Teaching Portfolio

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Contents:

1. Statement of Teaching Interests and Experience…… pg 2-3
2. Statement of Teaching Philosophy……. pg 4
3. Student Evaluations…… pgs 5-12

   a. Mentored Undergraduate Students *(University of Illinois at Chicago)*, pg 5-6
   b. Mentored Graduate Students (*Columbia University),* pg 7
   c. Statistics for the Behavioral Sciences *(University of Illinois at Chicago)*, pg 8
   d. Introduction to Cognitive Psychology *(Penn State-Berks),* pg 9
   e. Human Sexuality and Health *(Penn State-Berks)*, pg 10-11
   f. Introduction to Agent-Based Modeling of Social and Political Process (Virginia Tech), pg 12

Statement of Teaching Interests & Experience

Summary of Experience: To date, I have taught three university-level undergraduate courses: Statistics for the Behavioral Sciences (University of Illinois at Chicago), Introduction to Cognitive Psychology (Penn State – Berks) and, Human Sexuality and Health (Penn State – Berks). Further, I recently taught a PhD-level seminar course (Intro to Agent-Based Modeling of Social and Political Process (Virginia Tech).

In addition, I have mentored 14 undergraduates and 5 graduate students on several psychology and epidemiology projects (ranging from psychological laboratory experiments to field surveys in schools to computational modeling of social processes and psychological processes). I have served as primary thesis advisor to one master's level student at Columbia University's Mailman School of Public Health and I currently serve as primary dissertation advisor for a PhD student at Virginia Tech. Furthermore, over the past several years, I've taught a handful of workshops to professionals and faculty about both advanced statistical programming and computational modeling of social processes.

Courses of Interest

Cognitive Track: Cognitive Psych/Cognitive Science, Cognitive Neuroscience, Computational Modeling
Methods Track: Research Methods, Intro to Statistics and Measurement, Advanced Statistics, Computerized Laboratory Methods, Cognitive Methods, Programming and Mathematical Modeling in Psychology
Health Track: Health Psychology, Health Behavior and Education, Intro to Epidemiological Methods and Biostatistics, Computational Modeling of Social Processes, Social Epidemiology, Life-course Methods, Social Network Analysis
Miscellaneous: Experimental Aesthetics, Individual Differences, Introduction to Psychology, Policy and Psychology, Internship/Fieldwork/Independent Study.

Teaching Experience

Mentorship

Level	Name	Graduation Year and Placement/Status
Undergraduate	Matt Jacobs	1998, research analyst at Bank Financial
Undergraduate	Janet Ibe	1999, program coordinator at Mercy Home for Boys
Undergraduate	Corey O'Halloran	1999, graduate school in Library Science (Dominican Univ.)
Undergraduate	Lucy Peralta	1999, doctoral program at University of Arkansas
Undergraduate	Brian Fask	1999, counselor at Thresholds
Undergraduate	Neil Smith	2001, no follow-up information
Undergraduate	Chris Sanchez	2001, doctoral program at University of Illinois at Chicago
Undergraduate	Marina Bornovalova	2003, doctoral program at University of Maryland
Undergraduate	Ayesha Atique	2003, Pacific College of Oriental Medicine
Undergraduate	Lonika Misra	2003, Pacific College of Oriental Medicine
Undergraduate	Faith Nastali	2004, no follow-up information
Undergraduate	Yumi Okabe	2005, no follow-up information
Undergraduate	Esther Yoon	2006, no follow-up information
Graduate (PhD)	Sanyukta Marthar	2012, postdoctoral fellow at Columbia Mailman School of Public Health
Graduate (MPH)	Clare Evans	2011, doctoral program at Harvard School of Public Health
Graduate (MPH)	Andrew Kolsenko	2015, currently enrolled (Columbia University, Economics)
Graduate (MPH)	Dan Chen	2014, currently PhD student at Virginia Tech
Undergraduate	Emily Stark	2017, currently applying for cognitive science PhD programs
Graduate (PhD)	Dan Chen	2020, currently my PhD advisee funded by NSF (Orr-PI)

Course Instructor

Subject *(Undergraduate (U) or Graduate (G))*	**Institution**	**Date**
Statistics in the Behavioral Sciences (U)	University of Illinois at Chicago	Spring 2000
Quantitative Methods Tutorial (workshop) (G)	Columbia University	Spring 2007-08
Advanced Stat Methods Using Stata (workshop) (G)	Guttmacher Institute	Winter 2007
Complex Systems Approach to Health Behavior and Social Epidemiology (workshop) (G)	Columbia University	Spring 2010
Human Sexuality and Health (U)	Penn State-Berks	Fall 2010
Introduction to Cognitive Psychology (U)	Penn State-Berks	Spring 2011
Intro to Agent-based Modeling Soc. And Pol. Process (G)	Virginia Tech	Spring 2015

Statement of Teaching Philosophy

My teaching philosophy is simple: motivation is the key to effective learning. How do we motivate students today? First, and foremost, employ the dictum "teaching by doing." This is a pillar in the Open Learning Initiative based at Carnegie Mellon University. A clear example of this, and a favorite activity of mine, is mentorship in research.

I still remember the first moment that I stepped into the lab as an independent study student at West Chester University in 1992. The moment that my mentor, Mike Renner, gave me the key to his laboratory, I rushed over to the lab. As I put the key in the lock, I though 'Wow, now I'm a scientist. This is amazing.' Such awe recurred to me more as an undergraduate than during any other part of my training. Those were heady times, no doubt. I want my students to experience the same. Mentorship is a potent means to this end.

Through mentorship students learn much more than how to use statistical and/or experimental software or how to collect survey data. Mentorship allows students to learn to enjoy research by observing someone else's zeal for research. They learn that a good writer does not quickly and effortlessly crank out perfect articles. They learn that good science is usually a thoughtful, deliberate, difficult and collaborative process. They learn to take pride and have confidence in their creations and ideas. These are things that are best learned through immersion in scientific research. In short, becoming a scientist or a professional that requires, at some level, the consumption of science takes practice in science itself. And, we should not forget the reciprocity principle: students and mentors learn from one another--it is not a one-way street.

But mentorship applies more broadly, even to the traditional course environment where students can mentor each other to be more openly inquisitive, more analytical, and more sensitive to different perspectives. How is this done? There are several ways. First, we need to explore alternative medias that match the modes that are familiar to students. A very good example of this is the Introduction to Psychology course offered by the Open Learning Initiative. It is a web-based learning media (a textbook of sorts) that captures well the spirit of learning by doing. Second, develop collaborative experiences, possibly by leveraging social media, that will increase the dialogue among class participants and increase the motivation to learn from others. Third, transform class time into a working session, or workshop, that focuses more on the difficult course content. This requires shifting the way course content is absorbed by the student from the traditional textbook, lecture, text/quiz approach to a more interactive, socially engaging, and active-learning approach. These represent some of the potential methods that I have identified to incorporate teaching by doing in the traditional course setting. Naturally, from the professor's perspective, implementing these will best be done using the same dictum: teaching by doing. Rigor in evaluation of such methods will be paramount.

In closing, we are at exciting historical moments in both education and psychology. On one hand, education and technology are merging to produce an unprecedented change in how information is exchanged, digested and synthesized by both students and professors. On the other hand, psychology has started to interface, in a non-trivial way, with both sociological and neurophysiological levels of analysis and with large, unstructured data stream (e.g., social media and sensors). As a teacher/scholar of psychology, both of these developments must be heeded if pedagogy is to prove effective and relevant. The way forward will be to adopt a broad view of psychological science and to pursue judicial experimentation with the new and ever-changing electronic social and educational medias. The end goal is to provide an active, exploratory approach to scholarship that cultivates the curiosities of students and stimulates their own active approach to learning.

Student Evaluations from 7 Mentored Undergraduates at University of Illinois

A. Mean and frequency distribution for questions an exit survey from my laboratory. For all questions but #38, the rating scale was as follows: 1=Disagree, 3=In-between, 5=Agree

Question	Mean	Frequency Distribution: Disagr. (1)	(2)	In-betwn (3)	(4)	Agree (5)
1. Your understanding of how research is conducted has increased significantly	4.43	0	0	0	4	3
2. Your ability to think like a researcher has increased	4.29	0	0	1	3	3
3. Instructor was enthusiastic about you learning the necessary skills for becoming a competent researcher	4.72	0	0	0	2	5
4. Students were invited to share their ideas and knowledge	5	0	0	0	0	7
5. Students felt comfortable to question or challenge the instructor	4.86	0	0	0	1	6
6. Instructor had a genuine interest in individual students future career	4.86	0	0	0	1	6
*NEW QUESTION TYPE****	Mean	Much Worse	Aver.	Much Better	***	***
Compared with other courses youhave taken at UIC, this was	3	0	0	7	*	*
Compared with other instructors you have had at UIC, this instructor was	3	0	0	7	*	*

B. Selected open-ended comments:

"Far beyond his responsibilities, Mark assisted me in finding additional research opportunities, months after graduation, which proved instrumental in landing my present job (Market Research Analyst). Mark is an excellent instructor and an excellent person."

"In speaking with other students who have taken the same course [directed research], I feel fortunate to have worked with Mark Orr. He always took the time to explain anything he could, and if he wasn't familiar with what I asked about, he would always find references or refer me to someone with that information."

"Mark was very helpful. He gave me tremendous help in applying for graduate school. I honestly felt that if I ever needed help with anything, he would have tried to help me."

"Mark makes a really good teacher because he explains things fully and quickly."

"Mark Orr, as a teacher, created an open and comfortable atmosphere for asking questions which I think is the most important element in the learning process."

"Mark was very easy to work with. He was as flexible as he could be with his time, and did not have a condescending disposition. I always felt comfortable asking or talking about anything with him."

"The research with Mark greatly enhanced my understanding of the research process. His instruction and his willingness to discuss the process and his own future plans with research allowed me to better define my own path."

"It was really enjoyable working with Mark Orr during the last semester of my psychology curriculum. I doubted my choice in major, but Mark helped me view psychology in a different light. Honestly, that research project sparked new ideas into studying psychology further."

"I learned that a lot of planning goes into conducting research. You have to get subjects, decide what variables to study, and so on. I think that conducting the experiments [with Mark] has prepared me for doing my own."

Student Evaluations from 2 Mentored Graduate Students at Columbia University

Selected open-ended comments:

"During the summer of 2010—between the first and second year of my MPH degree program at Columbia University School of Public Health, Dr. Mark Orr was my practicum preceptor. This was an amazing experience for many reasons and it was all thanks to the excellence of Dr. Orr as a mentor. First, my interests in public health research throughout my first year were clearly tending towards something to do with innovative research methodologies and complex systems. However, I had not yet truly been introduced to the field of complex systems and agent-based modeling. When I began my practicum with Dr. Orr he essentially taught a condensed class, aimed at me personally, on the above subjects. It ended up being one of the most exciting and educational experiences of my time at Columbia, and it introduced me to the tools I intend to use throughout my own academic career. Second, Dr. Orr was enormously helpful in providing a wide range of guidance—from general advice about how to proceed with my academic career, to classes I may find interesting, to books I should read and subjects I should explore. I am the first person in my family to pursue an academic career, and Dr. Orr was the best possible resource a young researcher like myself could hope to encounter early on. After completing my practicum, which culminated in the successful publication of a research paper with Dr. Orr, he went on to become my Masters Thesis sponsor. As my sponsor, Dr. Orr devoted large amounts of time to guiding me through the process of conducting and producing a piece of original research. In the end I received an Honorable Mention for excellence of my MPH thesis, awarded from my department at graduation. I was also accepted to the Doctor of Science program at the Harvard School of Public Health, where I was awarded the Taplin Fellowship. I view all of these successes as being made possible thanks to the excellence of Dr. Mark Orr's mentorship, teaching skills, and devotion to assisting me as I begin my academic career. I cannot praise highly enough his abilities and character, and strongly recommend and endorse him for any positions involving teaching, mentorship and research."

"In the past year I have been privileged to work as a research assistant for Dr. Mark Orr. Mark has been an exemplary research investigator, open minded and very able to entertain new ideas while keeping a focus on the project at hand. In addition, while encouraging productive and independent thinking, he is very accessible, which in my view is crucial in collaborative research. It is always easy to get his views on whatever latest research problem is coming up. In all, I feel that after having worked with Mark I have a much better grasp of not only of a particular research project that I have been a part of, but of social science research in general."

Student Evaluations for Lecture Course

Psychology 343, Statistics for the Behavioral Sciences, Spring 2000, University of Illinois at Chicago

A. Mean and frequency distribution for selected questions from the end of semester survey (Undergraduate Student Government Form). For all questions but #38, the rating scale was as follows: 1=very poor, 2=poor, 3=average, 4=good, 5=very good.

Question	Mean	Frequency Distribution				
		V. Poor (1)	Poor (2)	Aver. (3)	Good (4)	V. Good (5)
6. Instructor's style of presentation held your interest	3.94	0	0	5	8	4
7. Instructor's explanations were clear	3.71	0	0	3	4	5
8. Course materials were well prepared	4.06	0	0	3	10	4
13. Students were encouraged to ask questions and were given meaningful answers	4.29	0	0	3	6	8
15. Instructor was friendly towards individual students	4.59	0	0	0	7	10
17. Instructor had genuine interest in individual students	4.31	0	0	2	7	7
23. Methods of evaluating student's work was fair and appropriate	4.47	0	0	1	6	10
28. Compared with other courses you have taken at UIC this course was	3.94	0	0	6	6	5
29. Compared with other instructors you have had at UIC this instructor was	4.24	0	0	3	7	7
*NEW QUESTION TYPE****	Mean	YES	NO	***	***	***
38. Would you recommend this course and instructor to a friend?	87% Yes	13	2	*	*	*

B. Selected open-ended comments:

"After having taken the same course last year (and being lost the whole time), I was surprised at the normalcy and clarity that this instructor brought to this section."

"I am glad to have you teaching this somewhat difficult material. I think you are extremely fair and concerned about making sure we are learning the material if we are making sincere attempts. I also think the test was very fair."

"Instructor took time to answer all questions as adequately as possible. Also, his grading was very fair as he had concern that each student actually learn the material"

"Well the pace of the class is excellent. You are very patient and you care about whether we understand the material. Also, you really make the material clear."

"You gotta keep not forgetting how to put yourself in a student position"

"We all followed along well, and the lectures were very clear."

Student Evaluations for Lecture Course

PSY 256, Introduction to Cognitive Psychology, Spring 2011, Penn State Berks

Final Official On-line Evaluations (44% Completion Rate)

		Frequency Distribution (7-pt Scale)						
		Lowest Rating			Average			Highest Rating
Question	**Mean**	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Overall quality of the course	4.9	2	0	0	3	0	2	4
Overall quality of the instructor	4.8	2	0	1	2	0	2	4
Clarity of instructor's presentations	5.2	1	1	0	1	1	4	3
Effectiveness of examples to clarify difficult concepts	5.6	1	1	0	0	1	2	6
Instructor's availability during office hours and appointments	6.8	0	0	0	0	0	2	6
Students' freedom to ask questions and express opinions	6.6	0	0	0	0	1	2	8
Instructor's respect for students as individuals	6.4	0	0	0	1	1	2	7
Instructor's knowedge of the subject matter	6.5	0	0	0	1	1	1	8
Adequacy of the instructor's references to related research	6.1	0	0	0	2	1	2	6
Instructor's preparation for class	5.4	1	0	0	1	3	3	3
Instructor's skill in emphasizing main points in lecture/disscus.	5.3	2	0	1	0	1	1	6
Clarity of the syllabus in stating objectives, outline and grades	5	1	0	1	3	1	1	4
Correspondence between exams and emphasized materials	5.2	1	1	0	2	1	1	5
Appropriateness of the difficulty of the exams	5.9	0	0	0	2	1	4	4
Exams tested understanding and not memorization	4.8	1	2	1	1	0	1	5
Encouragement to apply concepts to show understanding	5.4	1	0	1	1	1	1	5
Adequacy of amount of information learned	4.8	2	1	0	2	0	1	5
SUMMED FREQs =		15	6	5	22	14	32	89
PROPORTION OF TOTAL =		**0.08**	**0.03**	**0.03**	**0.12**	**0.08**	**0.17**	**0.49**

Student Evaluations for Lecture Course

BBH 146, Human Sexuality and Health, Fall 2010, Penn State Berks

Mid-Term Evaluation (by Instructor)

A. Mean and frequency distribution for selected questions from mid-term semester survey. For all questions but #38, the rating scale was as follows: 1=very poor, 2=poor, 3=average, 4=good, 5=very good

Question	Mean	Frequency Distribution				
		V. Poor (1)	Poor (2)	Aver. (3)	Good (4)	V. Good (5)
6. Instructor's style of presentation held your interest	4.54	0	0	1	11	16
7. Instructor's explanations were clear	4.42	0	0	2	12	14
8. Course materials were well prepared	4.03	0	1	8	8	11
13. Students were encouraged to ask questions and were given meaningful answers	4.89	0	0	0	3	25
15. Instructor was friendly towards individual students	4.89	0	0	0	3	25
17. Instructor had genuine interest in individual students	4.75	0	0	0	7	21
23. Methods of evaluating student's work was fair and appropriate	4.53	0	0	2	9	17
28. Compared with other courses you have taken at Penn State Berks this course was	4.64	0	0	0	10	18
29. Compared with other instructors you have had at Penn State Berks this instructor was	4.46	0	0	3	9	16
*NEW QUESTION TYPE****	Mean	YES	NO	***	***	***
38. Would you recommend this course and instructor to a friend?	100% Yes	28	0	*	*	*

Student Evaluations for Lecture Course

BBH 146, Human Sexuality and Health, Fall 2010, Penn State Berks

Final Official On-line Evaluations (56% Completion Rate)

		Frequency Distribution (7-pt Scale)						
		Lowest Rating			Average			Highest Rating
Question	**Mean**	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Overall quality of the course	5.8	0	1	0	3	4	6	10
Overall quality of the instructor	5.4	1	1	1	3	3	7	7
Clarity of instructor's presentations	5.4	0	1	1	5	4	6	6
Effectiveness of the instructors definitions of concepts	5.5	0	2	1	3	3	6	9
Instructor's skill in handling students' questions/comments	5.8	1	0	1	0	5	7	10
Pacing of lectures and presentations for note taking	5.5	0	2	1	2	3	6	7
Instructor's skill in commuicating at appropriate student level	5.9	0	2	0	2	3	4	13
Instructor's interest in students' understanding the material	5.7	1	1	1	1	3	8	9
Instructor's adequacy of knowing the subject matter	6.4	1	0	0	0	1	6	15
Instructor as an intellectual role model	5.4	2	0	1	3	3	7	8
Clarity of the communicatio about course objectives	5.3	1	0	1	6	4	6	6
Usefulness of instructor's comments on papers/exams	5	3	0	2	3	1	6	6
Fairness of the overall grading system	5.6	2	0	0	1	6	6	9
Instructor's skill in stressing important material	5.1	1	0	2	5	3	9	3
Effectiveness of the course in improving critical thinking	4.7	3	1	1	5	2	4	6
Effectiveness of the course in improving problem-solving	4.9	3	1	2	3	1	7	6
Importance of knowledge learned in this course	5.7	1	1	0	3	2	7	10
SUMMED FREQs =		20	13	15	48	51	108	140
PROPORTION OF TOTAL =		**0.05**	**0.03**	**0.04**	**0.12**	**0.13**	**0.27**	**0.35**

Student Evaluations for Graduate Seminar Course

UAP 5984, Introduction to Agent-Based Modeling of Social and Political Process, Spring 2015, Virginia Tech

"Thank you very much everything! This was an outstanding course, and gained a lot from this."

"It was a powerful learning experience for me and highly enjoyable. This course would be very beneficial for other CPAP students, PhD and MPA."

"I would suggest the course to others. Many of the MPA students are currently working in roles that require some form of decision science. While decision science tends to be focus on business schools, I think MPA students could benefit from similar exposure."

"I have already suggested it to other PhD students. The typical bases of my recommendation are: 1) the course provides students with a new methodological tool for research; 2) the course provides an exciting new perspective for considering policies as complex systems; and, importantly, 3) the course is a lot of fun."