Preparing Future Faculty
TEACHING ACADEMY

Teaching Portfolios

Michael Reese
Center for Educational Resources

JOHNS HOPKINS
UNIVERSITY

Albert Schweitzer

ARTIST STATEMENT | Resume

ARTIST BIOGRAPHY

Born in Wisconsin in 1967, Albert now lives in Baltimore, Maryland. He received his B.F.A. degree in painting from the University of Wisconsin-Whitewater in 1990. He received an M.F.A. in painting from the Maryland Institute College of Art. He studied under Grace Hartigan at the Hoffberger School of Painting, graduating in 1995.

Albert exhibits frequently in New York, Baltimore, and Washington, D.C. His work is in many private and permanent collections.

Why Create a Teaching Portfolio?

- Reflection
- Connection
- Promotion

Why Create a Teaching Portfolio?

"Having an eportfolio was a huge asset when I went on the job market. Several institutions that interviewed me mentioned that my website was what initially drew their attention to my job application. My new department at Duke is very tech-savvy, and I know I have my eportfolio to thank for getting my foot in the door there." – Valerie Mirshak

What is a Teaching Portfolio?

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What is a Teaching Portfolio?

A teaching portfolio is a collection of documents that together provide a record of

- the ideas and objectives that inform your teaching
- the courses you teach or are prepared to teach
- the methods you use
- your effectiveness as a teacher
- how you assess and improve your teaching

Washington U in St. Louis:

http://teachingcenter.wustl.edu/About/ProgramsforGraduateStudentsandPostdocs/resources/Pages/Creating-a-Teaching-Portfolio.aspx

What Should I Include?

- Teaching Philosophy Statement
- Previous Responsibilities
- Representative Work
- Contributions to Scholarship of Teaching
- Professional Development Activities
- Honors/Awards
- Materials from Others

What Should I Include?

Teaching Philosophy Statement

Michelle Kovarik: Teaching Portfolio

Search this site

- Teaching Statement
- Courses Taught
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- General Chemistry
- Instrumental Analysis
- Service Learning & Outreach
- Sitemap

Teaching Statement

Success in chemistry requires that students develop mathematical and conceptual understanding of topics, embrace the inquiry-based nature of science, and learn to communicate complex ideas with lucidity and accuracy. In general chemistry, students establish a new vocabulary and a foundation in mathematical manipulations based on chemical equations. Throughout the curriculum, students should also experience the creative nature of scientific research and the importance of communicating experiments and results clearly. I help my students achieve these goals by addressing both quantitative and conceptual understanding while grounding their learning in inquiry and in the larger community beyond the classroom.

Fostering Mathematical and Conceptual Understanding

Students can often master the algorithmic side of chemistry without appreciating the practical implications of their calculations; however, chemistry is not just math with units. To highlight this, I design my problem-sets around real-world examples. I have developed themed mini-case assignments based on flotation devices, carbon emissions and sequestration, and medical malpractice. I also provide explicit opportunities for students to estimate answers before "plugging and chugging," encourage them to evaluate the plausibility of their answers in context, and emphasize proportional reasoning skills. For example, in a unit on gas laws, my students practice predicting how and why pressure and temperature changes occur inside a pressure cooker or soda can *without* having specific values to plug in to equations. When we do longer calculations, I provide frequent opportunities for small group practice as an immediate check for novice students, who may falsely equate surface comprehension of an instructor-led example with the deeper understanding needed to solve problems independently. As problems become more complex, I also help my students become proficient in using computer software to complete their calculations. In fact, students in my instrumental analysis class identified the use of Excel in homework as one of the most valuable and transferable aspects of the class.

In parallel with this quantitative problem-solving, I use short answer and writing assignments to build conceptual understanding. In class, homework, and exams, I ask students to explain phenomena, evaluate methods, and predict the results of experiments: Why is it safe to put out a grease fire with baking soda, but not with flour? What separation method would you use to characterize a skunk's spray, and why? What will happen if I double the amount of fuel in a piston before ignition? Longer writing assignments give students an opportunity to think deeply about specific concepts and to identify weak points in their understanding by working to articulate newly learned ideas. In my instrumental analysis class, students completed 7 writing assignments for our class journal, in which they formed opinions about current issues in analytical chemistry, explained the thought processes they used in problem solving, and interviewed a scientist about their use of instrumentation to achieve research goals.

Grounding Learning in Research and Inquiry

Even beginning students and non-majors should understand that "doing science" means proposing new questions, formulating hypotheses around these questions, and designing experiments to test them. Consequently, I include project- and inquiry-based learning in the teaching laboratory. As a graduate student at Indiana University, I co-developed a problem-based learning module on gold nanoparticle synthesis that incorporates experimental design into a general chemistry laboratory. In my instrumental analysis lab, each group explored the available instrumentation during 8 weeks of guided exercises, then selected a capstone project that utilized a specific instrument. The students wrote a proposal on their plans and spent 3 weeks on a detailed investigation of a real-world sample (e.g. perfume, honey, sunscreen, or tea). We also emphasized the creative nature of scientific research in the lecture portion of class, where we discussed four papers describing the cutting-edge applications of spectroscopy, mass spectrometry, electrochemistry, and separations. I prepared guided reading assignments to scaffold the students' engagement with these articles, and we spent a class period discussing each manuscript. For each paper, small groups of students became experts on a specific figure or technique and presented that topic to the class to reinforce their understanding.

Undergraduate research experience is critical for any student planning to pursue a career as a professional chemist. I have mentored seven undergraduate researchers and seen firsthand how research-based problem-solving enhances a student's training. Through undergraduate research, a student gains ownership of a specific scientific question and experiences the creative nature of scientific endeavor. I recently recognized the enduring impact of this experience when a former student contacted me for a recommendation letter for graduate school. After five years in a successful career in science-driven company, he missed the creative outlet of research and decided to pursue a PhD. Undergraduate research also introduces students to the larger scientific community. An undergraduate mentee at Indiana University presented his honors thesis research at an international conference and is now pursuing graduate studies. Similarly, the student who worked with me at North Carolina A&T State University received a travel grant to present a our work at the Annual Biomedical Research Conference for Minority Students. These experiences provide valuable professional development and hopefully ignite a lifelong passion for discovery.

Learning by Teaching

Teaching and learning are complementary processes: few activities produce the depth of understanding gained by teaching an idea to someone else. At Indiana University, I was the assistant instructor for a dedicated service learning class in which undergraduates designed chemistry demonstrations, taught them to their classmates, and led them for children at the local Boys' and Girls' Club. At North Carolina A&T, I obtained a grant from the ACS Division of Analytical Chemistry to incorporate a semester-long service learning project into my instrumental analysis lab. Each lab group partnered with a 5th grade class at a local Greensboro elementary school. My students made two classroom visits to their partner class and hosted the 5th graders on a field trip to A&T's campus to perform a simulated ELISA assay. These presentations allow students to develop important professional skills and solidify their

SOURCE: https://sites.google.com/site/mkovarikteachingportfolio/home

What Should I Include?

Previous Responsibilities/ Representative Work

L. GIOVANNA URIST

CV | TEACHING PHILOSOPHY | COURSES TAUGHT | TEACHING MATERIALS | EVALUATIONS

HISTORY 111: EARLY MODERN EUROPEAN HISTORY, 1350-1815 (F '13)

History 111: Early Modern European History, 1350–1815
Fall 2013

Course Reflection

As of Fall 2013, I had taught this class twice, which allowed me to be much more relaxed in the classroom and also provided me an opportunity to revise things that did not go as smoothly the first time or revisit plans that went well. This semester, I used many more kinds of media to reach the students, such as video clips, pictures of the places and people pertaining to discussion, and also music from the period. This seemed to bring the period to life for the students. Furthermore, as a more experienced teacher and graduate student, the professor invited me to guest lecture for the whole survey of 230 students. I wrote and designed my own lecture titled "Art and Architecture in the Renaissance." It was an extremely valuable experience. Afterwards, the professor sat down with me and gave me feedback on my delivery and content, which was overwhelmingly positive as the professor wants the powerpoint I created for my lecture.

Syllabus prepared by Professor Chris Kyle

HST 111: Syllabus, Fall 2013

Sample Lesson Plan

This particular lesson plan was for the first section of the semester, so I used the reading that the students had to completed for that meeting to explain how they should approach primary sources in a history class and also to outline my expectations.

Lesson Plan Week 1

Quizzes

SOURCE: https://giovannaurist.wordpress.com/course-reflections/history-111-early-modern-european-history-1350-1815-f-13/

What Should I Include?

Contributions to Scholarship of Teaching

sciencegeekgirl

Dr. Stephanie Chasteen

stephanie@sciencegeekgirl.com

academic publications

I have engaged in traditional physics research (in condensed matter, at UC Santa Cruz), and in education research (at CU-Boulder)

Physics Education Research (CU Boulder)

I worked with the Science Education Initiative to assess student learning, create course transformations, and research the results of the transformations, in junior-level Electricity & Magnetism. **Click here to access those course materials**, as well as publications and posters. You may also visit the CU-Boulder **Physics Education Research (PER) group page** for our academic publications in education research.

Condensed Matter Physics (UC Santa Cruz)

I worked with **Dr. Sue Carter** on polymer photovoltaics (solar cells). My dissertation was on time-resolved photoluminescence studies of heterojunctions of electron- and hole-transporting materials for photovoltaics. My goal was to understand how certain canonical electron-transporters affect the excited state dynamics in a popular hole-transporting PPV polymer.

Academic & Professional Publications

The Colorado Upper-Division Electrostatics (CUE) Diagnostic: A conceptual assessment for the junior level, S. V. Chasteen, R. E. Pepper, M. D. Caballero, S. J. Pollock and K. K. Perkins, *Phys. Rev. S.T.: Phys. Educ. Res.* (submitted).

Observations on Student Difficulties with Mathematics in Upper-Division Electricity & Magnetism, R. E. Pepper, S. V Chasteen, S. J. Pollock and K. K. Perkins, *PhysRev: ST Phys Ed. Rsrch*, 8(1), 2012. **Online.**

Thinking Like a Physicist: A Case Study in Transforming Upper-Division Electricity and Magnetism S. V. Chasteen, R.E. Pepper, S. J. Pollock, K. K. Perkins, *Am. J. Phys.* (in press).

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Stephanie V. Chasteen

SOURCE: http://sciencegeekgirl.com/science_research.html

What Should I Include?

Professional Development Activities

SOURCE: http://michellejordansportfolio.weebly.com/workshops-and-events.html

What Should I Include?

Honors/Awards

KALANI CRAIG

Medieval & Digital Historian

ABOUT ▾ WORKSHOPS & TALKS DIGITAL HISTORY ▾ PEDAGOGY ▾

TEACHING PORTFOLIO

Teaching Philosophy

My ongoing teaching challenge is to both demonstrate the utility of historical practice and simultaneously communicate my awe of and enthusiasm for the past.

Read my full Statement of Teaching Philosophy

Teaching Digital Humanities with Analog Tools

It's hard to guarantee access to all the right tools for digital humanities in a standard classroom. That's doubly true in a survey course that's listed as a traditional history class, especially when it's not feasible to schedule every single class session in a computer lab. My series on teaching digital-humanities methodology with analog tools demonstrates how I adapt my teaching philosophy to the real-world constraints of the classroom.

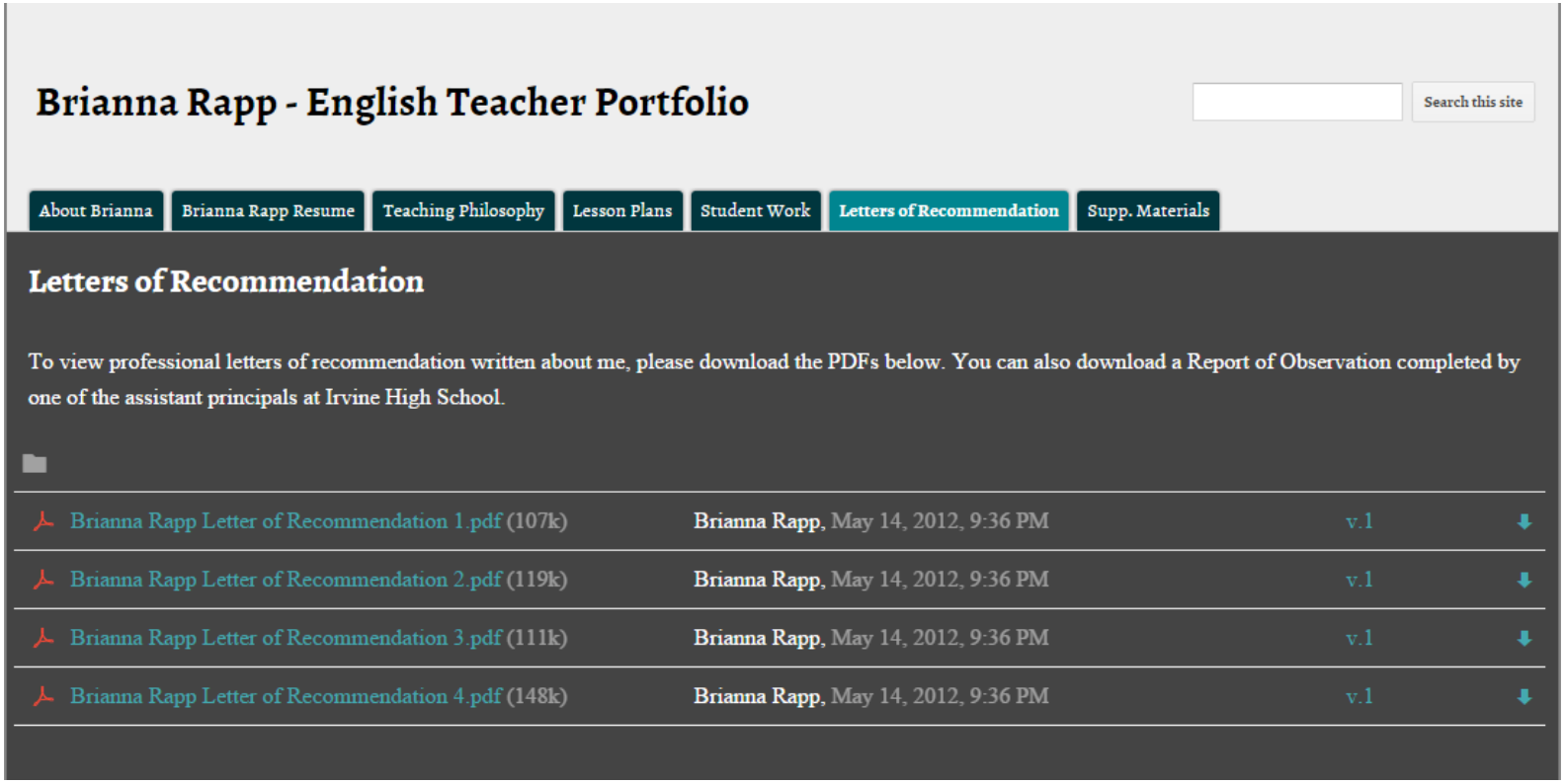
Teaching Awards

- **Susan O'Kell Memorial Award for Outstanding Associate Instructor,** *Department of History, Indiana University (2010-2011)*
- **Competitive teaching award for summer lectureship,** *Department of History, Indiana University (Summer 2010)*

SOURCE: http://www.kalanicraig.com/teachingportfolio/

What Should I Include?

Materials from Others



SOURCE: https://sites.google.com/site/briannarapp/letters-of-recommendation

Activity

1. Turn to your neighbor
2. Share a word or phrase that describes your teaching style.
3. Describe an artifact (e.g., lesson plan, assignment description, student comments, observation) that you could include as evidence of that word or phrase.

How Do I Create a Teaching Portfolio?

Step-by Step approach suggested by Peter Seldin

1. Summarize your teaching responsibilities
2. Describe your approach to teaching
3. Select items for the portfolio
4. Prepare statements on each item
5. Arrange the items in order (e.g., chronological, professional growth, thematic).
6. Compile supporting data
7. (Incorporate the portfolio into the curriculum vitae)

Seldin, P. (1997). *The Teaching Portfolio: A Practical Guide to Improved Performance and Promotion/Tenure Decisions.* Bolton, MA: Anker Publishing Company, Inc.

How Do I Create a Teaching Portfolio?

Additional Suggestions by Mike Reese

1. Define your intended audience
2. Choose a format: Paper or Web-based
3. Start collecting artifacts now!
4. Be selective in choosing what to share
5. Search for examples online
6. Connect with others – Get feedback
7. Be committed to it – Update it

Examples

- Giovanni Urist
  Wordpress / Selective / Doctoral Student

- Natalie Milman
  Web-page (embedded) / Selective / Professor

- Jessica Hausner
  Paper-based / Detailed / Doctoral Student

- Nancy Henke
  Web-page/ Detailed/ Master's Student

Additional Resources

- Center for Educational Resources
  - Advice
  - Video Support / Panopto
- Anne Reilly's *Teaching at the University Level* Course
- Richard Shingle's *Preparation for University Teaching* Course

Additional Resources

- *The Teaching Portfolio: A Practical Guide to Improved Performance and Promotion/Tenure Decisions* by Peter Seldin

- Washington University: http://teachingcenter.wustl.edu/About/ProgramsforGraduateStudentsandPostdocs/resources/Pages/Creating-a-Teaching-Portfolio.aspx

- Vanderbilt: http://cft.vanderbilt.edu/guides-sub-pages/teaching-portfolios/

- U of Virginia Website (Examples): http://trc.virginia.edu/topic/teaching-portfolios/

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Ph.D. Innovation Initiative
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C I R T L

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