

Academic Goals

My primary area of academic interest is in the research and design of online learning environments in science education. My prior coursework and current professional appointment have provided me with a considerable grounding in the issues and literature of both science education and instructional technology. What I would like to do, with my remaining coursework, is become well versed and confident in a variety of methodological approaches.

During this past year, I left my job designing science education video games to work as a school-based technology specialist for Fairfax County Public Schools. In this role, I am primarily concerned with teacher development and empowerment in using technology. For this reason, I plan to focus more on teachers and teacher development as my research moves forward.

Research Goals

As the Internet has become ubiquitous in our lives, educators have debated its role in education. Is it a force for good or bad, a waste of money or a vital investment? I am not interested in these evaluative conversations. Digital media is a medium like all others: books, movies, radio. It can do something things very well, and it will fail in others. I am interested in examining the features native to digital media and better understanding what types of information and experiences are enhanced by digital media and what types are hindered. In particular, I am interested in how digital media shapes science education.

One of the many dramatic changes the Internet has had on American cultures have been the facilitation of media creation and dissemination. Traditional barriers to media publication,

regardless of whether the media in question is text, music, or video, are obsolete. Any individual with access to technology now has the opportunity to create and distribute his or her work, and this has significantly changes the landscape of every information-based industry. Record companies struggle with obsolete revenue-generating models, book-publishers panic for relevance, journalists compete with bloggers, and user-content generated sites like Youtube and Vimeo birth pop-cultural phenomenon that exceed the viewerships of network television programming. Education is, of course, not untouched by these radical changes in information dissemination. Although the extent to which the Internet has, and ought to, impact traditional K-12 education is a matter that is currently up for great debate, there are cites where teachers have taken on a visible role in creating and sharing their own, “home-made” education media. With my own background as a designer of educational media and current work with teachers to empower them to be technologically proficient, I have begun to think more deeply about who these new teacher content creators are, and what the nature of their shared content is, especially in the area of science education.

Such work would likely involve methods such as online interview and content analysis of online video. Both of these research methods are relatively new, ill-defined, and in need of methodological innovation and attention. For this reason, I am excited about the potential to utilize my growing knowledge and understanding of educational research methods to make novel contributions to these methodological questions, which I imagine will only grow over time.

Professional Goals

This past year, I spoke on this topic at the Games for Learning Institute and the Games, Learning, and Society Conference and was asked to judge games for the second annual best game award from the Games 4 Change organization. I

I also completed an internship with Erin Peters-Burton investigating teachers' understanding of scientific literacy. This was a qualitative study will build my content understanding in issues of teacher development and scientific literacy while helping me deepen my proficiency in qualitative research. Our paper was accepted and presented at the top science education research conference, the National Association for Research in Science Teaching and I have submitted the paper for review to the International Journal of Science Education.

I have continued my work and interest in methodological scholarship. This work continues to be the most intellectually challenging part of my doctoral work so far. I've continued working as a graduate assistant for Joseph Maxwell. Among the variety of topics I've been able to explore as part of this assistantship, Maxwell and I have begun to collaborate on culture, contiguity, and diversity and their implications on research. I have also been working with Dr. Maxwell on his forthcoming book on realism in qualitative research. This has been a wonderful opportunity for me to deepen my understanding of that topic and I have really enjoyed seeing how qualitative research is a living, breathing, and evolving field. It is so different from the Creswell-textbook presentation of it. I have been working on a review of methods that illustrate how qualitative methods can be sensitive instruments for better understanding under-utilized notions of culture. I hope to submit this review for the 2012 AERA conference. In addition, Dr. Maxwell has some projects in the pipeline concerning validity in qualitative research, which is a topic I am eager to sink my teeth into.