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Developing Institutional Faculty Communities to Review and Assess SOTL Work

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2006 ISSOTL Conference – Washington DC

WORKING SESSION #88: DEVELOPING INSTITUTIONAL FACULTY COMMUNITIES TO REVIEW AND ASSESS SOTL WORK

Saturday, November 11, 2006 (2:45 PM – 4:00 PM)

A **course portfolio** is a reflective investigation of how course structures, teaching techniques, and assessment strategies enhance or detract from student learning. As such, it provides a window into what occurred during the course, highlights what worked and what did not, and showcases the student learning that resulted. By documenting your classroom inquiry in a portfolio and then archiving an electronic version of it on a website, you make your inquiry available to be shared, used, and reviewed by other teachers and students. Potential uses of a course portfolio include:

- developing a new course
- summarizing your teaching for annual merit review evaluations
- supporting teaching award applications
- documenting and assessing your faculty development efforts
- highlighting your teaching as part of a promotion and tenure packet
- structuring or showcasing a curricular revision
- aiding in a department program review
- supporting a job application
- providing or assessing learning outcomes for department or program accreditation

We have identified four types of course portfolios:

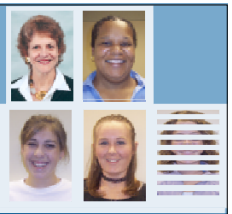
- **Benchmark** – this portfolio offers a snapshot of an entire course. Common elements of a benchmark portfolio include a listing of the course goals, a summary of classroom methods, and evidence of student learning in meeting the course goals.
- **Inquiry** – this portfolio is focused on exploring a specific question in a course. Common elements of an inquiry portfolio include development of a question or hypothesis to be studied, explanation of the approaches for collecting data on exploring the question, and analysis of the collected data
- **Concept** – this portfolio investigates a practice or issue in a course in terms of larger pedagogical concepts (e.g., general education, writing across the curriculum, problem-based learning) being addressed in higher education. For example, a concept portfolio might focus on how problem-based learning is used in a particular course.
- **Comprehensive** – this portfolio presents a holistic overview of the iterative development, evolution, and current status of a course as a result of continued refinement. Common elements of a comprehensive portfolio include the goals of the course, key changes that have occurred in the course over time, an assessment on student learning over time, and rational for the current course methods and practices.

The website: **www.courseportfolio.org**
Contains over 240 course portfolios written by faculty from 16 different schools

The next page is an example of a POSTER

FACS 170 Introduction to Early Care and Education
A Three-Year Analysis and Peer Review of College Teaching/Learning

Toni Hill-Menson
Doctoral Student, Family and Consumer Sciences
and
Carolyn Pope Edwards
Professor, Psychology and Family and Consumer Sciences



I. Peer Review of Teaching Project

This project provides a way for college faculty to work with others in a supportive context to document and reflect on both the quantity and quality of student learning. Faculty members work in groups of 3-5 for a semester or year to support each other's exploration of not only what students learn but also how they learn, for a particular selected course.

Personal goals: To improve teaching delivery and teaching methods for the enhancement of student learning and student professional development.

II. UNL's Peer Review Process

The purpose is to improve college teaching and "make learning visible" by:

- Carefully describing course objectives and structure and investigating teaching strategies and student understanding and performance
- Reflecting with others on the course's effectiveness and the links between teaching and the learning achieved or not achieved
- Documenting the process in a course portfolio
- Putting the portfolios on the web to be shared among the universities in the Peer Review of Teaching Consortium (Nebraska, Indiana, Kansas State, Michigan, and Texas A&M)

Ten Steps in Doing an Inquiry Portfolio:

Step 1: The instructor writes a memo in response to prompt for Interaction #1 (Stating an Issue or Problem to Investigate, e.g. "We wonder if students are really learning about X through this course?")

Step 2: Shares memo with "peers" on faculty team

Step 3: Meets with faculty peers to discuss each other's memos

Step 4: Writes an addendum to Interaction #1

Step 5: Secures student consents to publicly share their work

Step 6: Repeats Steps 1-4 for Interaction #2: (Determining a Methodology for Investigation, "How will we find out if students are learning about X? What data are needed? What kinds of student work need to be collected?")

Step 7 Repeats Steps 1-4 for Interaction #3: (Analyzing and Assessing Findings, "Did the students learn about X? What do the data say about it?")

Step 8: Edits/Summarizes Interactions #1,2,3 into a fluid course e-portfolio; highlight student learning and faculty development

Step 9: Solicit external peer reviews from off-campus

Step 10: Considers questions for future inquiry in this course or other courses you teach.

III. FACS 170: Introduction to Early Care and Education.

Format: Two class meetings a week. 3 credits.

Objectives: Students will learn different philosophical and educational approaches to working with young children (birth to grade 3) with a range of abilities and their families in a variety of professional settings. The core concepts of the course are: Professional, *Developmentally Appropriate, Culturally Sensitive, Inclusive*, and *Family-Centered*.

Required: for Inclusive Early Childhood Education certification students. Elective: open to other students interested in the early years.

Teaching Methods:

- Lectures and question-and-answer
- Small group and individual activities
- Practitioner presentations
- Parent panel
- Online quizzes
- Nongraded classroom assessments
- Midterms and final examinations
- Texts: (1) *Early Childhood Education Today, 9th Edition,* by George Morrison. Merrill Prentice Hall, 2004.
  (2) *Understanding Ethics in Early Care and Education* by Nancy E. Baptiste & Luis-Vicente Reyes. Pearson Education, Inc., 2002.

IV. Peer Reviews for FACS 170:

Year #1 (2002): Dr. Edwards taught the course for the first time (with Dean Kostelnik) and participated in the Peer Review project.
At the end of Year #1, the benchmark portfolio was presented in a panel at the national conference on *Making Learning Visible: Peer Review and the Scholarship of Teaching,* held in Lincoln, Nebraska, March, 2004.

Year #2 (2004): Dr. Carolyn Edwards and Toni Hill-Menson taught the course together.

Year #3 (2005): They taught together again, and Dr. Edwards was part of an advanced peer review team.

What was discovered in Years #1 and #2:

- All students gained basic knowledge about specific facts and concepts, especially when material was covered in both textbook and class.
- Students wanted grading to place less weight on the final exam and more evenly on all the graded activities in the course.
- Parent panel stood out as most effective in transmitting message of importance of inclusion.
- Unit on culturally sensitive education was strongly appreciated by students.
- Practitioner presentations were appreciated by students but may not have been explicit enough about how they illustrated the concept of developmentally appropriate practice.
- Minute papers and final reflective class activity were good ways to assess student attitudes and what they are learning.

Sample Student Comments, Final Reflections in Year #1:

One thing I learned in this class that was especially interesting was…'c9 "the true stories from the parents."

The part of my teaching philosophy that was most affected is…'c9 "that a teacher needs to teach all children depending on their intelligence level or their disabilities."

Something I learned that surprised me was…'c9"how the ethics play into [dealing with] children."

Year #3 Plans for a Classroom Assessment Project (Fall, 2005)

Learning Goals: In assessing their teaching, the instructors want to focus just two of the central concepts of the course. The instructors want to help students to develop: (1) an intellectual and emotional awareness of what it means for an early childhood professional to use *developmentally-appropriate practice* and (2) be *culturally-sensitive* with young children birth to age 8. Students will become more able to articulate these two concepts and relate them to other key concepts (themes) of the course.

Teaching Strategies around those two concepts: First, the course was reorganized with three separate units focused on the material related to (1) *Professional,* (2) *Developmentally-Appropriate* and *Culturally-Sensitive,* and (3) *Inclusive* and *Family-Centered*. In the first class, students did an activity that showed them how the core concepts correspond to the teaching standards (competencies) for the Nebraska Early Childhood Education Unified (Birth to Grade 3) teacher certification, for example:

Developmentally Appropriate
1. Use environmental assessments, individual and group guidance, and problem-solving techniques
2. Understand historical, philosophical and social foundations of comprehensive early childhood education
3. Establish and maintain physically and psychologically safe and healthful learning environments that promote development and learning;
4. Understand principles of organization and operation of programs for children birth through age 8

Culturally Sensitive
5. Demonstrate knowledge and sensitivity to differences in family structures and cultures
6. Recognize that children are best understood in the contexts of family, culture and society

Results of the Classroom Assessment:

(1) The concept of (DAP) refers to teaching that is coordinated with a child's level of development and for which the individual child is ready. Three dimensions must be considered: age appropriateness, individual appropriateness, and appropriateness for the child's cultural and social context. **Assessment:** Students completed Minute Papers after speakers and videos where they discussed, "What about this teaching was developmentally appropriate?" The students' answers on Minute Papers indicated understanding of these 3 components.

Results (1a) The Reggio Emilia approach to education is developmentally appropriate because it:

"Respects that every child has the ability to learn and express the way they see the world. They work at their own pace and the teachers can see their progress." -- teaching coordinated with children's learning.

"Allows children to learn how to do things other children do at their age" -- age appropriate

"Works with the children's developmental delays." -- individually appropriate

"Understands the kids' need for love and sense of belonging" -- cultural and social context

Results (1b) Montessori Education is developmentally appropriate because it:

"Focuses on the strengths and interests of the individual child. In this way the child is guiding the teacher as to what they are capable of doing." -- teaching coordinated with children's learning

"Children at the age of 3-6 want to learn responsibility. Doing work for them is fun" -- age appropriate

"Doesn't put pressure on them to learn at the same rate as others if they are not yet ready" -- individually appropriate

"Works for children in poverty and problem situations" -- cultural and social context

Results (1c) The High/Scope preschool method is developmentally appropriate because:

"There is shared control between the children and the teachers. This makes the children feel more competent about what they can do."-- teaching coordinated with children's learning

"At this age it is a perfect time for the child to learn these visual-spatial principles" -- age appropriate

"It allows there to be very different ways of learning" -- individually appropriate

"The continuing relationship between the parents and teachers. Many parents came in to participate within the classroom" -- cultural and social context

(2) The concept of culturally-sensitive practice refers to the development and interactions of early childhood education professionals. Students accept that competence includes cultural competence as a core component and that effective educators respect the child, the family, and the community with knowledge of their cultural context.

Assessment (2a): Students completed Pre and Post Tests related to the Multicultural education sections. **Results (2a 1)**: Pre Test: 34% students noted that race and ethnicity are the primary focus of multicultural education. Post Test: 3% students noted this.

(2a 2): Pre Test: 22% students could recognize the components of ethnographic interviewing. Post Test: 86% students correctly identified the components. The results demonstrate the increase of knowledge.

Assessment (2b): Students were asked to identify their own cultural issues through the use of exercises involving family photographs that they brought to class and by sharing the origin of their names. **Results (2b)**: Students' actively participated in small and large group discussions. They eagerly shared stories about themselves and their families, demonstrating insight about their own cultural backgrounds.

Assessment (2c): Students completed a class activity where they demonstrated knowledge of professional (cultural) competence by doing an in-depth review of the National Association for the Education of Young Children's (NAEYC) ethical guidelines. Students completed a worksheet listing explicit and implicit references to culture found in the guidelines. **Results (2c)**: Students showed that they could critically analyze the NAEYC guidelines using their own definitions of explicit and implicit cultural references.

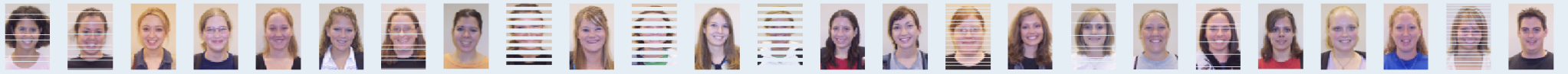
Sample Student Comments at the end of the unit:

"I think multicultural education is vital to connecting children, families, and communities."

"Multicultural education is something that allows all individuals to learn about the world around them. It is helpful to colleagues, students, and the community."

"I believe that multicultural education is extremely important in schools as well as universities."

"Every child has a different background, and we need to accommodate that."



HIST 202/202H: America after 1877

By Lloyd Ambrosius
(Department History - University of Nebraska – Lincoln)

Objectives of Peer Review Course Portfolio

The purpose of this portfolio is to assess the effectiveness in History 202/202H of the learning process to enable students to think historically. The course, which combines a regular section (History 202) with an honors section (History 202H), is designed to engage students in active learning. They are expected to learn both factual information and critical thinking skills through listening to lectures, reading the textbook and historical documents, writing weekly essays, participating in discussion in recitation, and taking two hour exams and a final exam.

Description of the Course

What is the course?
History 202. America after 1877 (and *History 202H*, an honors section of the same course) is an undergraduate survey of United States history from the end of post-Civil War Reconstruction to the present. This course examines the history of the American people since 1877, including their diverse traditions and common experiences. It includes the nation's transformation from its rural-agrarian roots to an urban-industrial, and then post-industrial, society; its reform movements and changes in government; its global involvement in war and peace from the Spanish-American War of 1898, World Wars I and II, the Cold War and its aftermath, to the post-9/11 conflicts; and its multicultural interactions among different individuals and communities within and beyond the United States. Historical analysis of these interactions includes the factors of gender, race/ethnicity/nationality, class, and religion. Emphasizing comparative history, this course focuses on similarities and differences between modern American national identities and those of peoples in other nations.

Who were the students?
At the end of the semester there were 102 students enrolled in History 202 and 26 in History 202H. These students ranged from their first year to their last semester at UNL. More than half (55%) were first-year students. More than one-fourth (27%) were sophomores. The others (18%) were juniors or seniors. A very few were history majors (2%). Most (71%) were students in colleges other than Arts and Sciences, including those (17%) in Education and Human Sciences. Given this variety, they brought a broad range of experience but little academic expertise with the study of history. Most were fairly recent graduates of high school, although a few were older, non-traditional students. This meant that most students came into the course with limited academic knowledge or personal experience of American history.

What are the goals for the course?
My primary goal is to help students learn how to think historically. In other words, I want them to know how to place themselves in another place and time in order to view the experience or history of others from multiple perspectives. Whether the students agree or disagree with another viewpoint from an earlier era, I want them to gain the ability or empathy to look at the world from another person's or group's frame of reference. Then I want them to step back and reflect on their own ideas and values to ascertain whether they might be reading their own contemporary values or prejudices into their assessments of previous generations. Ideally, this will open a dialogue in their thinking between the past and the present–between what Americans thought in the late 19th or 20th century and what they think today. This should enable students to escape the limits of their contemporary thinking, freeing them to think about the past without immediately imposing their own ideas or values onto it and simultaneously freeing them from the assumption that their contemporary thinking is the only way to view the world. Learning to think historically can thus enrich a student's overall education.

Teaching Methods/Course Materials/Course Activities

What does thinking historically require?
Thinking historically requires some fundamental knowledge. It is impossible for students to view the world from the perspective of other people who lived in earlier times without knowing some important information about them. In the case of American history, students need to learn basic factual information about who lived in previous generations in the United States, how they constructed families or communities at a particular time, how they organized and participated in political, social and economic institutions, and how they related to others outside the nation. Moreover, students need to learn how to integrate this fundamental factual information into a coherent

pattern to explain changes over time. In other words, students need to learn how to answer the questions: Who? What? When? Where? Why?

After students leave the course, I hope they will retain some fundamental knowledge they have learned during the semester, but I hope even more that they will have leaned how to think historically so that they can use this skill in assessing new information and experiences. This will enable them to participate critically as U.S. citizens in (or, if they are not U.S. citizens, as foreign observers of) the United States. Intellectual dialogues between the past and the present will offer the students the experience of comparing their own perspectives with those of other peoples in an earlier time. This engagement in comparative history will help them develop the skills that they will also need to analyze differences between typical American ideas and practices and those of other societies.

How do students learning to think historically?
Course assignments are designed to give students the experience of thinking historically. The lectures and the textbook offer the students some interpretive frameworks for assimilating fundamental knowledge about American history after 1877 into meaningful patterns. Multiple-choice or other objective questions on exams will test students over basic factual information. Essay questions on exams test them on their ability to use basic factual information to develop and defend a particular interpretation of a major episode in American history. A set of primary documents also gives them the experience of interpreting the American past on the basis of original sources. The written essays and recitation sections, which require oral participation in discussion, give students the opportunity to think historically about the past as recorded in the primary documents. The assignment to write essays requires students to offer their own historical interpretations rather than to repeat what others, such as the textbook's authors, have written about American history. The discussion gives them the same opportunity to express themselves orally.

What is the learning process?
As stated in the course syllabus (*See Appendix A*), the class format emphasizes active learning. The syllabus states: "All students are expected to participate actively in the learning process by attending the lectures on Monday and Wednesday and contributing to the discussion over the reading assignments in the recitation on Friday. Except for illness or an emergency beyond your control, you are expected to attend and participate in all classes. Contributions to classroom discussion, recitation essays, and announced or unannounced quizzes will serve as the basis for your recitation grade."

Regular attendance at lectures and recitation is essential for active learning. To encourage and reward attendance, students can earn bonus points. Bonus points may improve their course grades directly by increasing their final grades. Even more important is the indirect influence on their grades that results from their regular attendance at lectures and recitation.

Writing an essay each week is an important part of the learning process. This exercise is designed to teach students how to read historical documents, how to compare the contents of different documents, and how to answer larger questions about American history. Not only does it give students more experience in writing, it also helps prepare them for oral participation in the recitation. Having written an essay on two of the documents assigned for that week, each student should be well prepared to contribute to the discussion in the recitation section. As stated in the course syllabus (*See Appendix A*), students are required to bring their essays to recitation each week: "All students will write <u>a short essay (1-2 pages) each week</u> on two of the assigned documents. Each essay must be based on your careful reading of the documents to answer the following questions: Who were the Americans? What do the documents reveal about their national character or identity? How did these Americans view themselves and others? What rights did they want for themselves? Did they want the same rights for all people? If not, why and how did they want to limit the rights of others? In what ways were their beliefs, values, and practices different from those commonly held by Americans today? Compare the two documents to answer these questions. Based on your reading of the two documents, perhaps in comparison with the other documents, explain what you have learned about the American people from these historical sources. On the top line of your essay, give your name, document numbers, and date (e.g., Jane Doe, Documents 144 & 147, January 13, 2006). Each essay must be <u>1-2 pages, typed with standard margins and double spacing</u>. Use parentheses within the text to cite the documents, giving page references for quotations and other important information (e.g., Doc. 144, pp. 24-25). Essays are due each week at the beginning of your recitation."

The Course and the Broader Curriculum

This course is the second one in a sequence of two courses on American history, divided at 1877. The earlier course (History 201/201H) covers the origins of the United States from the earliest discoveries, explorations, and migrations to the Americas through its founding during the 18th-century American Revolution to the Civil War and Reconstruction. It is one of the history department's surveys, along with World History, Western Civilization (or European history), and several regional courses on Asian, African, or Latin American history. Although not

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required by the department or by any college, this course is usually taken by students for their history major or certification for teaching history or social studies in Nebraska schools, or to fulfill one or another of their university or college requirements. The course provides essential preparation for the study of upper-division courses in American history, although it is not a mandatory prerequisite for these courses in the department.

Analysis of Student Learning

What did students think they learned?

Several questions on the History Department Student Evaluation Form (*See Appendix F*) elicited information relative to the students' assessment of their learning. On question 24, 90% of the students strongly agreed or agreed that they learned factual material in this class; only 1.1% disagreed. On question 25, 87.8% strongly agreed or agreed that they could explain some concepts from the course to other interested people; only 2.2 disagreed. On question 26, 75.6% strongly agreed or agreed that things learned in the course could apply to other courses, life, or work; only 5.5% disagreed or strongly disagreed. On question 27, 48.9% strongly agreed or agreed that they improved their writing skills in this class; only 20% disagreed or strongly disagreed. On question 28, 37.8% strongly agreed or agreed that they improved their ability to express themselves orally in this class; only 27.7% disagreed or strongly disagreed. On question 29, 69.6% strongly agreed or agreed that they improved their ability to read and understand books, articles, and historical topics; only 7.8% disagreed or strongly disagreed. On question 30, 68.9% strongly agreed or agreed that they learned how to analyze historical documents; only 5.5% disagreed or strongly disagreed. On question 31, 47.7% strongly agreed or agreed that they learned to collect information and do research on a topic dealing with the past; only 10.0% disagreed or strongly disagreed. On question 32, 61.1% strongly agreed or agreed that they learned to analyze controversies and examine underlying assumptions in history; only 12.2% disagreed or strongly disagreed.

As indicated above (*3. Description of the Course* and *4. Teaching Methods/Course Materials/Course Activities*), my primary goal is to help students learn how to think historically. This requires the learning of historical knowledge. It also requires the development of thinking skills that enable students to deal with concepts or interpretations to fit the factual information into coherent patterns. Moreover, students must learn how to express their ideas in writing and orally in order to communicate their knowledge and interpretations to others. According to their own assessment, this course has contributed significantly to the fulfillment of my primary goal. On acquiring historical knowledge, 90% indicted that they had learned factual material in the class (question 24). On dealing with concepts or interpretations, 87.8% said that they could explain concepts from the course to others (question 25). On developing analytical skills, 69.6% stated that they had improved their ability to read and understand books, articles, and historical topics (question 29). On analyzing historical documents, 68.9% reported that they had learned how to analyze historical documents (question 30). In short, according to the students' own evaluation, a very large majority affirmed that they had achieved considerable success in fulfilling my primary goal for the course. Almost half of them also reported that the course had helped them improve their writing skills (question 27), while more than one-third said that it had improved their ability to communicate orally (question 28).

How did students perform on the exams?

The course involved three exams. The first exam (*See Appendix B*) on February 13 covered the lectures and reading assignment for the first third of the course. The second exam (*See Appendix C*) on March 27 covered the second third. The final exam (*See Appendix D*) on May 1 focused on the last third, but it also required the students to understand the more recent events within the longer historical context of the time since 1877. As stated in the syllabus (*See Appendix A*), the exams comprised 70% of the course grade; the first was worth 20%, the second 20%, and the final 30%. Multiple-choice questions comprised the first half of each exam. For the second half of each exam, students could choose either to answer true-false questions or write essays. The overwhelming majority picked the first option, answering the true-false questions. The multiple-choice and true-false questions were particularly useful for testing how well the students had learned historical knowledge or factual information. The questions also tested their ability to understand concepts. The essay questions allowed the students who chose this option greater freedom to develop concepts or interpretations. Examples of final exams (*See Appendix G*) by two students in History 202H illustrate how well they could develop their ideas in essays. The Comparison of Exam Scores & Grades (*See Appendix E)* provides an analysis of the three exams. The test mean and test median on the grades for all three exams was in the range from 81.65 to 89.00 for students regardless of which option they selected. In other words, the typical grade was somewhere in the B range.

How did students perform in recitation?

All students met weekly on Friday morning in recitation sections. Students in History 202 were divided into three sections, which were taught by the graduate teaching assistant. I led the section for the History 202H honors students. Writing weekly essays on the assigned historical documents and discussing these documents and the corresponding textbook chapter provided the basis for grades in recitation, which counted for 30% of the course

grade. The recitation grades ranged from A+ to F in History 202 and from A to B- in History 202H. We expected the students to participate actively in the classroom discussion, answering questions, developing concepts to explain the historical pattern in a particular era, and giving examples or citing documents to illustrate these concepts or interpretations. Even for honors students, it was challenging to move back and forth between concepts and factual information. Some students were concrete thinkers, who found it difficult to identify the broader significance of a particular historical episode or document. Others might easily offer broad concepts, but struggle to identify factual information or particular documents to illustrate the point. Because students had written essays on their choice of two of the documents assigned for that week, they were somewhat better prepared for classroom discussion than they might have been. The writing assignment had forced them to think about at least two of the documents, even if they neglected to read the others carefully or at all. We used various techniques to encourage all students to contribute to the discussion each week, although some students were more eager or more reluctant to do so.

Weekly essays were an extremely important component in the course. Reading these essays and writing comments on them required considerable time for grading by my teaching assistant and myself. Both of us, however, agreed that this was time well spent. We saw very significant improvement in the quality of essays during the semester. Although some students could write good essays at the beginning, the first few essays from most students were not outstanding. Some students could summarize the documents but could not use them to answer broader questions about the national identify or character of the American people. They often found it difficult to compare the two documents, preferring to summarize one and then the other. Some students could not even give the gist of either document. As they gained experience, however, students typically improved the quality of their essays. This pattern of improvement was not only our experience in this course; it has been the typical pattern in previous semesters. To afford the time to grade essays each week, I have resorted to multiple-choice and true-false questions on the three exams (except for the few students who opt to write essays for half of each exam). Spending less time reading essay exams and more time reading weekly essays makes better use of our limited time for grading the work of 128 students (or a few more at the beginning of the semester) in a large lecture course. Because my primary purpose is to teach the students to think historically, they need to learn how to express themselves in writing and orally. Discussion in the recitation sections and weekly essays are therefore extremely important features of the course. These are better ways, I believe, to engage students actively in the learning process than having them write essay exams. Devoting considerable teaching time to this learning process justifies or permits the use of machine-graded multiple-choice and true-false exams, which are good at testing factual information or historical knowledge, without sacrificing the overall quality of the learning experience for the students.

What was the quality of the weekly essays?

The first weekly essays were due on January 13. The best essay for that assignment from History 202H students was 95 (A); the lowest was 70 (C-). To show the range of quality, I have selected essays with grades of 90 (A-), 85 (B), and 80 (B-). These five essays (*See Appendix H*) show the full range of quality; there was none in the mid-70s (C).

To illustrate the typical improvement during the semester, I have selected the last essays, due April 21, from these same five students. All of these students earned higher grades on their last essays. The best essay was 99 (A+); the lowest two were 88 (B+). The other grades were 95 (A) and 91 (A-). These five essays (*See Appendix I*) show almost the full range of quality; only one student (whose essay is not included in the appendix) earned a slightly lower grade of 86 (B).

All of these students demonstrated improvement or consistently wrote A-quality essays throughout the semester. The student whose last essay was the best (99) in the class had earned an 80 on her first one. The student whose first essay was the best (95) earned that same grade on her last one; her essays were consistently in the A+ to A range throughout the semester, only occasionally falling to A-. There was not much room for improvement in her grades. The student whose first essay was the lowest (70) significantly improved the quality of his essays, earning an 88 on his last one. Another student increased her grade slightly from 90 on her first essay to 91 on her last one, but her actual improvement was even better than these numbers indicate. Except for her last one, she wrote essays in the A range during most of the semester. The student who earned an 85 on her first essay improved the quality to 88 on her last one.

Planned Changes

Because the student evaluations affirm and my own analysis of the students' essays and exams confirm that the learning process is achieving my purpose, I am not planning any major changes in this course. I may change the textbook and documents set in a future semester. I may also alter the focus of the essays. I will also revise some lectures to include the latest historical scholarship. But I am not planning any substantial revision of the course.

Summary and Overall Assessment of Portfolio Process

Systematic collection of data on the learning process in History 202/202H, as required for this portfolio, has enabled me to articulate my goals for this course and to assess how well it has fulfilled these during the past

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semester. The good news from this assessment is that the students are gaining from the course what I had hoped they would. They are learning to think historically. They are learning factual information and how to interpret it critically. After decades of teaching, I am convinced that I cannot teach anything to students. Only they can learn. If they choose not to learn, I cannot teach them. But I am also confident that I can help them learn if they are willing to make the commitment and do the work of historical scholarship. The data that I have collected confirms that the learning process is succeeding in this course.

Appendices *(included in the electronic version of the portfolio, but not included here)*

APPEDIX A. Syllabus: History 202/202H
APPEDIX B. First Exam, February 13, 2006
APPEDIX C. Second Exam, March 27, 2006
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APPEDIX I. Samples of Student Work: Essays, April 21

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Are visual methods of brainstorming more effective than verbal methods in a first-year art course?

By Elizabeth Ingram
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About the Course
In my course, *Speculative Drawing and Design*, students use drawing to investigate, describe, document and communicate. Students also use drawing to think visually, to develop ideas and to ask "what if" questions. Students gain skills in construction and hone their craft as they employ basic elements of design (such as positive and negative space, scale and gesture) in two-and three-dimensional compositions. My aim for the course is for students to become flexible, independent, and self-directed designers. I want them to experience design as a continual process of creating, making, evaluating, and making again and to be able to apply this process to other contexts and to other media in their continuing design education. Exhibit 1 shares details of my course.

Exhibit 1 Details of Elizabeth's course

Discipline	Art and Design (Visual Literacy Program)
Course	Speculative Drawing and Design
Course Level	first-year
Number of Students	21 students (two sections of the course)
Type of Course	targeted for majors in studio art, architecture, interior design, graphic design and textiles
Meeting Time	three 3-hour studio sessions per week

Development of the Inquiry
Throughout my course, students must use problem solving skills or "brainstorming." I define brainstorming as t*he ability to generate, communicate and develop ideas while employing those work habits and personal skills which encourage a creative mindset*. By defining brainstorming as an iterative process of idea generation and development, and not just as a brief activity in the initial stages of a project, I use brainstorming as a shorthand description for creative thinking.

During the course, students complete a series of projects in which they create three-dimensional objects that: (1) perform a stated function, (2) have other specifications (such as size or collapsibility), and (3) are made with easily available materials. These projects are otherwise open-ended in terms of what they create. The projects require that students come up with an "idea" for an object (invent and design) and make something which has not existed before (test, revise, fabricate, engineer), while solving functional, structural and aesthetic problems. The explicit brainstorming tasks that students must complete include:

- recognizing "what is an idea" and using multiple strategies for generating ideas,
- describing and discussing ideas,
- welcoming all ideas ("good" and "bad") during the idea generation,
- learning how to choose an idea to develop and when and how to modify/abandon an idea, and
- persisting until an idea is fully developed.

Putting the Issue into Context
The goal of my classroom inquiry is to investigate the first studio project that students complete in my course: the Cooperative Connector Project. In this project, students work in pairs and use inexpensive and found materials to make a wearable connector which joins body parts. Exhibit 2 gives the project description that I provide to my students. The Cooperative Connector Project requires students to solve a difficult problem within a short time frame, while working in cooperation with others with differing perspectives and dealing with external conditions which are not completely within their control.

Exhibit 2 Details of Elizabeth's cooperative connector project

1. Using any inexpensive or found materials (tyvek, fabric, vinyl, paper, corrugated cardboard, metal, wood, plastic, etc), make a cooperative connector which joins you and your partner at two locations on your bodies and which functions to keep you and your partner joined.
2. This is a collaborative project. You will draw names in studio to determine your partner(s) and the body locations to be connected.
3. Your connector has the following required elements:
   - Each person will draw a location and mirror that location on his/her partner's body. Thus, two people will be connecting at two locations. (You will have left-right symmetry.)
   - Your connector must be designed and fabricated (articulated, manipulated) by you, not readymade, although it may incorporate readymade components. (It should also not be simply a recreation of an existing device in other materials or at a larger scale.)
   - You must use a rigid material AND a flexible material AND a textured material.
   - Your connector must intentionally connect to your partner and must be supported without your holding it.
   - You and your partner must be able to move while wearing your connector without it falling off or breaking.
   - Your connector may not touch the ground between you and your partner.
   - Each connection must be reasonably direct and between 12" and 24" (approximately) in length.

The Cooperative Connector Project is the most difficult course project both for students and for me as the teacher. To meet the minimum requirements, students need to "get an idea," communicate this idea to me and to the class, and work cooperatively and collaboratively, which intensifies the need for clear communication. Exhibit 3 gives the grading criteria I use and share ahead of time with my students. To come up with a good idea (i.e., a highly successful solution) students often must push their thinking past the literal to the metaphorical. It is relatively easy for students to make a picture or a representation of something which already exists, but it can be very difficult for them to invent something new or to work in a more stylized or abstract way. My challenge with the Cooperative Connector Project is getting students to make something visual to see and to talk about as soon as possible so that they can get useful feedback. Thus I ask students to use drawings or models to talk about their ideas.

Exhibit 3 Grading criteria for the connector project

- Your connector meets the **basic project requirements**
- You used **excellent craft** (Your connector is sturdy, wearable and functional; joints are strong; cuts are clean; there is no visible glue or tape unless the tape is used as a design element.)
- Your connection is **intentional** and the **transitions** between your connector and your body are well thought out and well designed.
- You have a strong **overall design** or composition. (Your design is **volumetric,** carefully considers **both positive and negative space** and the distance or proximity between you and your partner, and has a **clear [exaggerated] gesture**.)
- You **pushed** beyond the expected response in craft or design or function. (Your engineering is especially inventive or your materials are especially effective or your craft is especially exquisite.)

During past terms, I have observed that students are often reluctant to use visual communication. For instance, during my desk critiques of their work, a student will begin with a long verbal description of his/her problem. When I interrupt and ask, "*Where's your drawing?*" the student will respond. . . "*My drawing? Oh, my drawing . . . .* " The student then searches through piles of papers and pulls out a beautiful drawing. This drawing is often gestural and expressive and suggests possibilities which words do not. The drawing shows me where the student is trying to go so that we can discuss how to get there.

I believe that the more I insist that students present their ideas visually and "talk about" their design problems with diagrams or models, the more fully developed their solutions will be. Useful feedback requires that we "see" the same thing, and words alone are inadequate for describing visual conditions. Speakers and hearers can have vastly different assumptions based on the same verbal description (whether written or spoken). Visual aids, whether drawings, models, material samples or the work-in-progress, remove much of the ambiguity of verbal communication so that communication is more efficient and feedback immediately becomes more focused.

My theory is that visual methods of brainstorming are more effective than verbal. They are certainly more effective from my viewpoint, since they make my job easier. *But are they more effective from a student's point of view? Is there any relationship between the quality of students' brainstorming*

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and the quality of their finished project? Are students using visual methods to brainstorm, even if I'm not always seeing evidence of this? Are they reluctant to draw or use visually imagery or just reluctant to show these visuals to anyone else?

Inquiry Hypothesis
Using my Cooperative Connector Project, I want to ask the central question: *Are visual methods of brainstorming more effective than verbal methods?* To answer this question, I need to address a series of sub-questions:

- What methods do students use to brainstorm? Are these methods visual, verbal or both?
- Do students prefer visual or verbal methods of brainstorming?
- Do students find visual or verbal methods more effective?
- Is there any discrepancy between the methods students prefer and the methods students find most effective? Or between the methods students use and the methods they prefer or find most effective? What reasons do students give for choosing the methods they prefer? The methods they find most effective?
- What types of visual evidence can students provide of their most effective brainstorming methods?
- Is there any relationship between the quality of a student's brainstorming evidence and the strength of the completed project?

Investigative Plan
I used three primary sources of data to explore my inquiry question. First, after the Cooperative Connector Project was completed, I had students complete a survey (Exhibit 4) identifying the brainstorming methods they used from a checklist of ten methods, five of which were visual and five of which were verbal. (The characterization of the methods as visual or verbal was not provided on the survey.) Students then specified their three most preferred methods, the three most effective methods, and stated their reasons for their choices. Although students worked in groups for the project, each of the twenty-one students submitted a separate survey.

Exhibit 4 Student survey of brainstorming approaches

Please check which brainstorming methods you used:

	Making lists		Exploring found objects / materials
	Looking at images from books, magazines or the internet		Discussing with my partner using visual aids
	E-mailing my partner		Discussing with my partner without visual aids
	Talking on the phone with my partner		Drawing on photos of myself / my partner
	Drawing		Writing

Of the methods that you used, which do you prefer? (rank your top three)
1.
2.
3.
Why?

Which do you find the most effective? (rank your top three)
1.
2.
3.
Why?

Students also submitted one page of *visual evidence* of their most effective brainstorming methods. There were no requirements concerning the form of this evidence, beyond stating that it had to be effective

for the student. Neither the survey or the visual evidence was graded. Finally, the project partners were photographed demonstrating their completed connectors project and I assigned a project grade.

Interpreting and Evaluating Findings
Exhibit 5 shows the percentage of students who used, preferred, and thought effective the ten brainstorming approaches solicited in the survey. The brainstorming approaches, whether visual or verbal, and the corresponding data series label (used in Exhibit 5) are given in Exhibit 6. Overall, every student used a combination of visual and verbal methods to brainstorm and no students used only verbal or only visual methods. No student used less than four methods and the average number of methods used was six. The three most used methods were all visual (Drawing, Discussing with visuals, and Exploring materials).

Exhibit 5 Results of student survey of brainstorming approaches

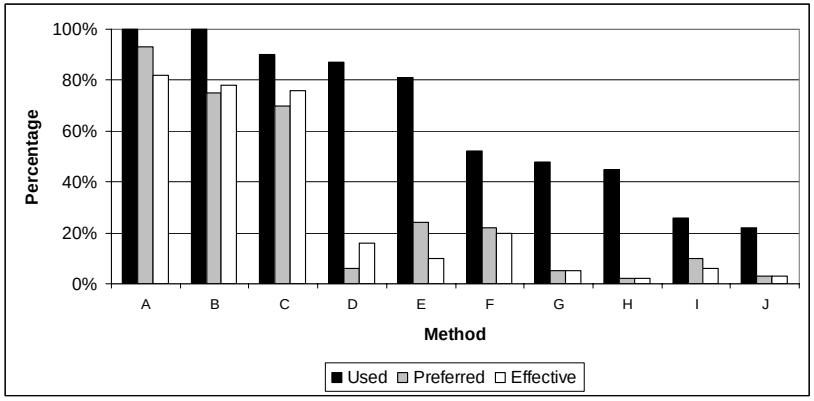

Exhibit 6 Brainstorming approaches

Method	Visual or Verbal	Data Series in Exhibit 5
Drawing	Visual	A
Discussing (with partner) WITH visuals	Visual	B
Exploring materials	Visual	C
Discussing (with partner) WITHOUT visuals	Verbal	D
Making lists	Verbal	E
Looking at images	Visual	F
Talking on the phone with partner	Verbal	G
Writing	Verbal	H
Drawing on photos of student and partner	Visual	I
E-mailing partner (L)	Verbal	J

Students clearly preferred visual methods of brainstorming. The three most preferred methods were visual (Drawing, Discussing with visuals, and Exploring materials). The three least preferred methods were verbal (Discussing without visuals, Talking on the phone, and E-mailing). Students found the visual methods of brainstorming more effective. The three most effective methods were all visual (Drawing, Discussing with visuals, and Exploring materials).

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There is no significant discrepancy between the methods students preferred and the methods students found most effective. Interestingly, I had expected that students might strongly prefer using certain methods even if they discovered that other methods were more effective.

There is a significant discrepancy between the methods students used and the methods which they identified as preferred or effective. Of the ten methods used, five methods (four verbal and one visual) were neither preferred nor found effective by any significant number of students. I suspect that students tried, but discarded, a number of methods. This is not surprising as I suggested they use a wide variety of brainstorming methods. Looking at the five methods that were the most used, three methods (Drawing, Discussing with visuals, Exploring materials), all visual, were the most used, the most preferred and the most effective of all brainstorming methods.

Students' written comments on the reasons for choosing each method were brief and their reasons for preference and for effectiveness were often identical. Reasons were all expressed in positive terms, and many students simply stated that a particular method "works for me" or "inspires me" or "I like (method)." Exhibit 7 groups the responses into general categories. Three visual methods (Drawing, Discussing with visuals, and Exploring materials) generated the most comments. Not surprisingly, these three methods were also students' most preferred and most effective methods.

Exhibit 7 Reason students gave for preferring a method or thinking it effective

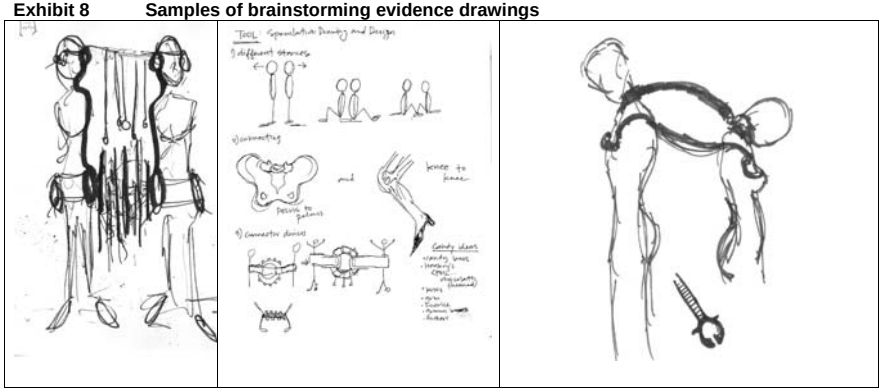
Reason	Percentage of Students (Preferred)	Percentage of Students (Effective)	Visual or Verbal
Visuals make ideas easier to understand/communicate	61%	45%	Visual
Drawing works for me/ I like to draw	58%	65%	Visual
Materials inspire me/ I need to work with materials	55%	71%	Visual
Discussing with visuals works for me	35%	52%	Visual
Looking at images inspires me	16%	19%	Visual
Making lists works for me/I like to make lists	16%	10%	Verbal
Drawing on photos helps me understand the site	6%	0%	Visual
Discussing without visuals works for me	0%	10%	Verbal

I also asked students to provide one page of visual evidence of their most effective brainstorming method(s). Partners had to choose their own evidence of what was most effective for him/her, but visual evidence was not otherwise defined. Ninety percent of the students submitted a drawing. Of these, 68 percent accompanied it with text—ranging from one word or a label to brief questions or measurements to longer lists, most often of associations or of possible materials. Exhibit 8 shares examples of the range of the students' brainstorming drawings. Drawings ranged from the stylized and gestural, to more detailed technical drawings exploring construction methods and details, and the photo of the partners also included drawing. On reflection, the fact that I received a high percentage of drawings is consistent with students' preference for visual methods and, I hope, reflects the course expectation that students use visual methods to design and to communicate effectively.

To see if there is any relationship between the quality of a student's brainstorming evidence and the strength of their completed project, I needed to assess a project's quality. I defined "quality" as visual richness and complexity and ranked the samples as low, average or high. Once I started looking at their work, I found this definition to be too ambiguous and subjective—if it included communicating clearly then it overlapped with usefulness; if it included expressiveness or visual presence, then I was too influenced by the seductiveness of a drawing. Recognizing the limited usefulness of this definition, I nevertheless proceeded with my analysis of the student projects to see what insight they could provide.

I expected that there would be a clear correspondence between the quality of a student's brainstorming evidence and the strength of his or her completed project. Instead, there was no such relationship, either considering the group as a whole or looking at individual samples. (This finding suggests the need for further study).

Exhibit 8 Samples of brainstorming evidence drawings



I used the project description and my grading rubric to gauge the strength of the completed project. All of the projects received 40 points or above (out of 50 points possible) and the overall quality of the completed projects was high. However, the brainstorming evidence varied much more in quality than the projects themselves. Looking at the brainstorming evidence samples, 19 percent were low quality, 55 percent were average quality, and 26 percent were high quality. In comparison, the projects were all above average. Thus, the projects were richer overall than the brainstorming evidence would suggest. Since I chose not to impose any guidelines on this brainstorming evidence, there were no specifications as to format or craft. This evidence was just a snapshot of their learning process, chosen by the student, and not edited or composed. Students knew that they were not being graded on this submission.

Overall, I found that while some strong projects also had higher quality (richer) brainstorming evidence, some did not, and conversely, some weaker projects nevertheless had rich brainstorming evidence. Exhibit 9 shows one team which had rich brainstorming evidence and a very strong project. They converged on an idea ("constructed vertebrae") very quickly but also considered, tested and discarded multiple methods of construction and attachment (transition) to the body.

Exhibit 9 Strong student project with rich brainstorming evidence

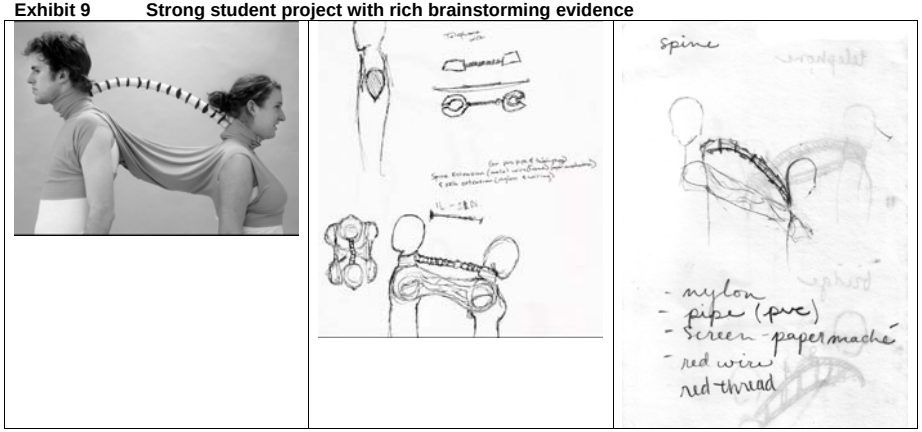


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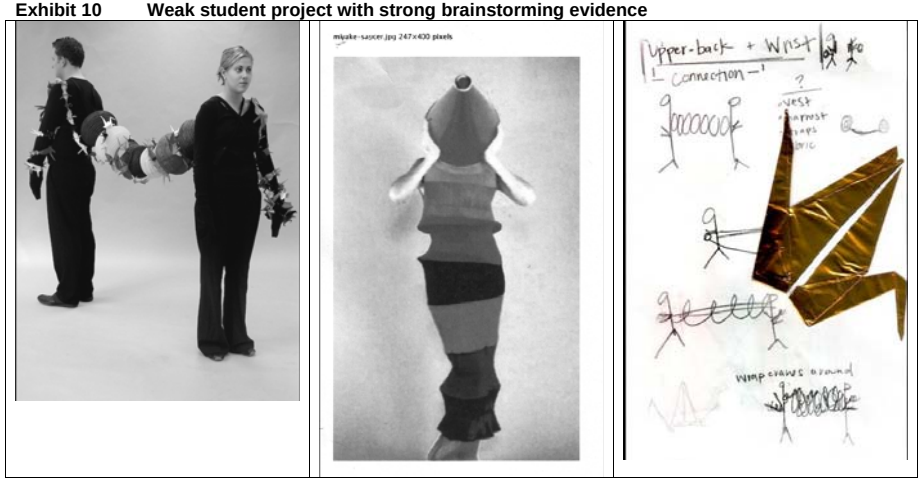
Exhibit 10 shows a student team that has strong brainstorming evidence but the weakest project overall, because they did not push beyond the aggregation of a pre-formed found object (Chinese lanterns), the use of a conventional crafted form (origami cranes), and an easy method of transitioning or connecting to the body (free-form draping). Thus, what is undeveloped in this brainstorming evidence is also what is undeveloped in the project—the transition to the body of each partner and the manipulation or transformation of the pleated volumetric forms of the lanterns.

Exhibit 10 Weak student project with strong brainstorming evidence



Overall, while I did not find the relationship I expected between the brainstorming evidence and the completed projects, the brainstorming evidence gave me a deeper insight into the project and the students' processes.

Final Reflection

The goal of my classroom inquiry was to answer the following central question: *Are visual methods of brainstorming more effective than verbal methods?* The short answer is yes, visual are more effective than verbal methods. An overwhelming majority of my students (68%) found visual methods more effective. The three most effective methods were all visual. These same visual methods were also the methods that students most preferred and most used. Conversely, the three least effective methods were all verbal.

In terms of the sub-questions that I posed:

- *What methods do students use to brainstorm? Are these methods visual, verbal or both?* All students used a combination of visual and verbal brainstorming methods, although visual methods were used more frequently than verbal methods. The three most used brainstorming methods were all visual.
- *Do students prefer visual or verbal methods of brainstorming?* Students preferred visual methods of brainstorming. The three most preferred methods were all visual ones and the three least preferred methods were all verbal ones.
- *Do students find visual or verbal methods of brainstorming more effective?* Students found visual methods of brainstorming more effective. The three most effective methods were all visual ones and the three least effective methods were all verbal ones.
- *Is there any discrepancy between the methods students prefer and the methods students find most effective? Or between the methods students use and the methods they prefer or find most effective?* There was no significant discrepancy between the methods students preferred and

the methods they found most effective. There was a significant discrepancy between the methods students used and the methods which students then preferred or found effective. Of the ten methods used, there were five methods (only one of which was visual) which were neither preferred nor found effective. However, three methods, all visual, were the most used, the most preferred and the most effective.

- *What reasons do students give for the methods they prefer? The methods they find most effective?* Reasons were grouped into eight general categories and were all expressed in positive terms.
- *Can students present useful brainstorming evidence of their most effective brainstorming methods? What types of evidence can students provide?* All students submitted visual evidence of their brainstorming methods.
- *Is there any relationship between the quality of a student's brainstorming evidence and the strength of their completed project?* There was no consistent relationship between the quality of a student's brainstorming evidence and the strength of their completed project. The brainstorming evidence varied more widely in quality than the projects themselves. While the projects were all above average, the evidence samples varied from low to high quality. However, comparing the brainstorming evidence to the completed projects provided insight into the students' process and their project development.

One unexpected benefit of my classroom inquiry is that I now have a rich resource of visual evidence of students' brainstorming methods. I plan to use this visual evidence in future offerings of my course, showing the brainstorming examples in conjunction with the completed projects. I hope that this will help students better understand the project development from initial idea to completed connector and will make the process of visual communication less intimidating to students by showing how simple drawings and models can clarify complex ideas.

I began my classroom inquiry with the belief that visual methods of brainstorming were more effective. My belief was pragmatic—the sooner the students and I see a drawing, a photograph or a material sample, the sooner we can give useful feedback. I knew that I valued visual communication. What I didn't realize until this inquiry was that students also recognize the value of, and prefer, visual communication. Looking forward, if visual methods of brainstorming are more effective, and my investigation shows that they are, what can I do to further encourage these methods? *That is, what can I do to encourage drawing and other methods of visual exploration and visual communication?*

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OUTLINE FOR PEER REVIEW COMMENTS ON A COURSE PORTFOLIO

From Bernstein, Burnett, Goodburn, and Savory (2006) *Making Teaching and Learning Visible: Course Portfolios and the Peer Review of Teaching*. Anker Publishing

The following headings identify four major topics that could readily be part of a review of a course portfolio generated through our project. We encourage you to use these or similar headings to identify the portions of your comments related to these specific issues in teaching. You need not reply to all the prompts, but they are provided to begin your reflection on the course portfolio.

Please feel free to make your comments in either a narrative format or as identified single sections. Any additional comments about the teaching represented in these documents would be welcome. Please feel free to expand on your reactions to the intellectual quality or effectiveness of this professor's teaching beyond the types of issues that we have posed. Remember that your frank but constructive reactions to what is presented will be very helpful in the development of the course and course portfolio. At the end, please include a few sentences that describe your experience in teaching courses related to the one you are reviewing. It is not necessary that you have taught exactly this course, by type or by content; it is helpful to the author of the portfolio to know your experience.

COURSE INTELLECTUAL CONTENT

Please evaluate the quality of the *course's intellectual content*. This may include but is not limited to:

- appropriateness of course material both for the curriculum and the institution
- intellectual coherence of course content
- articulation of intellectual goals for learners and congruence of those goals with course content and mission
- value/relevance of ideas, knowledge and skills covered by the course

QUALITY OF TEACHING PRACTICES

Please evaluate the *quality of the teaching practices* used in the course. This may include but is not limited to:

- organization and planning of contact time; congruence between planned and actual use of contact time
- opportunities to actively engage students in the material
- opportunities (in or out of class) for students to practice the skills embedded in the course goals
- particularly creative or effective uses of contact time that seem likely to improve student understanding
- activities scheduled outside of contact time that contribute to student achievement (this may include extracurricular activities, group projects, electronic discussions, or any other planned course related assignments or activities)
- course structures or procedures that contribute especially to the likely achievement of understanding by learners

QUALITY OF STUDENT UNDERSTANDING

Please evaluate the *quality of student understanding*. This may include but is not limited to:

- appropriateness of student performance, in light of course goals, course level and institution
- performance levels that reflect challenging levels of conceptual understanding and critical evaluation of the material appropriate to the level of the course and of the students
- appropriateness of forms of evaluation and assessment, given the stated goals of the course
- creativity in providing students with ways to demonstrate their understanding of and ability to use the ideas and content of the course
- alignment between the weighting of course assignments in grade calculation with the relative importance of the course goals
- demonstration of an appropriate percentage of students that they are achieving competence in the stated course goals, or identification of reasons why they might not be reaching these levels of competence
- revisions or modifications to the course that could improve performance

EVIDENCE OF REFLECTIVE CONSIDERATION AND DEVELOPMENT

Please evaluate the *evidence of reflective consideration and development*. This may include but is not limited to:

- substantive reflection by the faculty member on the achievement of the goals for the course
- identification of any meaningful relations between teaching practice and student performance
- evidence of changed teaching practice over successive course offerings in reaction to prior student understanding
- evidence of insightful analysis of teaching practice that resulted from consideration of student performance

REVIEWER'S EXPERIENCE OF TEACHING IN THIS AREA

What similar courses have you taught? (*e.g.*, class size, level, content). Have you taught using a similar format? (*e.g.*, course structure, presentation format)

Assessment checklist for a classroom inquiry/SOTL project

From Savory, Burnett, Goodburn (2007 – in press) *Inquiry Into the College Classroom: A Journey Toward Scholarly Teaching*, Anker Publishing

Characteristic	Strongly Agree	Agree	Indifferent	Disagree	Strongly Disagree	Not Applicable
Clear Goals and Objectives						
1. The hypothesis is clearly stated.						
2. The hypothesis is an important question in need of an answer						
3. Answering the hypothesis is realistic and achievable.						
4. The problem/issue defining the hypothesis is put into context						
Adequate Preparation						
5. The teacher brings the necessary skills to the inquiry project						
6. The teacher has the resources necessary to explore the hypothesis						
7. Relationship of the issue/problem to previous research is made clear						
8. There is an understanding of existing scholarship in the field						
Appropriate Methods						
9. Investigative plan is described fully						
10. Investigative plan is appropriate for exploring the hypothesis						
11. Investigative plan is free of shortcomings						
12. Investigative plan is correctly modified in response to changing circumstances during the term						
13. Data collection or sampling plan is defined						
14. Method of sampling is appropriate						
14. Data-gathering methods or procedures are appropriate for testing the hypothesis						
15. Data-gathering methods or procedures are utilized correctly						
16. Methods utilized in analyzing the data are correctly applied						
Meaningful Results						
17. Conclusions are clearly stated						
18. Comparisons are appropriately connected						
19. Conclusions are substantiated by the data presented						
20. Generalizations are confined to the population from which the data was drawn						
21. Alternative hypotheses or explanations of the data are ruled out						
22. The results are interesting and useful to others						
23. The results open additional areas for further exploration						
Critical Reflection						
24. The teacher critically evaluates his or her own work						
25. The teacher brings an appropriate breadth of evidence to his or her critique						
Clear Communication						
26. Assumptions are clearly stated						
27. Limitations are defined						
28. Writing is clear, logical, and organized						
29. Work is written with clarity and without error						

Questions for Building Communities around SOTL work

The External Reviews

(1) What is required within an external review? Which elements/categories in the *"Outline for Peer Review Comments"* are essential for a productive external review? Which are not essential? Are there categories/elements missing from this outline that you would include? What types of external reviews would be most valuable to institutional committees that assess and reward teaching?

The Reviewers

(2) How should reviewers be identified? (by portfolio authors, teaching center staff?, project leaders, others?)

(3) What qualifications, experiences, or backgrounds should reviewers have? Should they be experts within the discipline/area of the portfolio under review? Should they have taught a similar course? Should they have authored their own course portfolio? Does it matter what type of institution the reviewers come from (i.e., a Research One Institution or a four-year teaching institution? From a Carnegie Teaching Scholar? Who should decide?)

(4) How should reviewers be compensated for their time (e.g., Money, gift certificates, letters of recognition, reciprocal reviews of their portfolios?)

(5) How confidential should reviewers' identities be? Should the reviews go to project leaders first and then be passed on to portfolio authors? Should they be sent directly?

The Review Process

(6) How should portfolio authors be encouraged to use external reviews? (i.e., responding in writing to the reviews? Using them to update/revise course portfolios, including them in tenure/promotion files?

(7) What obligations do portfolio authors have regarding external reviews? Should they be asked to respond to the reviewer? Comment on the value of the review?

Reviewer Communities

(8) How can institutions develop communities of readers for SOTL work? How can we prepare faculty who have never engaged in SOTL work to fairly read and evaluate it?