



The University of Georgia

**Graduate Portfolio in Community Engagement
COVER SHEET**

Date of Submission: _____ (due April 1 or November 1 for review cycle)

Name: _____

Department and Major: _____ Degree: _____

Expected Semester/Year of Graduation: _____

Email: _____ Preferred Phone: _____

Mailing Address: _____

Portfolio Faculty Mentor Name: _____ Email: _____

Title of Community Engagement Portfolio Project: _____

Project is: Engaged Research Engaged Teaching Engaged Service & Outreach

Workshop Attendance Dates: (if via GRSC 7870S or 7970S, indicate semester/year)

- Introduction to Community Engagement _____
- Preparing the Graduate Portfolio in Community Engagement _____

Sample Portfolios will be available online via the Office of Service-Learning's website.

- May we include your Portfolio on the website?: Yes No

Please include all the following with your Portfolio submission, assembled as a single PDF:

- This Cover Sheet
- Community Engagement Philosophy (2 pages)
- Description and Self-Assessment of Community Engagement Project/Activity including
 - Narrative overview/description (1 page)
 - Impact/anticipated impact (1-2 pages)
 - Reflective assessment, linking to engagement philosophy and future (2 pages)
- Curriculum Vitae, including relevant engagement experiences (2-4 pages)
- Letter of support from faculty mentor (1-2 pages)
- Appendices with letter from community partner and any additional supporting information

For OSL Use:

v. 5.2014

Date received:

Outcome of Review:

Community Engagement Philosophy

My interest in the topic of my research and in the field of science itself can be traced back to interactions with a small number of passionate individuals. To this day, I credit my initial spark of curiosity as being struck by Dr. Doyle, the husband of my second grade teacher. He led Science Tuesdays weekly in our classroom, showing the varying ways that the natural world can be fascinating and inspiring to our young minds. His knowledge and wonderment about the natural world inspired me to further my questioning of the world around me and set off my career in the sciences. During this career, I found that my passion also lies in education and sharing my wonderment of the natural world with others. I see communication of my research as an integral portion of my job as an educator. Like Dr. Doyle, I seek to inspire young minds towards careers in science or simply towards a further appreciation of the natural world around me. In my career, I get to fulfill this duty in college classrooms, but in this effort I am only reaching a small percentage of my community, primarily comprised of those like me demographically and socioeconomically. Thus, my approach to community engagement comes from a perspective of wanting to better the community around me with education: hoping to inspire young minds towards higher education and a better appreciation for the natural world.

This goal cannot be accomplished by simply lecturing to the community around me. These attempts may be beneficial, but fail to define the needs of the community to which they are reaching out to. Instead, I must open a dialogue with those within the community, and learn from them how I can best help: identifying the **significance** and **context** within which my efforts may make an **impact**. This fosters a sense of ownership by those around me, and allows for **reciprocity**, as the open dialogue will foster the raising of concerns and wants by both parties. Thus, I have sought for opportunities to combine these tenants of effective community engagement with my passion for education and inspiring young minds.

Within my outreach opportunities, I have sought to accomplish this process by reaching out to local middle schools and meeting with life science teachers to find out how a team of my peers (biology graduate students) may best help the middle school students. By opening this dialogue, I learned that what they need most is simply more

help and reiteration of the course material that teachers are already implementing in their classrooms, providing a **context** for my project.

In this effort to educate young minds, assessment can be difficult for a quantitative scientist, such as myself. Thus, I have had to learn to turn to qualitative measures that I receive from the teachers in how our lessons to these students are providing an **impact** for these students in potentially better understanding their material and better appreciating the natural world around them. This further emphasizes the great importance of maintaining open communication with my partners, so that they can inform me of the efficacy and structure of this program. Towards this effort, I have set up monthly meetings with teachers to ensure that their needs and mine are met to a degree of satisfaction and that our efforts are continuing in a positive direction.

The crux of my philosophy towards community engagement is a sharing of passion, ideas, and knowledge being community partners. My passion for science and education can only be shared effectively if I work *with* the community that I would like to reach, rather than attempting to work *for* this community.

Project Description

In 2013 and 2014, I had worked with a group of fellow graduate students to bring short plant biology lessons to the Agri-science classrooms of a local middle school. The teacher whose classes we were working in retired in the spring of 2015, providing me the opportunity to evolve this program from one of graduate student outreach to one of community engagement. The goal of the initial group was to expose local middle school students to plant science with short active-learning lessons. This program successfully accomplished getting students excited about plants and the natural world around them. However, the content of our lessons had been chosen and implemented solely by the graduate students, and learning objectives often missed those of either their teacher or their school.

After discussions with teachers, I identified a specific need among 7th grade life students at Clarke Middle School: reinforcement of concepts that will appear on state testing at the end of the spring semester. Further, teachers pointed out that students display a general lack of appreciation for the natural world around them, a lack of understanding of what research scientists do, and an inability to picture themselves in higher education in their futures. In an effort to meet these needs and to create a program of community engagement, I restructured the program mentioned previously mentioned into one that addresses specific topics related to the students' curriculum.

This re-vamped program broadens its focus away from solely plant biology into broader disciplines of biology, including genetics, ecology, and cell biology. For implementation of this plan, we have taught in the classroom of Ms. [REDACTED] at CMS each Wednesday of the Spring 2016 semester. There are currently 8 graduate students who come into the classroom each week, breaking students into 5 small groups for implementation of our lessons.. Thus, we set out to work together (7th grade teachers and a small group of graduate students) in creating 50-minute, hands-on lessons/modules that will highlight concepts covered in their classrooms, and elaborate on these concepts, using research and equipment from the university. Thus, this project falls within the definition of engaged public service and outreach. To ensure that our lessons were effective and were within the scope of expectation, I met with Ms. [REDACTED] in order to address any concerns and evaluate the program on a monthly basis.

Impact

Ideal end products for this program are: improved knowledge of key concepts for state testing, and a better appreciation for the natural world, research, the experimental method and higher education as a possibility by the CMS students. In order to address these needs, I maintain contact directly with our 7th grade teacher/partner, Ms. [REDACTED], in order to design material that best suits her classroom. As we are at a leading research institution, we have access to materials and cutting-edge research techniques that middle schools simply do not. Therefore, we have been able to provide lessons, modules, and experimentation techniques to the students that would otherwise go unaffordable, or unknown, to the teachers. These lessons have included plants from across the globe that are curated by our Botany Research Greenhouse facilities, living samples from the UGA herpetology collection, microscope slides made for graduate student research, and equipment from research labs across campus. By creating targeted lessons, we strive to directly affect student learning and appreciation of the course material, as well as the scientific process as a whole. By discussing our research, our jobs, and our scientific lives with students, we have exposed them to the importance of higher education and possibilities within the sciences that they may be able to explore for their futures. By exposing them to new organisms and ecosystems, we have sought to strike interest and appreciation for the natural world around them.

Appreciation for the natural world, interest in higher education, and knowledge of the scientific process are difficult metrics to assess. Thus, I have relied upon open communication with the middle school while working with them to assess the work we are doing. Each month I met with Ms. [REDACTED], outside of our scheduled classroom time, to discuss whether our efforts were seen as effective and to reevaluate any methods that may have been seen as ineffective or even negative to the learning environment we sought to create. Ms. [REDACTED] has had very positive reviews of our efforts stating that students have continued to ask questions inspired by our lessons, and appear to have grown in their appreciation for science as a discipline. Some hard data may become available in the form of grades of the 7th graders, which we may be able to quantitatively assess student improvement in science learning and understanding. This, however, is not currently available as per restrictions on access to student grades. However, we will

be working towards improvement of future years in the implementation and possible expansion of this program. Critical analysis of these efforts will allow myself, and future graduate students, to enhance this program and keep up with changing classrooms and curriculums.

This project has sought to not only expose the middle school students to material and methods beyond those they may find in their classroom, but also to provide lesson-planning and experimental design experience to graduate students in various disciplines at UGA. As future faculty, researchers, government workers, or community partners, communicating our work to the public (even those in their pre-teens) is an important function of our careers. A majority of the graduate students who have participated in this program have expressed an interest in teaching in their future career. This program provides key lesson planning experience, and potential ideas for future service-learning opportunities to these graduate students. Further, this experience provides opportunities for teaching projects that can be used towards the UGA Teaching Certificate.

Reflective Assessment

This program taught me multiple lessons, and I am quite sure that I will continue to learn through the (hopefully many) future cycles of this program to come. The first of these came when I began to search for a home for our program following the retirement of the teacher with whom I had previously worked. Having seen positive reactions from our previous efforts at Hilsman Middle, I was under the naïve assumption that teachers and/or schools would jump at the chance to have a similar program implemented in their classroom(s). However, I was instead met with multiple rejections and un-retuned emails from school around the county. Thankfully, I was able to make use of my community engagement mentor, Jim Geiser, who contacted the assistant principal at Clarke Middle and opened a dialogue for my involvement. This initial lack of response caused me to reassess the context of my involvement and my expectations for the program. I had been expecting schools and teachers to be excited by help, while disregarding the fact that many teachers are working hard to prepare their students to succeed in their classrooms and in need of all of the class time that they can get. With increasing pressure towards state testing scores, these teachers needed to ensure that my efforts would be effective and, at least in part, towards this goal.

Finding a community partner in Ms. [REDACTED] at Clarke Middle began a rapid progression of setting up logistics and ensuring that graduate student involvement was in place to support this program. This rapid progression led to many learning opportunities, as I found myself the designer, coordinator, and university liaison for this new program. I had previously only acted as a coordinator for an already fully designed program and was slightly unprepared for what was to come. I have always been an independent worker, and had little experience being in charge of or managing others in a common effort. Thus, I found a new appreciation for delegation and asking directly for those things that I cannot do fully by myself. For example, when setting out to design lesson plans for this project, I had not fully appreciated the difficulty in putting together 7 fully formed, 7th grade appropriate lessons. However, as soon as I began directly asking my fellow graduate students for help, I found the support I needed.

This program was a great lesson in not only delegating the workload to allow myself room for work in other areas, but also allowing work to be done without my

hands playing a part (i.e. trusting that this work can be done to standards without my involvement). These are basic skills of any effective manager, but take time and practice to learn. This delegation also brought in the importance of open communication between individuals involved along the process. As discussed above, being able to easily access the graduate students who are helping me with this project and allowing them to take large roles in this program's implementation has been invaluable for both my schedule and sanity. Further, and potentially more importantly, maintaining contact and communication with the school and teachers was imperative to ensure that this program remained effective and on mission.

This communication was the barometer on which I based the program's success. Her continued excitement and praise of our lessons gave us the feedback that we needed to ensure our program remained on a path of effective implementation. We met as graduate students bi-weekly to ensure that all of us were on the same page, and remembered that the context of our project was to teach and excite our 7th grade classrooms. As graduate students are often bogged down in their own work and issues, these meetings served as a reminder that this program was not another meeting or obligation, but an opportunity to share our love of science and maybe even remember that we do, in fact, love science even after hours of dissertation-writing.

Through this semester, I learned that by making sure that all members along this process understand the expectations and outcomes of the project, I can ensure a best chance at its success. Overall, I think that this program was set up to become a success within the school, and I hope that by maintaining communication and assessment, we will create a lasting entity within this community. My future plans for this program are to recruit a volunteer coordinator out of the current pool of graduate student volunteer instructors. I will "mentor" them next year before I graduate, initiating a process of passing down knowledge from year to year. If this program grows beyond its current supply of graduate students, there is a possibility that we could accommodate a second classroom at Clarke Middle in future years with multiple teams helping to improve lesson plans and stay relevant with the 7th grade curriculum.

Alex J. Pilote**Curriculum Vitae**

 Dept. of Plant Biology • The University of Georgia • 2502 Miller Plant Sciences • Athens, GA 30602

Education

 2017 (Expected) Ph.D. Plant Biology, The University of Georgia, Athens, GA
 2012 M.S. Geography, The University of Tennessee, Knoxville, TN
 2010 B.S. Wildlife & Fisheries Science, Tennessee Tech University, Cookeville, TN

Professional Appointments***Instructor of Record***

2016 Principles of Plant Biology

Graduate Teaching Assistant (90% Instructor of Record)
 2014 Introduction to Biology I lab
 2013 Introduction to Biology II lab
 2012 Introduction to Physical Geography II lab
 2011 Introduction to Physical Geography I lab
Graduate Lecture Assistant
 2015 Principles of Plant Biology
 2015 Introduction to Biology I (non-majors section)
 2014 Introduction to Biology II
 2011 Introduction to Physical Geography II
 2010 Introduction to Physical Geography I
Graduate Research Assistant
 2013 *Dept. of Biological Sciences*
 Efficacy of interactive case studies in an Introductory Biology course
Further Teaching Experience***Instruction and Curriculum Design (non-paid positions)***
 2016 Undergraduate Seminar: Plant-Based Solutions
 2014 Freshman Seminar: Plant Adaptation to Harsh Environments
Lab Course Design and Improvement

2011-12 Introduction to Physical Geography I & II

Pedagogy Courses Taken
 2015 Graduate Seminar in Service Learning and Community Engagement
 2013 Undergraduate Course Design
 2012 Pedagogy of Writing in the Sciences
 2012 Graduate Seminar in Undergraduate Education
Professional Development
 2016 Graduate Portfolio in University Teaching, University of Georgia
 2016 Teaching Internship in the Biological Sciences
 2015-16 Plant Biology Graduate Student Association Peer Teaching Evaluator
 2012 Center for the Integration of Research, Teaching, & Learning Fellow
 2011-12 Head Graduate Teaching Assistant

Community Engagement and Outreach

Program Designer and Coordinator

- 2015-16 Clarke Middle School community engagement partnership
 Weekly lessons and experiments for 7th grade life sciences classrooms designed by graduate students working with teachers, covering topics relevant to the middle school curriculum to prepare students for state testing and inspire interest in science

Coordinator

- 2013-15 Hilsman Middle School outreach program
 Botany lessons for middle school Agri-Science classrooms designed and taught by graduate students

Mentor

- 2015-16 Undergraduate Researchers
 [REDACTED]
 [REDACTED] Spring 2015
- 2015 Young Dawgs High School Summer Internship Program
 [REDACTED]
- 2015-16 PlantingScience.org
 AP Biology students via Skype and web forum

Contributing Author

- 2015-16 The Athens Science Observer
 Locally-based science outreach blog

Publications

Mason, C.M., Christopher, D.A., Rea, A.M., Eserman, L.A., **Pilote, A.J.**, Batora, N.L., Chang, S-M. 2015. Low inbreeding depression and high plasticity under abiotic stress in the common morning glory *Ipomoea purpurea* (Convolvulaceae). *Weed Science* 63: 864–876.

Pilote, A.J. and Donovan, L.A. (In Prep) Coordinated evolution of leaf and stem functional traits across the herbaceous genus, *Helianthus*.

Pilote, A.J. and Grissino-Mayer, H.D. (In Prep) Evaluating fire severity in a topographically diverse landscape, El Malpais National Monument, New Mexico, USA.

Recognitions

- 2016 Graduate Portfolio in Community Engagement, University of Georgia
 2012 Outstanding Teaching Assistant Award. University of Tennessee

Grants

- 2016 Georgia Scholarship of STEM Travel Grant (\$200)
 2015 Palfrey Student Research Grant (\$1,159)
 2015 Sigma Xi Grant in Aid of Research (\$991)
 2013 Palfrey Student Research Grant (\$1,080)
 2011 Science Alliance Award (\$2,200)

Professional Memberships

Ecological Society of America
Botanical Society of America
Society for the Study of Evolution
Sigma Xi, The Scientific Research Society

Professional Presentations (selected)

Alex J. Pilote. Turning outreach into community engagement in a graduate student-middle school partnership. Scholarship of STEM education conference. March 3-4, 2016. Statesboro, Georgia.

Alex J. Pilote and Lisa A. Donovan. Stem hydraulics and leaf economics traits across *Helianthus*. Plant Biology Symposium, 24 August 2015, Athens, Georgia.

Alex J. Pilote and Lisa A. Donovan. Relationship of hydraulic architecture and leaf economics traits across *Helianthus*. Annual Meeting of the Ecological Society of America, 10-14 August 2015, Baltimore, Maryland.

Alex J. Pilote and Henri D. Grissino-Mayer. The influence of fire on stand structure and dynamics of three habitat types in El Malpais National Monument, Annual Meeting of the Association of American Geographers, 24-28 February 2012, New York City, New York.

Alex J. Pilote and Henri D. Grissino-Mayer. The influence of fire on stand dynamics at Cerro Bandera cinder cone, New Mexico U.S.A. 67th Annual Meeting of the Southeastern Division of the Association of American Geographers, 20-22 November 2011, Savannah, Georgia.



November 9, 2016

To Whom It May Concern:

I am very happy to write this letter of evaluation for Alex Pilote. Alex has taken an active role in setting up a program for engagement with teachers and students at a local middle school, Clarke Middle. He has shown a passion for engaging with young students in science activities and lessons, hoping to get these students excited about the natural world around them. Alex has met with Clarke Middle School administration and has set up a communication and planning process that will help assure a successful program.

The program that Alex is planning to implement will include a strong collaborative effort between his team of UGA science graduate students and science teachers at Clarke Middle. This will be a strong collaborative effort with Alex and his team developing curriculum in full coordination with the Clarke Middle School staff. The teachers and Alex's group will co-teach to help assure that the science lessons are not only very "hands-on," but also meets the academic requirements of the school.

I am very impressed with Alex's leadership as he has already met with the leadership at the school and has scheduled the first joint planning meeting for December 4. I am looking forward to my continued work with Alex and I am confident that the program that he helps to develop will become a model for others.

Please let me know if you need any additional information.

Sincerely,

A black rectangular box redacts the signature of the sender. The box is positioned over the handwritten signature area.

Senior Managing Consultant
Young Dawgs Program
Human Resources
University of Georgia

Athens, Georgia 30602
706-542-7341 (w)
706-254-6695 (c)

Appendix



March 23, 2016

To whom it may concern,

This is a letter of support for Alex Pilote. This spring semester, he has been working with me in my 7th grade life sciences classroom, designing and teaching hands-on activities and experiments for my students. He has maintained communication with me to ensure that his group of graduate students is doing a good job, and has shown up each Wednesday morning (that we have been able to have them) with a group of graduate students who have provided fun learning experiences for my students.

Alex is very organized and has been flexible as needed working with a large group of middle school students. I am very impressed with the lessons, experiments, and discussions that Alex brought to our class and it has contributed valuable enrichment.

Sincerely,

[REDACTED]

7th Grade Life Science Teacher, Clarke Middle School

[REDACTED]