



educational technology for the global village

worldwide innovation and best practices

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Introduction

Although the editors of and contributors to *Educational Technology for the Global Village* come from a broad spectrum of academic fields and specializations, the common bond they share is a keen insight into how to use today's educational technology in a way that both enhances student learning and contributes to global understanding. The chapters in this anthology highlight best practices in educational technology and how it can be used to enhance internationalization efforts. The editors have included projects that explore how the use of technology both in the United States and abroad can impact student learning, and how that technology can bring together people from different corners of the globe. We also aim to demonstrate different models of interaction and communication: from face-to-face technological exchanges to asynchronous and live computer-mediated communication. Our hope is that the chapters included in this anthology can serve as templates that readers can apply to their specific areas of expertise and instruction.

Our contributors' projects reflect the varied terrain of access to the world of technology and the challenges facing different segments of our global village. On one hand, we see that access to the web and web interface tools presents few problems in developed and technologically advanced countries, such as South Korea and Spain. On the other hand, in the developing world, the digital divide would appear to be insurmountable but for the efforts of our contributors in remote corners of Asia, Africa, Latin America, and the Caribbean. Through the examples presented in this text, however, we see clearly the power of communication and instant access to the world of the web and the importance of sharing technology and technological know-how. This is an important lesson for students and instructors alike.

Finally, a number of technologies are discussed as being educational or instructional, including Facebook, Skype, Second Life, and the iPad.

Clearly this is not their only function. However, we have discussed how these mainstream technologies can be used for educational purposes.

The possibilities afforded by instructional technology to build bridges between the diverse peoples of the world seem endless. As educators in this globalized and technology-filled environment, our task is to find the most effective ways to guide our students across those bridges and make sense of the interconnectedness afforded by that technology. We trust that this collection of works will facilitate discussions among colleagues and inspire new and creative applications of instructional technology, with the aim of raising intercultural awareness among our students and preparing them for the challenges of a living in a global village.

Learning Global Citizenship Through Teaching Technology

Gabriel I. Barreneche

As technology and interconnectivity bring people of the world in ever closer contact, institutions of higher education look to educate tomorrow's global citizens, preparing them for the challenges and opportunities of this new landscape. While technological advances such as the internet, Skype, mobile telephones, and wireless connectivity are making the world "smaller" by eliminating barriers to instantaneous communication, it is not clear what the moral response to this smaller world should be for citizens who are privileged to have access to this technology. When technological skills and knowledge are shared with those on the other side of the digital divide, what is learned by the instructor/donor? In other words, through the experience of teaching technology, what can the teachers learn from the students about globalization and responsible citizenship?

This chapter will explore how new movements in higher education toward citizenship education, service-learning, and global awareness can intersect with and augment movements in global technology education. By analyzing a case study from an international service-learning project, we shall see that technology can serve as a valuable tool in educating college and university students about global issues of poverty, education, and the digital divide. Additionally, through these types of international service projects, focused on technology education, students can gain the interpersonal, problem-solving, and intercultural skills necessary to thrive and succeed in the global marketplace. Finally, the results of this case study will demonstrate that this type of international service technology teaching project can assist institutions

of higher education in achieving their goals of educating students for global awareness and citizenship.

Service-Learning Theory and Praxis in Higher Education

Over the past two decades, institutions of higher education have been making use of community-based learning and service-learning pedagogy to engage their students and serve the greater good of the communities in which they are located. This movement toward greater student involvement in community issues and service has its roots in the theories of engaged learning developed by John Dewey (1942) and Paulo Freire (1970). Before entering into a detailed discussion of the service movement in higher education, it is important to have a clear understanding of the terminology that is being used. Service-learning researchers Robert Bringle and Julie Hatcher (1995) clearly define service-learning as follows:

We consider service-learning to be a course-based, credit-bearing educational experience in which students (a) participate in an organized service activity that meets identified community needs and (b) reflect on the service activity in such a way as to gain further understanding of the course content, a broader appreciation of the discipline, and an enhanced sense of civic responsibility. This is in contrast to cocurricular and extracurricular service, from which learning may occur, but for which there is no formal evaluation and documentation of academic learning. (112)

It is important to note the distinction that Bringle and Hatcher make between community service and service-learning. The course-based learning objectives linked to the service activity are what distinguish service-learning from the numerous cocurricular and extracurricular service and volunteer activities found on campuses and throughout the greater community. Another way of distinguishing service-learning from other service activities is to determine if the particular academic course would be significantly different in its achievement of learning objectives if the service activity were not present. In simpler terms, service-learning is one of many teaching tools that educators can employ in achieving the learning objectives of a given academic

course. Janet Eyler and Dwight Giles argue in their 1999 book *Where's the Learning in Service-Learning?* that, in service-learning, both the service and learning goals are primary in the course and must be clearly linked to one another.

A broader term used frequently to identify academic activities that engage students outside of the classroom is community-based learning (CBL). In contrast to service-learning, in which students generally are working to address a specific need identified by the community partner, CBL activities are not necessarily directly related to service. An example of a CBL activity would be language students participating in conversation exchanges with native speakers of the target language from the local community. While the learning activity takes place in the local community (and outside of the classroom), these linguistic exchanges do not necessarily address a community partner's need. For the purposes of this chapter, we will be closely examining the narrower field of service-learning rather than CBL.

Over the years, service-learning pedagogy has become more formalized, and its contributions to higher education have been better documented, thanks to the work of numerous researchers in the field. These efforts have been spearheaded by a combination of college and university faculty in conjunction with national service organizations such as the National Service-Learning Clearinghouse/Campus Compact, peer-reviewed research publications such as the *Michigan Journal of Community Service-Learning*, and annual conferences such as the one hosted by the International Association for Research on Service-Learning and Community Engagement. In order to formalize and standardize community-based learning practices at the institutional level, the Carnegie Foundation for the Advancement of Teaching offers a Community Engagement Classification (classifications.carnegiefoundation.org/descriptions/community_engagement.php), which provides colleges and universities with frameworks and criteria so that their curricular objectives align with their service-learning efforts. In doing so, the Carnegie Classification recognizes the academic legitimacy and value of this type of pedagogy. Finally, colleges and universities have made efforts to standardize their community engagement practices by designating specific service-learning and/or community engagement courses as such. In doing so, faculty must adhere to certain norms and best practices; students then have prior knowledge of the expectations of the courses in which

they enroll. Examples of institutions with these academic service-learning norms include Rollins College, the University of Georgia, and the University of Central Florida.

In addition to the benefits gained by the community partners in having student volunteers making contributions to their organizations, research has shown that these course-based activities have positive impacts on student learning. For example, the research of Alexander Astin and colleagues (2000) demonstrates increased learning outcomes in student writing, while Patricia Fredericksen (2000) shows that student performance in class improved through service-learning. Research has demonstrated increased development of students' cognitive skills and academic motivation (Bringle, Phillips, and Hudson 2004) through service-learning. Eyler and Giles (1999) also observe increased motivation in students to learn the course material because of a direct connection to the service-learning project in addition to improved problem-solving skills and higher levels of complex thinking (75). Furthermore, the authors note an increased development of critical thinking skills through high-level service-learning experiences (101). However, Eyler and Giles caution that one must consider the fact that the cognitive development of the student can influence the level of these gains. The results of these and numerous other research projects on the benefits of service-learning clearly underscore the academic nature of this type of experiential pedagogy.

Educating Students for Active and Responsible Citizenship

Beyond having a positive effect on student learning and motivation, service-learning also assists faculty and the broader institution in achieving the goal of educating students for active and responsible citizenship. Colleges and universities around the country have dedicated valuable and scarce resources to the establishment of centers for community engagement and service in the hopes of educating students on the importance of participating in the community and becoming active members of society. This emphasis on education with a focus on creating positive outcomes for society is not new to the higher education landscape. Educational theoretician Ernest Boyer argues that, beyond the individualistic goals of career and personal interest, higher education must instill in students a sense of responsibility to their community

(1987, 67–68) and that institutions of higher education have a duty to connect their vast resources with social issues and transform the campus into “staging grounds for action” for solving these problems (1996, 32). This emphasis on citizenship and community engagement can be seen more recently in the National Leadership Council for Liberal Education and America’s Promise’s (LEAP) 2007 report “College Learning for the New Global Century.” According to this report, one of the four essential learning outcomes for students today is “personal and social responsibility, including civic knowledge and engagement—local and global, intercultural knowledge and competence, ethical reasoning and action, and foundations and skills for lifelong learning (anchored through active involvement with diverse communities and real-world challenges)” (3) (Figure 1.1).

The Essential Learning Outcomes

Beginning in school, and continuing at successively higher levels across their college studies, students should prepare for twenty-first-century challenges by gaining:

★ **Knowledge of Human Cultures and the Physical and Natural World**

- Through study in the sciences and mathematics, social sciences, humanities, histories, languages, and the arts

Focused by engagement with big questions, both contemporary and enduring

★ **Intellectual and Practical Skills, including**

- Inquiry and analysis
- Critical and creative thinking
- Written and oral communication
- Quantitative literacy
- Information literacy
- Teamwork and problem solving

Practiced extensively, across the curriculum, in the context of progressively more challenging problems, projects, and standards for performance

★ **Personal and Social Responsibility, including**

- Civic knowledge and engagement—local and global
- Intercultural knowledge and competence
- Ethical reasoning and action
- Foundations and skills for lifelong learning

Anchored through active involvement with diverse communities and real-world challenges

★ **Integrative and Applied Learning, including**

- Synthesis and advanced accomplishment across general and specialized studies

Demonstrated through the application of knowledge, skills, and responsibilities to new settings and complex problems

Figure 1.1 The essential learning outcomes from the LEAP report (www.aacu.org/leap)

Academic service-learning and community-based learning can serve as vehicles for institutions of higher education to achieve these learning outcomes for today's student. According to Astin and colleagues (2000), among the outcomes for students in service-learning courses are a heightened sense of civic responsibility and an increased likelihood of pursuing a career in a service field after graduation. Similarly, Eyler and Giles (1999) maintain that service-learning leads to engagement, connection, and active citizenship (157). By linking theory on what it means for students to become active and responsible members of their communities with hands-on activities outside of the classroom, educators make the course material relevant to the students and achieve the improved learning outcomes discussed earlier.

On the other hand, this increased involvement of institutions of higher education through community engagement activities has not always been the norm. According to Boyer and Arthur Levine (1981), higher education has vacillated between focusing on preparing students for their vocation and career and the institution's greater social obligation to the broader community:

Each general education revival moved in the direction of community and away from social fragmentation. The focus consistently has been on shared values, shared responsibilities, shared governance, a shared heritage, and a shared world vision. To us, this is an important point. It suggests that the ebb and flow of general education is, in fact, a mirror of broader shifts in the nation's mood. (17)

Now, more than 30 years since Boyer and Levine's study, our nation's mood can be characterized as one of institutions of higher education and their students actively looking to share and engage with the local community. College and university students today are more likely to come to campus with experience and interest in volunteering and serving the community. According to the U.S. Bureau of Labor Statistics (2012), 22.6 percent of people aged 16 to 24 volunteered in the year 2012. The Corporation for National and Community Service (2006) also reports that, "In 2005, approximately 30.2 percent of college students volunteered, exceeding the volunteer rate for the general adult population of 28.8 percent" (2). In sum, today's college-aged students are generally interested and experienced in community

engagement, providing fertile ground for academic service-learning courses and initiatives across college and university campuses.

Globalizing the Curriculum

There is no arguing that today's students need to prepare for an ever more interconnected and globalized society. It is not enough to simply educate students for success in their region or state; they must graduate with the skills and abilities to thrive in the competitive global marketplace. Higher education is keenly aware that a 21st-century education requires that students achieve certain intercultural competencies and a general awareness of the world beyond our borders. For example, according to Nelly Furman, David Goldberg, and Natalie Lusin's Modern Language Association report (2010), enrollments in the study of languages other than English at institutions of higher education reached a new high in 2009, including a notable increase in enrollments in the languages outside of the 15 most commonly taught languages. In addition to increased study of foreign languages, more and more students are participating in international educational experiences during their college years. For example, according to the Institute of International Education's "Open Doors Report on International Educational Exchange" (2012), over 273,000 university students from the U.S. studied abroad for academic credit during academic year 2010–2011, more than triple the number of students from two decades before.

As well as international travel experiences, colleges and universities are providing valuable global perspectives through initiatives to internationalize their faculty and curriculum. In discussing a study by the International Association of Universities, Aisha Labi (2009) explains that the primary objective for internationalization efforts across higher education has shifted from a focus on research to a focus on preparing students for a globalized society:

Strengthening research capacity through international collaborations, which in 2005 ranked second in importance only to internationalizing the faculty and student body, is no longer among the top three rationales institutions cite for why they are internationalizing. Instead, their current priorities, in order of importance, are improving student preparedness,

internationalizing their curricula, and enhancing their institution's international profile and reputation.

On the faculty side of the equation, institutions are not just encouraging their students to participate in study abroad programs. For example, at Rollins College, in Winter Park, Florida, home to the author and this study, every 3 years faculty members qualify for an internationalization grant to travel to a country they have never visited before as part of an educational tour or research trip. The objective of this grant is that faculty return to campus and share their global experiences with their students through new additions to the courses they teach.

In addition to a more globalized curriculum and focus on international issues and challenges, student travel abroad, in various forms, contributes to the global consciousness that is now an increasingly prevalent learning objective. International experiences for students can take the form of traditional study abroad at a host institution in a foreign country, short-term immersion experiences led by a faculty member from the student's home institution, noncredit cocurricular experiences of short or intermediate duration, and longer-term internships abroad, among others.

While all of these experiences have merit in advancing global learning objectives, international trips with a service-learning focus can achieve both the global awareness objective and also the personal and social responsibility outcomes that the LEAP learning report argues for, as discussed earlier. Bringle and Hatcher (2011) go so far as to claim that "International service-learning [ISL] ... may be a pedagogy that is best suited to prepare college graduates to be active global citizens in the 21st century," (3) and that the field of international service-learning lies at the triple intersection of the educational domains of international education, study abroad, and service-learning (4). They further define ISL as follows:

A structured academic experience in another country in which students (a) participate in an organized service activity that addresses identified community needs; (b) learn from direct interaction and cross-cultural dialogue with others; and (c) reflect on the experience in such a way as to gain further understanding of course content, a deeper understanding of global and intercultural issues, a broader

appreciation of the host country and the discipline, and an enhanced sense of their own responsibilities as citizens, locally and globally. (19)

The increasing demand for such learning experiences that take students beyond classroom learning can be seen in the proliferation of service-oriented trip offerings from both colleges and universities as well as from international study service providers, such as IPSL and Amizade International, among others. One must be cautious, however, in the structure and delivery of such international service-oriented experiences for students. Following the best practices of service-learning generally, educators and organizers of international service trips must be mindful of developing equal, respectful, and reciprocal relationships with the community partner abroad (Eyler and Giles 1999) and to not replicate colonialist/imperialist structures in the service project (Kahn 2011). Organizers must be very careful as well in not placing the community partner in any position that can be detrimental to their group and must adhere to a policy of “do no harm.”

Case Study: The World Wide Web in Mexico

The following case study will illustrate how the institutional goals of global citizenship and personal and social responsibility can be achieved through an international academic service-learning experience focused on bridging the digital divide globally.

In 2003 and 2004, the associate vice president of information technology at Rollins College organized an international academic service-learning experience for first-year students called The World Wide Web in Mexico. Although the focus of this case study will be the 2003 and 2004 experiences, similar iterations of this project took place from 2005 to 2009 with service trips to Cuenca and Galapagos, Ecuador, and the Bahamian island of Abaco. Assisting the associate vice president in 2003 and 2004 were two Rollins faculty members—one from the department of education to assist with lesson planning and pedagogy, and one from the Spanish program to conduct the language component of the course. Also, during the 2004 project, a group of Rollins students developed a basic English language program for the Mexican students in addition to the computer skills course that was piloted the previous year. Additional details about this project can be found in Chapter 12.

Preservice Seminar

As part of their first-year seminar, called the Rollins College Conference (RCC), students in The World Wide Web in Mexico seminars in 2003 and 2004 designed, prepared, and implemented a curriculum to teach webpage design and computer literacy to underprivileged elementary school students near the town of San Miguel de Allende in Central Mexico. The objective of the preservice course was for students to learn about Mexican culture, history, society, and the digital divide in a developing country, in addition to developing global awareness through service to others. Over the course of the semester, students also engaged in readings about Mexico, the economic and social effects of the North American Free Trade Agreement, and Mexican immigration to the United States. In preparation for December's service-learning trip after the completion of final exams, the RCC students created and executed fundraising activities to collect money to purchase the used laptop computers that would be used for instruction in Mexico, and eventually donated to the partner schools. The students collaborated in groups to create a curriculum for 5 days of computer instruction, while also learning about social and economic issues in modern Mexico and Spanish technology-based vocabulary and conversational Spanish. Prior to departure, the students also produced instructional guides in English and Spanish that would be left with the partner schools' administrators and teachers so that they could continue to effectively use and maintain the computers that the Rollins group was donating.

It is important to note that, in working with students in the first semester of their first year of college, the expectation at the end of the course was not that they would immediately be transformed into global civil servants ready to tackle all of the social problems of the world. A developmental approach to student learning can result in a deeper and more long-lasting impact. In other words, one isolated service-learning experience will not achieve all of the desired learning outcomes in civic knowledge and global awareness. Eyler and Giles explain that, "the principle of continuity was central to Dewey's thinking; learning is never finished but is a lifelong process of understanding" (1999, 183). They also contend that, although high-level service-learning contributes to the development of critical thinking skills, students experience more significant cognitive development through multiple service experiences (125).

Service-Learning Trip

Over the course of the week of instruction, Rollins students were placed at two schools in the San Miguel de Allende area, each with differing levels of computer literacy and English competency, ranging from absolute zero to intermediate-level competency (Figure 1.2). For many of the Mexican students, especially in the more rural school, it was the first time they had ever used a personal computer. As such, the curriculum designed by the Rollins students provided (in Spanish) a complete overview of the parts and workings of a laptop computer. While the initial aim of the 2003 groups was to train the Mexican children on web design, limited access to a reliable internet connection forced the group to change strategy and focus. The plans for teaching Microsoft FrontPage, a WYSIWYG HTML editor and website administration tool, were scrapped, and the Rollins students created a new curriculum teaching PowerPoint and Publisher, as well as word processing software so that the Mexican children could create school newsletters and disseminate information in a new way with their families and



Figure 1.2 A Rollins student assisting young Mexican students with basic computer skills

community. This technical hiccup provided the students a valuable lesson in being flexible and improvising one's plans under challenging circumstances.

At the end of 5 days of intense instruction at the local schools, the Mexican students were able to create presentations and newsletters for their families and community. They also learned how to take pictures using digital cameras (which were also donated to the schools), upload the pictures from the cameras to the laptops, and then use them in the digital media they were producing. The students were eager to share their new knowledge of computers with their families and created letters and cards with images, different fonts, colors, and formatting. One of the local schools was procuring funds and materials to build a computer lab where the students could put their new computers and computing knowledge to use as part of their academic learning.

Keeping in mind the importance of developing respectful and reciprocal relationships, the group of students from Rollins did not come to the schools with the hierarchical mindset of simply imparting their knowledge and leaving behind some computers. The group was sensitive to the need to develop a trusting relationship with the Mexican students and their teachers. In order to accomplish this goal, the group organized games and ice-breaker activities with the children and engaged in linguistic exchanges with them so as to improve their Spanish skills (Figure 1.3).

This personal interaction with the Mexican children and their teachers addressed the course goal of developing intercultural competence and enhancing the Rollins students' global perspective. At the end of



Figure 1.3 Mexican students participating in an ice-breaker activity with a Rollins student

the week of instruction, all of the community schools where the Rollins group was working held ceremonies and thank you *fiestas*. The families wanted to demonstrate their gratitude and share their cultural customs with an authentic Christmas party, complete with piñatas, *aguinaldos* (small, handmade “goodie bags” with holiday candies), homemade food, games, and music. At these farewell celebrations, the close bond between the Rollins students and their Mexican counterparts was most evident. Speeches were made, gifts exchanged, and even a few tears shed. By the end of the week of service, it was clear that the Rollins group had learned and received more from the Mexican students than they had given in computing and English instruction.

Impact of the Experience

As with any well-designed service-learning project, the students were required to submit an extensive reflection assignment in the days following their return from Mexico. In these reflections, one can clearly see how the computer education project for the Mexican students turned into a citizenship and global awareness lesson for the Rollins students. For reasons of privacy, the names of the students will not be revealed. One student remarked:

When I first signed up for this course, I didn't really know what to expect. ... I signed up because I thought it would be interesting. I was completely unaware as to how the trip to Mexico would completely change my outlook on life.

Another student commented about the experience of teaching:

It made me see that one of my obligations [in] being fortunate enough to have the opportunities that I do is to continue giving to those less fortunate. It wasn't until that [last] day at the school that I realized this.

As discussed earlier, one experience will not forever change a student's perspective, but it will set him on a path for further exploration and discovery. After graduation, the following student went on to pursue legal studies:

After spending 5 days with the students from Campana, I really felt that I was a changed person. The impact that we all had on their lives was immeasurable, and that changed me in a way that I cannot describe. I learned that the things that matter most in life are those things that impact the lives of others.

This sentiment of altruism and a call to service to the global community is also echoed in the following reflection:

Being able to teach students in a different setting than what I am used to just refocused [me] and made me confident that being an educator is what I want to do. I'd like to change the world (who wouldn't?), and I hope that with more experiences like this one and the chance to keep improving myself while at the same time helping and giving back to others, I will be able to continue this type of work while exploring more worlds.

Finally, a student who had previously demonstrated a passion for social issues found his values and ideals validated by the experience:

This trip was not only moving and motivational to me, but it again reaffirmed my dreams of being a social worker and eventually my dream of changing the world in the magnitude of Marx, MLK, Gandhi, and Che Guevara. Even though we were able to touch the lives of only so few, I have to believe that even if we changed the life of one of those students that our trip was well worth our while.

Much of the deep impact that these projects had on the students can be attributed to their working through situations beyond their usual comfort zones, both physical and emotional. A colleague of the author refers to the importance of a "squirm and learn" approach to service-learning. In other words, when students are challenged to move beyond what is familiar and safe for them, they are more actively engaged in their learning and will exceed the limits of what they already know. The first challenge that pushed the students outside of their comfort zones was climatic. The weather in San Miguel in mid-December is typically cool

during the day and chilly in the evenings, oftentimes close to freezing. Our accommodations during both of these trips did not have central heat or a readily available supply of hot water to accommodate a group as large as ours. Although there were numerous complaints about the living arrangements at first, the students quickly adapted to the more difficult conditions and focused on the project at hand. Secondly, although a few students were native speakers of Spanish or had high linguistic competency before the trip, the majority experienced difficulties in communicating with our Mexican counterparts as well as with the children, most of whom spoke absolutely no English. The linguistic obstacles presented by not having sufficient Spanish skills further pushed the students out of their comfort zones and challenged them to find other means of interpersonal communication. The intra-lingual negotiation between the students and our hosts yielded a deeper appreciation of the challenges immigrants with limited English skills face in our own country. However, one must be cautious in challenging students to go beyond the realm of the familiar in a travel abroad environment. If pushed too far and too soon, students may revolt and counteract the positive outcomes of the experience for the rest of the group.

The long-term impact of service-learning experiences beyond graduation from undergraduate studies is an area that warrants further research. Anecdotally, years after the 2003 and 2004 trips to Mexico, several of the participants are currently working in or continuing studies in fields related to international study and service. One participant is currently completing a PhD program in Spanish language and literature. Another received a master of social work from Columbia University, focusing on the juvenile system, and will shortly begin law school. This same student wrote a senior thesis at Rollins on the experience of young Mexican migrants in the Central Florida area. One of the 2004 participants is working as an international admissions counselor at a college in the Northeast. Finally, a 2003 participant spent a semester studying abroad in Spain and has channeled his international experiences into founding his own Spanish wine importing company.

Conclusion

As seen by the case study presented, technology teaching can be a valuable vehicle for educating our students about global issues and the need for social action. Students learn valuable intercultural, problem

solving, and leadership skills while developing sensitivity to other cultures and peoples through close, meaningful, and positive interactions with the host country. By having students “serve and learn” during an international experience, they gain an international perspective beyond experiencing the other through the “tourist gaze.” Technology education in an international setting can bridge the gaps between cultures while empowering both the students who impart the skills and the students who receive the valuable training. Furthermore, technology education can be at the center of a critical triple intersection, international education, study abroad, and service-learning, as Bringle and Hatcher suggest. This is not to suggest that every college and university should rush out to implement an international technology-based service-learning program. Such educational experiences must be carefully designed, articulated, and executed in deliberate and culturally sensitive ways following the best practices of service-learning pedagogy and academic study abroad. In doing so, a particular course’s learning objectives can be realized along with the institution’s global outreach and citizenship goals. Finally, just as technology connects people across countries and continents, teaching people how to use technology through an international service-learning program can connect and transform all those involved.

References

- Astin, Alexander W., Lori J. Vogelgesang, Elaine K. Ikeda, and Jennifer A. Yee. 2000. *How Service Learning Affects Students*. Los Angeles: University of California, Higher Education Research Institute. heri.ucla.edu/pdfs/rhowas.pdf.
- Boyer, Ernest L. 1987. *College: The Undergraduate Experience in America*. New York: Harper.
- . 1996. “Stated Meeting Report: The Scholarship of Engagement.” *Bulletin of the American Academy of Arts and Sciences* 49(7): 18–33.
- Boyer, Ernest L., and Arthur Levine. 1981. *A Quest for Common Learning (The Aims of Higher Education: A Carnegie Foundation Essay)*. Washington, DC: The Carnegie Foundation for the Advancement of Teaching.
- Bringle, Robert G., and Julie A. Hatcher. 1995. “A Service-Learning Curriculum for Faculty.” *Michigan Journal of Community Service-Learning* 2(1): 112–122.
- . 2011. “International Service Learning.” In *International Service Learning: Conceptual Frameworks and Research*, edited by Robert G. Bringle, Julie A. Hatcher, and Steven G. Jones, 3–28. Sterling, VA: Stylus Publishing.

- Bringle, Robert G., Mindy A. Phillips, and Michael Hudson. 2004. *The Measure of Service Learning: Research Scales to Assess Student Experiences*. Washington, DC: American Psychological Association.
- Corporation for National and Community Service. 2006. "College Students Helping America: Executive Summary." www.nationalservice.gov/pdf/06_1016_RPD_college_full.pdf.
- Dewey, John. 1942. *Democracy and Education: An Introduction to the Philosophy of Education*. New York: Macmillan.
- Eyler, Janet S. and Dwight E. Giles, Jr. 1999. *Where's the Learning in Service-Learning?* San Francisco: Jossey-Bass.
- Fredericksen, Patricia J. 2000. "Does Service Learning Make a Difference in Student Performance?" *Journal of Experiential Education* 23(2): 64–74.
- Freire, Paulo. 1970. *Pedagogy of the Oppressed*. Translated by Myra Bergman Ramos. New York: Herder.
- Furman, Nelly, David Goldberg, and Natalia Lusin. 2010. "Enrollments in Languages Other Than English in United States Institutions of Higher Education, Fall 2009." Modern Language Association of America. www.mla.org/pdf/2009_enrollment_survey.pdf.
- Institute of International Education. 2012. "Open Doors Report on International Educational Exchange." www.iie.org/Research-and-Publications/Publications-and-Reports/IIE-Bookstore/Open-Doors-2012.
- Kahn, Hilary E. 2011. "Overcoming the Challenges of International Service Learning." In *International Service Learning: Conceptual Frameworks and Research*, edited by Robert G. Bringle, Julie A. Hatcher, and Steven G. Jones, 113–124. Sterling, VA: Stylus Publishing.
- Labi, Aisha. 2009. "Priorities in Internationalization Shift From Research to Preparing Students." *Chronicle of Higher Education* (September 20). chronicle.com/article/Internalizations-Focus/48530.
- National Leadership Council for Liberal Education and America's Promise. 2007. *College Learning for the New Global Century*. Washington, DC: AACU. www.aacu.org/leap/documents/GlobalCentury_final.pdf.
- U.S. Bureau of Labor Statistics. 2012. "Volunteering in the United States." www.bls.gov/news.release/volun.nr0.htm.

About the Editors



Les Lloyd received his BS in Interdisciplinary Science and MBA from Rensselaer Polytechnic Institute. He has managed IT operations at Drew University, Lafayette College, Rollins College, and Saint Leo University, and he has published several books on higher-ed IT management and the use of technology in education.

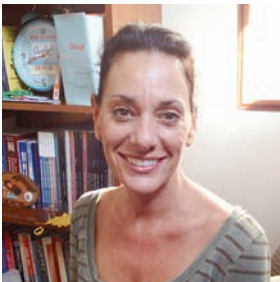
Dr. Gabriel Ignacio Barreneche, associate professor of Spanish, received his BA in Spanish and International Studies from Boston College in 1996 after participating in that institution's study abroad program at the Universidad de San Francisco de Quito, Ecuador, during his junior year. He holds an MA and a PhD in Hispanic Languages and Literatures from the University of California, Los Angeles. Since completing his graduate studies in 2003, Dr. Barreneche has been a member of the faculty of the Department of Modern Languages and Literatures at Rollins College in Winter Park, FL. He has published articles and presented papers on contemporary Caribbean and Latin American literature, Latino writers in the United States, service-learning pedagogy in the field of language instruction, and the role of instructional technology in language education.



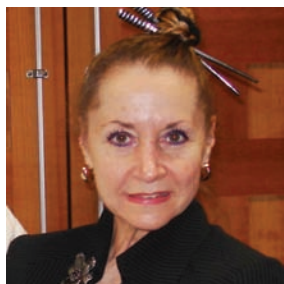
About the Contributors



Mariana Amatullo is vice president in the Designmatters department at Art Center College of Design. Amatullo founded Designmatters, based in Pasadena, CA, in 2001. As the lead of the program and at the helm of the Designmatters concentration in art and design for social impact, she develops strategic educational partnerships and oversees a portfolio of research collaborations, communication campaigns, exhibitions, and publications that enhance Art Center's commitment to be at the forefront of international design education and contribute solutions to humanitarian issues of critical urgency. In 2012, *Fast Company* magazine listed Amatullo as one of its "Design 50."



Denise Cummings is associate professor and chair of Critical Media and Cultural Studies at Rollins College. Her teaching and research focus on film history, theory, and criticism; American and American Indian film and literature; and media and cultural studies. She is editor of *Visualities: Perspectives on Contemporary American Indian Film and Art* (Michigan State University Press 2011) and co-editor of *Seeing Red, Hollywood's Pixeled Skins: American Indians and Film* (Michigan State University Press 2013). Cummings regularly teaches community-based service-learning courses. She has curated numerous film programs and serves on selection committees and juries for several film festivals, including the Florida Film Festival.



Dr. Patricia Davis-Wiley holds an AB and MA in French from the University of California and a MEd and EdD in curriculum and instruction from the University of Houston. She taught high school French and Spanish, French at Baylor University, and World Language Methods classes at the University of Houston. She is presently professor of world languages and English as a

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Dan Gottlieb and Penny Herscovitch are Los Angeles-based designers and design educators. Together they lead the design studio Padlab and co-teach in the Environmental Design department at Art Center College of Design in Pasadena, CA. Padlab's work encompasses materials research and innovation, illumination, and spatial installation design. The pair has lectured and taught internationally, and their work has been published extensively. Herscovitch also conducts research and writes for renowned institutions and firms, including Morphosis Architects. In 2003, Gottlieb received his Master of Architecture from the Yale School of Architecture and Herscovitch her BA in Architecture, Magna

Cum Laude, from Yale University. As faculty at Art Center College of Design, they were awarded the 2007 Nuckolls Fund for Lighting Education Grant. They have co-led international educational collaborations for Art Center, including the 2007 and 2012 Pacific Rim Projects in Tokyo in partnership with Tama Art University; and the award-winning Safe Agua project, initiated in 2009 between Art Center's Designmatters and the Innovation Center of N.G.O. TECHO to design innovative water solutions for Latin American communities with no running water.



J. Scott Hewitt is an associate professor of education at Rollins College in Winter Park, FL. He has worked with the Rwandan Education Assistance Project (REAP) in Rwanda since 2010. His Rollins Laptop Legacy Project has resulted in some 30 refurbished laptops being brought to the rural Duha Complex School since 2011.



Lina Lee received her PhD from University of Texas, Austin. She is a professor of Spanish at the University of New Hampshire, where she teaches courses in second language acquisition, applied linguistics, and foreign language methodology. She has conducted research and published articles on language assessment, online feedback, computer-mediated communication, and | discourse analysis.



Dr. Maysoun Dimachkie Masri is an assistant professor at the Department of Health Management and Informatics at the University of Central Florida. As a junior healthcare finance and economics researcher, Dr. Masri has worked on projects trying to delineate the causal relationship between efficiency and effectiveness of

healthcare services. The focus of her research is directly related to the following disciplines: healthcare finance, healthcare finance education, economics, and healthcare policy.



Kathryn Mendez earned her MA in Spanish from Middlebury College and is currently working toward a doctoral degree in Hispanic and Luso Brazilian Literatures and Languages from the CUNY Graduate Center in New York City. She is a Spanish teacher at the Hopkins School in New Haven, CT. Mendez has published poetry both in the United States and abroad, and

she has most recently published literary criticism on the topic of Orientalism in Latin America.



Dr. Eunice M. Merideth is the associate dean and a Levitt Distinguished Professor in the Drake University School of Education. She has designed and taught courses with and about technology for 24 years at the university level and worked with technology integration at all levels of education. In addition to being associate dean, Dr. Merideth is the assessment officer and

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Abigail Bragg New is a graduate of Rollins College in Winter Park, FL. She has taught in a Title 1 school that serves some of the poorest populations in downtown Orlando for the past 8 years. New has worked with REAP since 2012. She has assisted in establishing one of the first libraries in rural Rwanda and raised money to outfit the handball team at the Duha Complex School.



Bernardo Ramirez, MD, MBA, is an assistant professor and director of the Executive Master in Science in Health Services Administration Program (e-MSHSA) and of Global Health Initiatives of the Department of Health Management and Informatics at the University of Central Florida. Dr. Ramirez is an experienced health-services administrator in public and private organizations, and his experience includes clinical practice and administrative experience from the hospital departmental level to the health systems planning and policy levels. He has provided technical assistance, developed research, and conducted training for organizations including the U.S. Agency for International Development, the World Health Organization, and the W.K. Kellogg Foundation for 35 years in more than 60 countries on five continents. He has taught online courses at UCF since 2006 and is the author of numerous publications and training materials and a presenter at many national and international forums.



Dr. Cherie Lynn Ramirez is a Post-doctoral Fellow at the Harvard School of Public Health, with a joint appointment as Curriculum Fellow at the Harvard Global Health Institute. Her focus is primarily on priorities in the arena of education, including the development and implementation of a strategy to build a cadre of teaching fellows for global health courses, inclusive of

teaching workshops in partnership with the Derek Bok Center for Teaching and Learning, teaching tools that can be shared across classes at Harvard, and a common set of resources that could be made available and accessible as educational public goods. She completed her PhD in experimental pathology through the Division of Medical Sciences at Harvard University in 2012. She holds an Associate in Arts degree from Valencia College and a Bachelor of Arts degree in classical studies and biochemistry/molecular biology from Rollins College. Dr. Ramirez has found her experiences living in Mexico, Spain, and Belgium and traveling extensively within the United States and abroad to be among her most enriching catalysts for learning and inspiration.



Carrie Schulz received her MBA from Crummer Graduate School of Business. She has served in a multitude of positions within the IT field and is currently the director of academic computing for Rollins College. During her career, she has embarked on multiple service immersions with students, bringing technology to schools in various forms. Her main focus of research is in

bridging the digital divide and, more specifically, investigating how technology affects the quality of education that students receive.



Dr. Brian Shmaefsky is currently a professor of biology at Lone Star College, Kingwood, near Houston, and coordinates the college's service-learning program. He has been at the college since 1992. His research emphasis is in environmental physiology. Dr. Shmaefsky attended Brooklyn College of CUNY, Southern Illinois University at Edwardsville, Rocky Mountain

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Dr. Peggy E. Steinbronn is an instructional designer for AEA PD Online, a statewide system for delivering online professional development to K–12 educators. In addition, she is an adjunct faculty member at Drake University School of Education, teaching technology integration and electronic portfolio courses for preservice teachers. Dr. Steinbronn has 27 years

of K–12 classroom experience and 13 years teaching at the university level and has published extensively about technology in education.

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