Clemson Collaborations in Service-Learning 2011-2012

Shades of Sustainability: Becoming a Catalyst for Sustainable Change

CLEMSON SERVICE ALLIANCE
The theme chosen by the Service Alliance Faculty Fellows for Clemson Collaborations in Service-Learning for 2012-2013 is “Shades of Sustainability: Becoming a Catalyst for Sustainable Change”.

Sustainability has become quite a trend on college campuses in the last few years. New degree programs and strategic plans focused on sustainability have been developed on campuses nationwide, and Clemson is no exception. So what is meant by sustainability? According to the World Commission on Environment and Development, formed in 1987, sustainability is development guided by policies and practices that “meet the needs of the present without compromising the ability of future generations to meet their own needs.”

How does service-learning as a teaching pedagogy promote sustainability? In a service-learning class, students learn through the process of meeting a current and present need in a community—a local nonprofit organization, a city, an elementary school, a museum, a park, a clinic—the list could go on. By participating in service-learning activities, students often experience the present with an eye toward the future and what the needs of future generations may be based upon our experiences in the present.

Our global economy continues to struggle four years after the great recession, and nowhere is the impact of that recession felt more than in our public sector. Each day we hear of another city going bankrupt, of public funding being cut for education, parks, arts and historical associations, etc. That list goes on too.

It would be easier and possibly more cost efficient to sit in a traditional classroom setting, listen to a lecture, and read case studies and books to inform us on the problems and issues facing society. Our students write their papers, pass their tests, collect their degrees and move on. This model for an educational experience worked in the past and appears to still meet present needs adequately. However, the sustainability question is: In our fast changing world, will the current traditional educational model compromise “the ability of future generations to meet their own needs”? This is a question being asked across our nation as the United States has watched our global educational competitiveness rankings in many areas decline. As Service Alliance Faculty Fellow Professor Dr. Skye Arthur-Banning states in his article, “As faculty it has forced us to reevaluate where our classrooms truly are. Do the walls provide comfort or limit the possibilities?”

Service-learning and other academic engagement experiences that promote the active involvement of our students in experiential learning experiences serve as catalysts for sustainable change—change that can improve the overall educational experience for our students at Clemson. These changes can benefit the student, the faculty member, Clemson, and the greater community.

We hope you enjoy reading about the work of some of our faculty “catalysts” at Clemson and how they are promoting sustainable change in their disciplines, their classrooms and their students.
Service-Learning Writing Across and Beyond the Curriculum

Dr. Michael LeMahieu, Assistant Professor, English and Director, Pearce Center for Professional Communication

One of the primary tenets of Writing Across the Curriculum is embodied in the expression “writing-to-learn.” When done well, classroom instruction teaches students not only to learn to write but also to write to learn. Regardless of the subject matter, students can learn more if they are asked to write frequently and meaningfully about the course content, whether it is World War I, oxidation-reduction reactions, or health care.

In the Pearce Center for Professional Communication, we view service-learning projects as an effective way to extend Writing Across the Curriculum into community-based learning and engaged writing. That’s why the Pearce Center has partnered with the English Department to sponsor the Client Based Program. Students in client-based courses, which are primarily business and technical writing, partner with non-profit groups, and other community and university organizations to work on semester-long projects that address the needs of the particular client. Students produce a range of “deliverables” for these clients, ranging from websites to brochures to business plans to promotional materials. Each semester, the Pearce Center sponsors a showcase of student work in the Class of 1941 Studio for Student Communication.

Service-learning and client-based writing extend the principles of writing-to-learn. Whereas typical write-to-learn are short and informal, service-learning writing projects tend to be broad and ambitious. Students must communicate, organize, plan, design, and implement these long-term projects. The results are impressive. As we work to create a culture of engaged writers at Clemson, the success of the Client Based Program demonstrates how service learning extends writing not only across but also beyond the curriculum.

3525 Clemson students participated in at least one service-learning course in 2011-2012.
Service Alliance Faculty Fellows

The Fellows Program is for faculty interested in exploring issues related to service-learning and community-based research. Fellows receive a $1200 stipend, conduct faculty workshops and webcasts on service-learning and community-based research and serve as a resource for other faculty members interested in utilizing service-learning in their classroom or developing a community-based research design. Representation comes from four of Clemson’s five colleges.

Strong buy-in from faculty and students are the keys to the successful Client Based Program.

Professor Ashley Cowden
Senior Lecturer, English; Coordinator, Client-Based Writing Program, and Assistant Director, Pearce Center for Professional Communication

The Client-Based Program (CBP) has been a part of Clemson’s Service-Learning landscape since 2003. Created by the late Dr. Summer Smith Taylor, the CBP matches Clemson classes with local nonprofit and departmental clients who need communication deliverables. During the first 5 years, the CBP relied solely on business and technical writing classes because they were a general education requirement. After a general education curriculum change, there was some worry about the future of the program. The Program knew two keys to sustainability would be continued student and faculty buy-in.

To sustain faculty buy-in, the English department and now the Pearce Center support the CBP faculty through stipends, workshops, and discussion groups. Service-learning classes require extra effort, so it is important to create a support system for challenges, technology resources, and classroom material.

In addition to faculty support, student engagement and satisfaction are instrumental in the program’s success. The program can have great faculty and clients, but if students will not sign-up for classes, then the program is not sustainable. The CBP periodically surveys students, separate from their course evaluations, to better understand the student experience. This data is used to make changes in curriculum, approaches, and available resources. It is important to give students a voice to shape this program.

Here are three of the student free response answers, from the Spring 2012 survey:
• “I enjoyed applying my creative skills along with my engineering and problem solving skills. It was good to work with very diverse teams because we all had different skills and talents to offer to the project. I also enjoyed attending the event that we planned and seeing first hand our project’s success and our customers’ satisfaction.”
• “I really enjoyed being able to apply what we learned in class. The experience with the client was instrumental in giving me the understanding of what occurs between companies and their clients. It has given me much more confidence in my ability to do this kind of work and pointed me towards interests I had no previously known I had.”

• “I enjoyed working with the real world client. We were able to hear their needs, figure out how we could best use our time to achieve the maximum benefit, and deliver a professional product that significantly benefited the client. It was cool to work on a project that was actually making a real, positive impact and that served as a strong motivation to excel throughout the project.”

By supporting faculty and engaging students, the CBP is continuing to receive their buy-in. During the 2011-2012 school year, its 8th year, 8 faculty, 665 students, and 35 sections of English 304 (Business Writing), English 314 (Technical Writing), Marketing 865 (Seminar in Marketing Management), and Honors 223 (Multimodal Communication) participated in this program.

**Applied Engineering Service Learning – Design and Build Wind Tunnels for Elementary Classrooms**

*Dr. Joshua D. Summers, Professor of Mechanical Engineering and CoES IDEaS Professor*

The Department of Mechanical Engineering requires a two course sequence for students in their senior year that first introduces students to engineering design and then applies this understanding and integrates the other technical domains learned in their undergraduate curriculum through a capstone design project. One challenge that has been seen in student performance and exit surveys is that some of the challenges faced in the final capstone project (ME 402) are not ones for which the students have been prepared in the design methods course (ME 401). One of the challenges that students face in the capstone project is the interactions with customers and reconciling the two customer axioms: (1) the customer is always right and (2) the customer does not know what the customer wants. A second major challenge students seen in capstone without adequate preparation is the role of physical pro-
Students in ME 402 over the past six years have consistently requested an opportunity to apply their mechanical engineering knowledge and design expertise to more altruistic endeavors, beyond the industry applications that essentially serve as their final exit exam of ME 402. Therefore, a new way of executing ME 401 has been piloted (Fall 2010, Spring 2011, and Fall 2011) which addresses the curricular demands of the course while addressing specifically these challenges.

In order to provide students with a learning platform on which they can apply their understanding of the design process, we want to provide them with a controlled design project, one in which they will be guided throughout the process and on which they can apply various tools for the same design activities. In this manner, they are required to understand one design problem at a deeper level than three “mini” projects, while exploring all the aspects of the design stages that are encapsulated in these three traditional mini projects. Moreover, the students can compare and contrast how well the different tools perform within the project. The project should, ideally, include an external customer, introducing students to the challenge of dealing with customers. Further, if a physical deliverable is required by the customer, then the students will be introduced to the challenges of prototyping and budget and project management. A final distinguishing characteristic can be made between the ME 401 and ME 402 projects, in addition to scale, in that the ME 402 projects are always industry sponsored design projects. Thus, we believe that a unique opportunity is possible to offer a service oriented engineering design project to the students that can address all the challenges while providing a public service. It is in this manner that we have partnered with three different elementary schools in the Spring 2011 and Fall 2011 semesters to design and build functioning wind tunnels, experimental configurations, and lesson plans through the ME 401 class.

In the semester long course, students are provided weekly topical lectures every Tuesday while Thursday meeting periods are dedicated to project design reviews. The students are provided assignments and weekly deliverables that guide them through the project and are required to submit reflective essays that compare and contrast different engineering design tools applied. In this manner, students are engaged in a deeper learning and assimilation activity than traditional approaches where they simply apply the tools. Further, to provide students with an even broader understanding of engineering design problems and processes, they are assigned a series of case
totyping integrated throughout the design process – most students in Mechanical Engineering have never actually built or tested any of the concepts developed throughout their undergraduate career, except perhaps if they participated in the student design contests (SAE Formula, SAE Baja) or creative inquiry projects. A third limitation observed with respect to the students’ preparation for the capstone experience is their budgeting and project management skills have never been applied to projects that require actual expenditures. Finally, while not a challenge, students in ME 402 over the past six years have consistently requested an opportunity to apply their mechanical engineering knowledge and design expertise to more altruistic endeavors, beyond the industry applications that essentially serve as their final exit exam of ME 402.
studies where they compare and contrast different past design projects from the capstone course. Students evaluate executive summaries, final report structures, experimental descriptions, concept memos, and problem statements for multiple different projects. In this way, students are actually exposed to at least ten different design projects through case study in addition to the deep application of the wind tunnel project. Pedagogically, this refinement of the existing course maintains the same course content, changes delivery mode, and addresses the limitations of past student experiences.

For the project, student teams are assigned a specific classroom (six fourth grade classrooms from Midway Elementary in Anderson, SC for Spring 2011 and four fourth grade classrooms from East-North Street Academy in Greenville, SC and four fifth grade classrooms from Six Mile Elementary in Six Mile, SC for Fall 2011) for which they are tasked with understanding the needs of the specific classroom and teacher, such as space limitations, teaching needs, or even student color preferences. To do this, the teams of ME students must visit the classroom throughout the semester, introduce the classes to what wind tunnels are, how they can be used in conducting scientific experiments, and eliciting the requirements from the teacher and students. This is an interesting challenge in that much of the time the ME students must also help explain to the elementary teachers what wind tunnels are and how they can be used to explicitly teach the scientific curriculum of South Carolina. As the semester progresses, the student teams return to the classroom to share prototypes and to get customer feedback on their solutions. Finally, at the end of the semester, all the classes are invited to spend a day at Clemson University where they are introduced to physical wind tunnel testing in our undergraduate labs, industry related flow projects (such as Rotary lawnmower measurements and Electrolux refrigerator projects), and the role that virtual simulations play in engineering analyses. Ultimately, the ME student teams deliver the final wind tunnels that the elementary students will use in their classrooms. Tutorials are provided and finally the elementary students are asked to demonstrate how their new wind tunnels operate.

This unique service learning experience provides physical equipment for science education to cash strapped elementary schools. It provides a critically designed teaching platform for the ME students’ education in engineering design, addressing all curricular issues while introducing the
students to the challenges they will see in the capstone projects in a low risk environment. As evidence that this experience is appreciated by both ME students and the elementary schools, consider the fact that the Department of Mechanical Engineering has been invited to the elementary schools twice in the Spring 2012 to demonstrate the wind tunnels (that are still functioning after a year) and that one of the ME students volunteered in the Fall 2011 semester as a graduate coach of the Future Engineers club at Clemson Elementary where after elementary school students designed and built their own wind tunnels. Most importantly, this service learning project excites both the elementary students and the ME students, engaging them both in how engineering can, and should, be applied to create a lasting and beneficial impact on society.

Completing the cycle: Service-learning with pre-service teachers, community members and K-12 science students.

Dr. Cassie Quigley, Assistant Professor, Teacher Education

The relationship between science and service-learning has long since been documented in research. However, in recent years, service-learning has been removed from science classrooms in order to make way for a growing list of content-driven standards. Despite this, I have been able to demonstrate a need for service-learning in middle-school classrooms as a way to increase engagement with students, provide real-world applicability, and promoting civic participation (Cook & Quigley, 2012). In my middle school science methods courses, pre-service teachers undergo several service-learning projects that are connected specifically to the content. Before the start of the course, I establish relationships with the local community to provide a list of possible projects. Some examples of
partnerships include Paris Mountain State Park, Roper Mountain Science Center, Upstate Forever, and Greenville County School Districts. The pre-service teachers choose a project that matches their interests and then work with the community members to plan out the project. Below is a table of the possible projects from last fall’s methods course.

What materialized from these projects was much more than just a finished product from the com-

<table>
<thead>
<tr>
<th>Table 1. Descriptions of possible projects</th>
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<tr>
<td><strong>Paris Mountain State Park</strong></td>
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<td>Last year, my students developed two field guides—a plant and an animal field guide to be used in the park. This year, Cathy is not exactly sure what is needed but beginning ideas are improving curricula for field trips, creating some signage for trails, creating a game, scavenger hunt for visitors.</td>
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<tr>
<td><strong>STEM Middle School Native SC plant walk</strong></td>
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<tr>
<td>Greenville County is building a STEM middle school near iCAR as a feeder school for AJW. They would like to create a plant walk of indigenous South Carolina plants. You can design it! Research local plants, create a design with ideas of climate, expense and predators in mind</td>
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<tr>
<td><strong>Citizen Science Project</strong></td>
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<td>Create a citizen science project for SC using SC science standards—examples are Journey North—www.learner.org/jnorth Can you create a lesson that is more aligned to specific science standards and is truly science inquiry?</td>
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<tr>
<td><strong>AJ Whitenburg School Garden Project</strong></td>
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<tr>
<td>Review existing curriculum and study its effectiveness. Interview students and observe Katy at AJW. While this project is for younger students, it could have great benefits for those of you interested in starting a school garden and interested in STEM education as AJW is a STEM school</td>
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<tr>
<td><strong>SimHub</strong></td>
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<td>The SimHub has tons of technology projects but not a lot of curriculum. You could design a lesson(s) around existing curricula for them to use in relationship to science education (i.e.—Dance Dance Revolution with a lesson on the circulatory system)</td>
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<td><strong>Your ideas?</strong></td>
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munity member. The students remarked that overall they felt a connection with science and the community in a way that they had not previously experienced. One student, Janet, said, “Overall, the project allowed me the opportunity to delve into an area of science I have no previous experience in. Doing this project, served as a great introduction to plant species in the Upstate. Additionally, prior to taking on this project, I had not previously visited Paris Mountain State Park, so that in itself was a positive learning experience. Overall, I look forward to now being able to have a personal resource for identifying some plant species and being able to pass that small bit of knowledge on to my daughter. I hope to take my daughter to visit Paris Mountain in the near future and show her a contribution her Mommy made to the visitor’s center.” Additionally, the community members felt inspired by the project. As a park Ranger for Paris Mountain State Park conveyed, “I have been carefully going over the field guides you made. They will be a great asset to park visitors who want to know what’s out there. As helpful as the field guide aspects are, I would especially like for folks to read your reflections pages, helping them get a perspective on the significance of Paris Mountain State Park.” As the pre-service students were inspired, so were their students that they were teaching, and thus the cycle continues. It is my hope that service-learning and science will once more become partners in education!
Service-learning as catalyst for sustainable leadership

Dr. Dylan Wolfe
Assistant Professor, Communication Studies

Since 2007 I have worked with around 200 students in communication studies and other disciplines to study, document, and publicize the South Carolina Botanical Garden (SCBG) and their Nature-based Sculpture Program (NBSP). The project began simply, with students enrolled in my Visual Communication course volunteering in the construction of the nature-based sculpture Chameleon Meadow – In Praise of Shadows. The following semester, I collaborated with David Novak to adapt a participatory research method known as PhotoVoice for use as a service-research project. Students worked as participant researchers and translated their experiences of the sculptures through filed note reflection and photographic expression. At the time, I expected this would likely be the end of my engagement with the Garden and its sculptures. After all, when the sculpture program’s creator and director retired around the time the state’s funding crisis froze hiring and slashed the garden’s funding, the sculpture program was put on an extended hold and the future of the garden itself came into question.

Several students approached me about continuing to work with the NBSP. In particular, they wanted to do something about the possible demise of what they came to see as an important cultural resource; this subtle yet powerful assemblage of sculptures spoke to the need for deeper consideration of the human-nature relationship. These students took inspiration from these sculptures, and their commitment inspired me to continue developing my interest in service-learning.

This phenomenon of student leadership emerging from engaged learning has become not only the driving force behind my service-learning program, but also the very model of its organization. Each semester a group of students with previous experience in one of my service-oriented courses come together to take on leadership of the current projects. While the number of students taking on the responsibilities of project facilitation varies, last year a total of 17 leaders emerged. These project facilitators managed a diverse set of service projects that involved over 50 additional students enrolled in my courses. Although graduation inevitably sends these incredible and inspirational students on, new leaders always emerge.

Together, the student leaders and I develop ambitious goals for each semester, goals that I often find myself needing to keep in check for this motivated and talented group. Each semester,
these students find ways to exceed even their own expectations, all the while inspiring the next group of leaders through example. In the last year alone, these students have: managed and overhauled a highly interactive website; organized and extended a massive archive including over 2000 pages of documentation, 6000 photographs, 300 creative works, dozens of interviews, and untold hours of video; developed a digital archive; produced three sets of professional quality mobile display units for use by Botanical Garden staff and placed on display around campus; planned, constructed, and completed an interactive exhibit about the sculpture program on permanent display at the state botanical garden visitor center; organized and implemented Project Revitalize, an event attracting over 150 volunteers to a day of service at the SCBG; developed a highly successful social media campaign and blog; administered our program’s second annual eARTh (earth art) competition, including cash awards and an exhibit in the Elizabeth Besler Fuller Gallery; and worked in collaboration with the SCBG staff to brand, organize, and execute a major fundraising event that raised over $10,000 for construction of a Natural Heritage Garden.

I have, as always, received numerous inquiries from the next group of leaders.

32 percent of the faculty teaching at least one service-learning course in 2011-2012 were tenured or tenure-track faculty.
Addressing Community Wildlife Conflicts through Student Engagement

Dr. Greg Yarrow; Professor of Wildlife Ecology; School of Agricultural, Forest, and Environmental Sciences

South Carolina is blessed with an abundance and variety of wildlife that provide multiple benefits to the quality of life of South Carolinians, as well as to the natural beauty and biodiversity of the state. In some cases, however, wildlife may conflict with people and impact the economic, health and safety, or aesthetic values of a community. In the Spring of 2011, The Reserve at Lake Keowee, requested assistance from Clemson University to assess relative deer densities within the community and the types and degree of deer conflicts, and also to develop a plan that would included recommendations and options to reduce problems with deer in the community. In 2011 and 2012 Clemson students enrolled in two Wildlife and Fisheries Biology courses, Wildlife Management and Wildlife Damage Management, participated in assisting The Reserve community as part of their field requirements of both courses.

Students conducted consecutive nightly deer spotlight counts during May 2011 on three predetermined survey routes on The Reserve and found that estimated deer densities were high in major sections of the community. The degree of deer browsing present on native vegetation, as well as ornamental plants within the community, was also observed to be excessive. Results of the students’ efforts suggested that efforts should be considered to reduce conflicts with deer in the community. Students helped craft a comprehensive plan, Community Assessment and Approaches for Managing White-tailed Deer: The Reserve at Lake Keowee, which was presented to The Reserve Board of Directors and community residents describing deer densities and impacts within the community, as well as multiple options to reduce conflicts. The Reserve project provided students with a unique educational experience and opportunity to understand the often complex biological and social issues associated with wildlife conflicts, as well as assist a local community.
Building Sustainable Partnerships through Service Learning

Professor Jackie S. Gillespie MN, RN, CNE
Senior Lecturer, Clemson University School of Nursing

Each semester, Clemson University N415 Senior Nursing Students connect with community partners to deliver service learning projects. Often, out of this project grows a commitment between the students and the agency to sustain this working relationship and create a continued academic-community partnership. The role of faculty in developing sustainable partnerships is to carefully select the partnering agency and deliberately guide the students and partners in collaboration and communication.

When selecting a community partner for students, care should be taken to ensure a good fit for this affiliation. Is this an agency that could benefit from the services that these students can provide? Can this agency supply the time and support needed to promote the learning endeavor of these students? After selection of the agency, the true community partnership and collaboration begins. Planned times should be scheduled for students and agency representatives to meet together and form a working relationship. As the work on the service learning project progresses, there should be frequent communication between the agency representatives and the students to discuss the project, roles, and desired outcomes. This communication and team work forges bonds that build sustainable relationships.

Dr. Arlene Privette, director of Oconee Hospice of the Foothills, commented on her organization’s relationship with Clemson: “Hospice of the Foothills has partnered with the Clemson University School of Nursing for several years with service learning projects. While students learn about our services, we also benefit from working with them in developing and completing their projects. This year Hospice is beginning a Palliative Care Program that intrigued the students. They decided to develop their project to provide Palliative Care education to the hospital employees and visitors. They researched the topic and explored various methods to determine the most appropriate method use. They developed poster boards, brochures, and a Power point presentation that were displayed at two strategic locations in the Hospital. Feedback from those persons who visited the booths indicated that the presentation was positively received and was very informative. We anticipate that a student group next year will build on this effort to further promote our Palliative Care Program.”
A service learning project is the culmination of many hours of student work and support from the community agency. It is a time that both the students and the partnering agency reap the rewards of a partnership—creating a project that would be impossible or difficult to create alone. Ideally, as they complete one project, they envision the next.

The Public History Emphasis Area: A Humanities Model for Service-Learning Curriculum

Dr. Megan Shockley, Professor, History and Coordinator, Public History Project

I have heard over the course of my Service Alliance fellowship year that participation by history students has been met with disbelief by some. Indeed, many outside of the humanities often view with skepticism the potential of our students to engage with the community to provide critical services that sustain important programs. They could not be more wrong. History departments have long provided “service-learning” experiences to students, in the form of for-credit internships in museums and archives. Students provide necessary labor to sustain these sites, and in turn they learn about the field of public history. At Clemson University, the Department of History and Geography has moved beyond merely supervising internships—we have created a Public History Emphasis Area program that provides undergraduates with both the theoretical underpinnings of the field in their coursework and the practical experience necessary to understand the realities of the field through service-learning projects in their chosen classes.

The Public History Emphasis Area is designed for undergraduates who are interested in pursuing graduate work in museum studies or public history in pursuit of a career in museums, archives, or historic sites. In addition to engaging in at least 145 hours of an internship, students work with the community on various field projects in each class required for the area. We created this area in response to the desires of our students who looked for ways to use their historians’ skills outside of the academy, but also to address a need in our community. Our area museums are victims of a trend that is occurring nationwide. Perpetually underfunded, they face decreasing grant resources and rely on a combination of volunteer and paid workers to run. This economic need provides our students with opportunities to help sustain important historic sites while they gain the necessary experience to work in public history.
This past academic year, our public history students engaged in a myriad of projects that support the community in a number of important ways. Our “digital history” students learned how to create websites for local museums. One group’s site provides an online artifact exhibit for a museum that is not open yet—and the QR code they embedded is located on the door of that museum, so that anyone who would like a preview of the museum can scan it and go immediately to the site. Our preservation students, under the supervision of Associate Professor of Geography Criss Smith, researched the history of the Clemson Forest, focusing on prior ownership, foreclosures in the area, and boundaries of land—which they then went to the field to record. And in what will potentially be our most ambitious ongoing project, our “History and Uses of Tourism” class provided the model for an ongoing project that introduces the public to significant historical sites in the region. The “Palmetto History Project” will be a free downloadable app that provides information in the form of text, videos, and links to local accommodations, related to sites in the area. We hope that this site will drive traffic to the sites and the communities that support the sites. The history students provided the content, and Associate Professor of Computer Science Roy Pargas is supervising student programmers who are currently constructing the app. Anyone interested in viewing the videos for the app or beta testing the app is welcome to “like” the Clemson Public History Facebook page for links.

These efforts are helping to sustain important community institutions. But how can we sustain these efforts at Clemson? By creating a curriculum that supports service-learning projects in these classes, the Department of History and Geography has noted its commitment to bridging the academic and surrounding community. However, we currently have only two faculty members teaching courses in the public history emphasis area, neither of whom can dedicate all of their time to these courses alone. We are expecting several more currently on our faculty to join us in this effort, but Clemson University is not immune to the economic downturn, either. Without financial support, we cannot significantly expand either the program or the Palmetto History Project. We are seeking out grants for the Project. We continue to hope that we may receive faculty lines that will free up the two faculty members to teach more classes, and that will perhaps enhance the public history course offerings. We have wonderful students, who dedicate their time and energy to these service-learning projects. We hope that their efforts will be met with the financial/personnel support necessary to sustain this effort long-term.

106 unique service-learning courses were taught in 2011-2012.
Things to do today……..Make a difference in someone’s life today through service.

Dr. Skye Arthur-Banning, Professor, Parks, Recreation, and Tourism Management

What began as an idea of partnership and collaboration between departments within HEHD turned into a once in a lifetime opportunity for 15 Clemson University students to experience Tanzania in a service learning experience.

The collaborative group from PRTM, Nursing and Health Science began meeting in September to discuss the possibility of a Service Learning trip to Tanzania based upon the Memorandum of Understanding (MOU) that Clemson University has signed with The University of Dar es Salaam (UDSM). Faculty from both Clemson and UDSM had already made reciprocal visits to each other’s institutions so the thought was it was time for students to make the trip to continue to solidify the MOU even further with thoughts of the sustainability of the MOU and of a service learning program.

A creative inquiry class was set up as a student facilitated learning environment where students would research topic areas about our trip (health issues in Tanzania, recreation opportunities in Tanzania, things to do as tourists etc.) and present the material to the class each week. We also put a significant amount of time into seeking ways to further understand the Tanzanian culture, language, people, religious affiliations, tribal rituals etc. The intent was to encourage students to take responsibility of their own learning, to plan their own trip and to understand how their service in Tanzania could have the greatest impact to the local people all while understanding the culture of the area we were visiting.

In May, the students traveled to Tanzania where we visited 3 unique programs that allowed for the students to apply their knowledge, share the resources we had collected and implement the programs we have planned. At the University of Dar es Salaam, students and from both Clemson and the University of Dar es Salaam shared information and experiences to help each other learn. While things appeared so different, the commonality of the University experience was so much closer than both groups could imagine.

We followed up our time at the University of Dar Es Salaam by working with several afterschool programs in the very poorest parts of the city where there was no grass in the playgrounds and very little equipment to be had. One HEHD student wrote in her journal “It was amazing to
see what their definition of sport and recreation were and how different it was than ours....
you can play in the mud with a ball of elastic bands wrapped together and still have the biggest
smiles on their faces.” We left the afterschool program with various pieces of equipment and
knowledge so that our visit would help sustain their program well beyond our time in the city.
Following our time with the afterschool pro-
grams, we spent 2 days with an orphanage just
outside the city to provide medical checkups,
recreational equipment and various programs to
the children. This place was what the true hope
of Africa was all about. Children slept 3 kids to
a bunk and ate rice and beans every day with
little variation. They had a hole in the ground
for a toilet and their “playground” was space
cleared from their garbage dump. However, each
and every child we interacted with was proud to
show us THEIR home. They danced for us and
fed us like we were royalty. They shared all that
they had with us and were happy to do so. It was
truly a moving experience for both students and faculty. One student wrote…"While I have al-
ways viewed myself as a fairly grounded person, today was a true reminder of just how lucky I am
and how grateful I should be for everything I am blessed to have in my life. Visiting the Friends
of Don Bosco orphanage was an extremely moving experience. From the minute we arrived, the
children just seemed so excited and happy to have us there.”

Upon return to Clemson, the connections we have made in Tanzania have continued. We have
plans to return to Tanzania with a new group of students in May of 2013 with the intent of a
continued visiting program every few years. The previous students have passed on their various
experiences to the new group of students enrolled in a creative inquiry class so that the initial
understanding can lead to new opportunities. To a person, each student will say there is some-
thing about this trip that was life changing. As faculty, it has forced us to reevaluate where our
classrooms truly are. Do the walls provide comfort or limit the possibilities?

170 faculty reported teaching
at least, one service-learning
course in 2011-2012.
Shaping Our Future

Professor Mary Beth McCubbin
Director, a.LINE.ments Studio, Lecturer, Landscape Architecture

Since 2006, the a.LINE.ments Studio has been providing opportunities for students to participate in community-based projects throughout South Carolina. Based in the School of Planning, Development, Preservation and Landscape Architecture the Studio assembles multi-disciplinary teams of students, both undergraduate and graduate, to work on community design initiatives. These projects range from walkability studies, to conceptual designs for parks or streetscapes, to studies for low-income housing opportunities. Common to most projects is a public participation component where students are responsible for organizing community work sessions, collecting survey data and facilitating conversations to address community issues. These encounters stretch our classrooms outside of traditional boundaries and require students to apply skills they have learned from across their University experiences. It provides a different lens through which students view their chosen field of study—it often expands their professional aspirations. I asked a few a.LINE.ments "alums" to comment on what these engagement activities have meant to them:

Katie Lloyd, masters of landscape architecture candidate 2013

Through active participation in community meetings, debates, and dialogue, I have had the opportunity to begin to learn the skills needed to account for the diverse and dynamic needs of clients within landscape architecture projects. Direct engagement with the individuals that will use the product of my design fosters more commitment to the design process, the community impact, and the ultimate success and function of the landscape. Through service learning, I have been able to enhance my responsive design ability and civic responsibility. In doing so, I am able to get invaluable experience with real world projects that help to prepare me for the professional opportunities that I seek after graduation. The process of working with the public, specifically with groups of community members who are invested in the success of their neighborhoods, has sparked an interest in continuing to seek more non-profit or public outlets for my design skills. I hope to continue to learn through service within the professional field.

Jennifer Johnson, M.L.A. 2009. (Jennifer is now in the Parks, Recreation, Tourism Management Ph.D. program at Clemson)

As I transition from student to design professional, I find myself confident in many of the skills necessary to be a professional that have been honed through the a.LINE.ments Studio. I feel I have an advantage over others in a similar position because of my a.LINE.ments experience. In fact, my a.LINE.ment Studio experience has opened doors in my professional life; for me, an a.LINE.ments Studio project has turned into an exciting and fulfilling job!
Leigh Wood, Masters in City and Regional Planning 2009; Leigh is now Coastal Training Program Coordinator with the USC Baruch Marine Lab

...in the a.LINE.ments Studio, I was able to collaborate with peers from sister programs to develop a neighborhood revitalization plan for distressed areas of the City of Anderson, South Carolina. Initially, our team surveyed the housing conditions and economic capacity of neighborhoods, resulting in the identification of sectors of the city with the greatest need and capacity for redevelopment. Our team, along with city officials, hosted numerous workshops to help residents identify their neighborhood's strengths and weaknesses, thus, building relationships and the capacity for change... my work with the a.LINE.ments Studio evolved into an internship. By the end of the summer, a draft revitalization plan was delivered to the City of Anderson, providing zoning and ordinance guidance, redevelopment site designs, and the grassroots and funding opportunities available to implement the plan. As a native South Carolinian, and planning professional, I understand the importance and ability of collegiate systems to provide outreach to communities within the State. I also understand the importance of tying students to the communities and states in which they attend school.

Aaron Bowman, AIA, LEED-AP; March, Clemson 2008
(Aaron is now a candidate for a second master's degree in architecture with a focus on community design.)

Often in academic programs students are categorized and segregated by major and work independently on individual projects, despite the fact that in a professional environment this is rarely the case. Programs and classes such as this prepare students to work with allied disciplines and learn valuable team working and communication skills and, most importantly, they offer a chance to engage actual community members as clients and critics of their work... these service-learning classes help break down the students' preconceptions and prejudices against unfamiliar communities and often disparate communities find common ground to build upon. These classes were a formative experience that has helped me focus my career aspirations toward a more community design oriented practice.

These four students offer examples of the more than 300 who have participated in a.LINE.ments Studio community projects over the years who have directly leveraged their engagement experiences into meaningful careers. They will undoubtedly make significant contributions to the communities in which they serve.
“Service Learning Projects: A Look at their Economic Impact, with an Eye to Continuity and Sustainability”

Dr. Clementina E. Adams
Professor, Languages; Language and International Health

Service Learning Projects (SLPs), especially the ones addressed to the Hispanic community, provide benefits for the providers (CU students) and for the Hispanics served. The variety of services needed in the Upstate of South Carolina, creates a variety of project opportunities for our students. I believe those service learning projects help to alleviate the burden caused by the language barrier between health providers and patients; increases comprehension, understanding, and appreciation between the two cultures; while providing Spanish immersion for students.

In regard to the economic value of services provided to the Hispanic community, there is information available. As an example, let’s consider the cost involved in hiring interpreters for patients and parents or providing tutoring for students and parents: In-person interpreting typically cost $50 -$145 per hour. A two-hour minimum is common for in-person interpreters, so clients must pay extra if less than two hours of services are required. On the other hand, phone interpreters typically charge $1.25 -$3 per minute. Language Translation, Inc. charges a flat fee of $1.88 per minute for phone interpreting. Unless otherwise stated, international phone calls may incur additional charges on top of the phone interpreter’s fees. Other costs associated with the services include travel time, which is typically billed extra, as an hourly rate or a set fee (Bureau of Labor Statistics).

In regard to future plans and after more than 10 years of SLPs provided, it is necessary to assess the validity and impact of the services provided. A survey will help to gather feedback from the community served. The results will be decisive for continuing, stopping, or modifying the services provided and for finding sources of sustainability.
International Service Learning

Dr. Mark Small, Professor, Institute of Family and Neighborhood Life

As Mark Twain reminds us, “Travel is fatal to prejudice, bigotry, and narrow-mindedness, and many of our people need it sorely on these accounts. Broad, wholesome, charitable views of men and things cannot be acquired by vegetating in one little corner of the earth all one's lifetime” (The Innocents Abroad/Roughing It).

In addition to all of the benefits that normally accrue to students through service learning projects, there is additional value gained when service learning takes place in a foreign country. Students often come face-to-face with the recognition of the wealth disparities between resource rich and resource poor countries and are forced to reflect upon the nature and extent of how wealth disparities constrain individual choice. Moreover, students may become aware of how foreign polices affect how others perceive the United States of America and this in turn can be a transformative experience.

Despite the many benefits of international service learning projects, starting and sustaining such a project is considerably time-consuming and fraught with peril. Building an initial relationship with a non-governmental organization in a foreign country can be a challenge. The strategy most often used at Clemson is to build directly from personal relationships or indirectly through social networks of foreign nationals. Aside from meeting the traditional challenges of finding institutional support from within Clemson and/or outside sources to fund the project, the most important task is to organize the international service learning project so that students can meaningfully benefit from the experience. There is a risk in any international service project that the participants are ill-prepared for the differences in cultural context and as a consequence end up denigrating the dignity of others.

This past year, I brought Clemson students to the Czech Republic to visit universities and non-governmental organizations and begin negotiations for a long-term international service project to mentor children in foster homes through Skype and other technology. In preparation for the trip, students learned from guest speakers from other countries how citizens organize themselves to care for one another. Although there is much still to be done to make the project fatal to prejudice, I am hopeful that the initial trip convinced students of the need to get beyond the corner of the world called Clemson in order to fulfill their potential.
New foundations on solid ground: architecture+communityBUILD

Curriculum enhancement and the establishment of a service-learning centric graduate certificate program

Professor Daniel Harding, Associate Professor, Architecture and Director, Community Research and Design Center

The spring of 2012 showcased significant commitments to facilities, curriculum, and creative pedagogy for the School of Architecture at Clemson University. Coupled with the dedication of an innovative new building addition to Lee Hall, which supports interdisciplinary work in the form of an open collaborative studio environment, the Graduate School of Architecture received approval for a new certificate program, Architecture+communityBUILD. Within the Master of Architecture's accredited
program, this curriculum enhancement places a concentration on service-learning and student engagement initiatives, thus ensuring the School of Architecture's ability to set itself apart from other programs as a leader into an era in which design, sustainability, and community grow hand in hand.

Architecture+communityBUILD creatively solidifies the foundation of many projects and design studios at both the Main Campus of Clemson and its architectural center located in Charleston, South Carolina. Through a calibrated 18 credit hour sequence of design+build studios and seminar courses, the Architecture+communityBUILD program targets design as a social justice and a key component in sustaining community. Students find themselves immersed with key faculty and local communities from the upstate to the low country. With the program's emphasis on the design+build process and creative collaboration, students gain the perspective that community engagement and appropriate design solutions become the catalyst for positive change. True to the University's mission, this curriculum enhancement strategically places students in reciprocal relationships and demonstrative opportunities that embody the spirit of service-learning and student engagement while celebrating family and community living, sustainable environments, leadership and entrepreneurism, and general education.
Who is our Community? Service Learning Can Include Company Sponsored Projects

Dr. Joshua D. Summers, Professor of Mechanical Engineering and CoES IDEaS Professor

Service learning as a teaching and learning style has been implemented successfully in many different contexts nationally and at Clemson University. Specifically, Clemson University has defined service learning as:

A form of experiential education that uses community service experiences to enhance the academic classroom experience. This teaching process involves the students in the identification and analysis of real community needs, developing solutions to meet those needs, and then implementing those solutions. It also requires that students evaluate their work and assess their service experience and its impact.

According to the National Service-Learning Clearinghouse, a national organization established to promote and establish standards for service learning, service learning is an experiential activity for students to engage in beneficial service within a community that also offers opportunities for application and extension of the classroom learning. According to the Clearinghouse, service learning experiences should:

• be a real experience,
• be cooperative rather than competitive,
• address complex problems,
• support critical thinking to define underlying problems,
• be personally meaningful and engaging at multiple levels to the participants, and
• promote deeper learning with immediate results.

Ideally, most every educational experience at the university should also have these characteristics. For example, when designing an engineering design problem for a mechanisms class, the professor will require students to work in teams to solve a problem that

• is not artificial,
• is easily accessible to the students,
• is not simple or obvious,
• requires the students to push the limits of their understanding and learning from the course material, and
• has multiple different feasible solutions.

This type of engineering design problem aligns with the characteristics of service learning defined above, but without one key aspect—the community. Therefore, we ask the question about who the community might be for engineering courses? Example communities that are served in
service-learning experiences at Clemson University might include:

- development, implementation, and support for health programs for the general public (community = Pendleton, SC)
- projects to identify and challenge the barriers associated with new, specialty crop producing entrants to full economic success in the Southeastern US (community = farmers in SC)
- park planning and design for local municipalities (community = Poc Mill, SC)
- home visits and nursing mentoring activities (community = Guatemala)
- historical preservation and literature collection efforts (community = public in SC)
- design and build of wind tunnels to be used in elementary classrooms (community = elementary students and teachers in Anderson, SC, Greenville, SC, and Six Mile, SC)

These communities include international communities of economically challenged families, public municipalities that are economically challenged with constrained budgets, novice, struggling farmers that are not well prepared for the business structures required for specialty crop production, and elementary schools that are challenged with low equipment budgets and teachers challenged with teaching new to them STEM (Science, Technology, Engineering, and Math) curricula. All of these communities are provided a service from the student service-learning classes that would not be normally available to the community because of economic constraints. In this way, the students are “giving” to the community of interest a value service while learning and practicing what they have learned. Interestingly, none of these communities include SME (small-medium sized enterprises). Is there an opportunity to expand our current definition of the community to include small companies that have engineering challenges? Must the community being served be a non-profit, public group or can a small company, such as Rotary or TopTennis, benefit just as much from a service-learning partnership?

Essentially, there are three groups that are interlinked within service-learning programs: the student, the teacher/mentor/facilitator, and the community. Each group needs to benefit from the experience. The student needs to learn and apply new knowledge. The teacher benefits from an opportunity to excite and engage students with problems that will challenge students – what we all want to do as educators. The community benefits from a service provided by the students. All service learning experiences must engage these three groups to provide students with learning experiences and the community with a student provided service.

When we consider that Clemson University was founded as a “high seminary of learning” focused on teaching and developing “useful
information to the farmers and mechanics” of South Carolina, we recognize that the goal of the institution is to help educate students through “theoretic and practical instruction in those sciences and arts”. Engineering can be seen at the heart of this motivation and the mechanics of today are these same small engineering and manufacturing firms that dot the landscape. Moreover, the structure of Clemson University has evolved to recognize three thrusts of our common purpose: teaching, research, and service as embodied within the three Vice Presidents of the University. Therefore, it appears that we are called towards service learning from our own University heritage. We should focus on creating and disseminating useful information (research) by giving our students real problems to solve through practical instruction (education) while “developing the material resources of the State” through economic extensions (service).

Thus, we conclude that existing programs in the College of Engineering and Science such as the capstone engineering design classes also fit within the definition of service-learning. Specifically, the Department of Mechanical Engineering, having offered a capstone design course for the past four decades in which local companies sponsor engineering design projects that teams of graduating mechanical engineering students address within a semester, has apparently also been offering a service learning program. While the service that is being rendered to the sponsoring companies is something that can have direct positive impact on these companies, the profit motive of the community (the sponsoring company) does not negate the fact that this was a service learning activity. Therefore, we call on other departments that are actively involved in sponsored senior design projects to consider who their communities are. In doing so, we can recognize our student body for contributing to the communities that they are being groomed to service upon graduation. This broadening of the understanding of the served community can create a more inclusive and vibrant group of Clemson University educators that recognize the benefits of service-learning. This group can continue to exchange best practices on strategies for student and community engagement.

Therefore, we offer this definition:

A Service-Learning Community is any group or organization outside of the University that directly benefits from the service rendered by student teams through their coursework.