Preface

During the early boom of Web-based education in the late 1990s, both in the United States and in other nations such as the United Kingdom and Australia, there was a flurry of publications on the subject of university and industry partnerships, with a focus on ways in which online learning might break down barriers and lead to new models of collaboration and engagement across heretofore clearly delineated borders. Despite the interest in such endeavors this moment generated, few such partnerships materialized and fewer still have been effectively documented. Some might argue that this outcome is attributable to the proprietary nature of most course management systems, which steadfastly maintain a wall between campuses and the outside world. Others might say that partnerships across sectors are inherently unsustainable because the differences are simply too significant. Whatever the reasons, there has been little documentation of effective technology-based partnership practice within the literature of higher education. This collection is meant to bring attention to exceptional projects around the world that demonstrate ways in which colleges and universities can leverage resources of time, energy, and intelligence to create mutually beneficial collaborations with industry, nonprofit, and other groups in their local and global communities.

My co-editor and I join with the 88 teachers, professors, community leaders, and others who have written the chapters in this collection to argue that technologies are being used in compelling ways to forge partnerships between college students, staff and faculty members, and the communities around them. As we enter the second decade of the 21st century, we see a moment of growing opportunity for connection. Though progressively more formal course management options are owned and operated by large corporations, each year, many faculty members move their classes out of these structures and into the blogosphere. Social networking programs like Facebook and Twitter are increasingly central to the lives of faculty, and mobile technologies are ubiquitous, blurring lines among work, school, and pleasure. Second Life, a virtual world built by technologically savvy entrepreneurs, and similar interfaces are appropriated frequently by educators interested in exploring their potential for teaching and learning. As entities of all types struggle to survive in increasingly difficult economic times, there is a chance for innovative and intellectually, economically, and socially beneficial collaborations among academic institutions on all levels and nonprofit and profit-driven organizations in their communities. These opportunities are the focus of this volume.

WHAT WE’VE LEARNED FROM THE EDITING AND COLLABORATION PROCESS

The first feature that might strike readers about this volume is its considerable length. When we started this project in mid-2009, we reached out to listservs, blogs, and other digital community venues in
search of exemplary partnership projects from around the world. We were thrilled to receive the many proposals that came in over the course of the fall of 2009 and the process for selecting those we would highlight was challenging. What we found through our efforts is that committed people everywhere are working to improve education and other opportunities for their fellow citizens through innovative uses of digital technologies. The examples that emerged from our rigorous review process to become part of this volume underscore a number of important lessons about community partnerships. Below I will summarize a few of these lessons that are effectively demonstrated in the chapters that follow.

*College and high school students today are taking a lead in the process of creating valuable partnerships that make a difference in local and global communities.* We hear a great deal of speculation about the attitudes and abilities of the Millennials, a moniker used to describe people born between 1980 and 2000, which includes most current traditional-aged college and high school students. Many chapters in this book will demonstrate that young people today are contributing significantly to the world through their creativity, hard work, and commitment. Chapter One is written by Rachael Wendler and a team of high school student researchers from Tucson, Arizona—Aria Altuna, Timothy Crain, Oksana Perez, Savannah Sanchez, and Jalina Vidotto. The chapter describes the group’s efforts to study a service-learning partnership between high school and university students and to identify ways to improve the learning impacts for both groups of students. The chapter underscores the energy, intelligence, and technical expertise these emerging leaders bring to the table, and makes crucial points about the ways in which digital tools, including Google Wave, can be used to harness and direct those resources. In Chapter Two, Curtis DeBerg describes the profound global impact of Students for the Advancement of Global Entrepreneurship (SAGE), an organization that brings high school and university students and their teachers together with representatives from the private and nonprofit sectors to encourage collaboration, all with a goal of improving the world. DeBerg describes SAGE as “a transnational social movement organization (TSMO) that includes youth and adults who believe that humanitarian capitalism and social entrepreneurship provide one promising avenue to alleviate poverty and to contribute to world peace.” The chapter identifies compelling ways in which participants use digital technologies to work together toward these ends. Recent Harvard graduate Katelyn Foley describes another student-run project in Chapter Four. Foley and a group of her fellow students recognized a lack of access to computers in a small local school, formed a campus organization to raise money to address that need, and provided the equipment resources and their own labor and knowledge to help students in the school to improve their technological and social skills. Foley takes up the one-to-one computing debate in this piece, which describes a sustained and, indeed, expanding partnership for education that addresses the need for technical training not only for primary school students but for their teachers as well.

*Creating a successful partnership is challenging.* Anyone in higher education who has attempted to create a genuine partnership with an organization outside of the academy can attest to the complexity of the balance required to secure mutual benefit. Just managing the logistics and working through the politics to get the appropriate parties to a shared table is challenge enough, but those steps are only the beginning. Throughout this book, authors offer insights about the importance of recognizing the values and expectations of community partners and of figuring those elements into every stage of project development. In Chapter Twelve, Katherine Loving, Randy Stoecker, and Molly Reed offer a model of technology-based service-learning that prioritizes the immediate technology needs of nonprofit partners and suggests strategies for helping those organizations to not only receive technical assistance through the process, but also to play a role in shaping the emerging tools for their own needs and expectations. Students working together on these projects learn about technology and partnerships through genuinely
addressing the needs of their community partners. In Chapter Twenty-Seven, Charles Underwood and Leann Parker apply an anthropological methodology to study the responses to changing technology across 35 sites hosting technology-based afterschool programs for underserved youth in California. Their analysis suggests, among other points, that the unique attributes of each site shape the technological and programmatic approach needed to create a successful university and community partnership. Similarly, Pat Byrne and Lorraine McIlrath describe in Chapter Eight a successful service-learning project at the University of Ireland, Galway, that pairs Master’s students in Information Technology with local community organizations to address specific technology needs that impact the organizations’ ability to provide services needed in the community. The authors place this project within the context of the history of service-learning in Ireland and provide data from interviews with both students and community partners to offer insights into strategies for making technology-focused partnerships successful for everyone involved, including student awareness of the realities of the technical conditions in the organizations’ sites.

While collaboration is a valued process for all of our authors, not all partnerships are equally effective. Many university leaders face mounting pressure to form partnerships with local businesses and nonprofit organizations as available resources contract in the current economic situation, but partnership for partnership’s sake is not inherently valuable. Authors in many of the chapters that follow offer solid criteria for evaluating the potential of a given current or potential partnership and support the notion that in some cases it is better to discontinue or redirect a partnership rather than to maintain one that is problematic for any of the parties involved. James Lawler argues in Chapter Ten that a set of critical factors shapes the effectiveness and value of a technology-focused, service-learning partnership; he suggests that faculty members can apply these criteria as they form new partnerships and assess existing ones. While Lawler’s ideas are geared toward computer and technology courses in particular, the lessons presented will resonate with service-learning teachers across campuses. Trey Conner, Morgan Gresham, and Jill McCracken reflect in Chapter Thirty-One that even when an initial partnership turns out to be less than perfect fit, value can still emerge from the process for the local community. They describe an experience of initially helping to establish a computer network with a local social services organization and then stepping back to watch a human network emerge. Ultimately, the university’s role in the project changed from a major player to a peripheral role in a collaboration that took on a life of its own. The authors offer a model for redefining partnership through a community capacity-building lens, and underscore the importance of maintaining focus on project goals from the community partner’s perspective.

Partnerships are not always easy to initiate or to sustain, but partnerships with primary and secondary schools can be some of the most valuable and effective. Education at all levels today face budget challenges, and institutions of higher education are often in a unique position to leverage the expertise of their faculty and students to enhance curricula at the lower stages. This kind of work can provide learning and research opportunities for students and teachers on all levels. Chapter Three authors Jill Russell, Karen Glum, Jennifer Licata, David Russell, and Jenny Wohlforth describe an exciting science education effort among two universities, a research and education institute, and a middle school. These team members engage middle school students in a bird-banding project that captures their attention and sparks their interest in the natural world. The chapter explains how digital technologies allow these young researchers to work as citizen scientists, collecting and tracking data that contributes to conservation efforts in and beyond their region. Web-conferencing technology allows the students to participate virtually in a conservation expedition in Alaska, and the faculty and researchers involved have a fascinating vantage point for watching learning and science in action. In Chapter Five, my co-authors
Meghan Griffin, Erin Saitta, Linda Walters, and I provide an overview of our project, Engaging STEM, which uses digital technologies, including handheld video cameras and Web conferencing, to connect undergraduate chemistry students with virtual lab partners in a local technology magnet high school and invites college biology students to produce educational videos about marine life for students at the same school. We describe ways in which technology makes our partnership sustainable and engaging for all of the students involved.

**Successful partnerships between universities and other groups can be invaluable in the promotion of intercultural communication and support for underserved populations.** In Chapter Nine, Emily Wexler Love, Debra Flanders Cushing, Jode Brexa, and Maggie Sullivan describe ways in which their partnership has challenged university service-learning students to engage multicultural high school students, many of whom struggle with written and spoken English skills, in sharing their experiences with their communities through digital storytelling. They explain the evolution of their partnership from a hesitant beginning to a sustained collaboration that has proved valuable for college and high school students and their communities. Caroline Collins, Olga Vásquez, and James Bliesner make related points in Chapter Twenty-Nine, where they describe *La Clase Mágica*, an afterschool educational activity that brings University of California-San Diego students together with residents of five underserved neighborhoods in the city. The programs take place at a Catholic Mission, a community center on the U.S./Mexico border, two affordable housing complexes, and an American Indian Reservation. These authors argue that the process of making technology and other kinds of educational support available to the children and families in these communities enhances the lives of several generations of residents and secures benefits for the university as well.

The authors of many chapters make the point that technological tools have different practical and theoretical meanings for different populations, and underscore the importance of taking that reality into consideration when we plan our partnership efforts. Amy Kimme Hea demonstrates this point effectively in Chapter Twenty-One when she argues that all parties in a technology-based partnership need to develop a critical sensibility about the media used in a project to collaborate effectively. After offering a robust theoretical framework for this recommendation, she demonstrates her point through the example of students in a client-based professional writing course who are developing a social media campaign for a local business. The students and partners discover that while they may share a basic understanding of how the technology functions, their ideas about how this tool can and should be used in the community sometimes conflict. Kimme Hea suggests that helping students and partners become more aware of their interpretation of these tools through formal reflection can help to alleviate this problem. Bernadette Longo offers a related insight in Chapter Twenty-Two as she describes her graduate students’ experiences of working with women attempting to start small businesses in their home country, the Democratic Republic of Congo. Longo explains that her students had to reevaluate their use of cellular phones as a tool for communication as they worked with these entrepreneurs for whom cellular minutes were precious and to whom common American mobile phone features such as games, texting, and e-mail were of little or no value. She explores the educational and partnership value of careful analysis of the function of technologies across cultures and advocates for continued purposeful efforts of collaboration and research.

While some chapters in the volume, such as those noted above, argue for the importance of thinking carefully about the kinds of tools we use for specific purposes, others argue that the collaboration process itself can be much more important than the selection of particular tools. In Chapter Seventeen, Amy Garrett Dikkers and Aimee Whiteside offer the example of their online human rights education course that uses a range of technologies to bring public school teachers, nonprofit leaders, and human
rights experts from around the world together to create an exemplary educational experience. The authors reflect on the complexity of working with such a varied group of participants and emphasize best practices for remaining flexible in pedagogical practice and use of technology. Chapter Thirty by John Patterson offers a model for engaging teachers-in-training as technology educators in their local communities in the United Kingdom. Drawing on more than a decade of programming, Patterson argues that the selection of relevant specific tools varies according to the local setting and is less important to the process than the initiative’s critical role in building community engagement in public education and training of future educators.

While the specific kinds of tools used in a given context may vary significantly, access to digital tools of any kind remains an issue in many communities and contexts. Patricia Aceves, Robert Aceves, and Shannon Watson offer a fascinating analysis of challenges related to technology and education access in correctional facilities. Describing the relevant curricular and financial history of higher education access in the Minnesota corrections system, the authors explain in Chapter Twenty-Three that over time the old model of correspondence courses, once a viable option for incarcerated students, has been replaced on most campuses with online learning, leaving these students who are forbidden access to the Internet with few or no options for pursuing an education. The chapter explains the process educators used to convert online courses back to a print-based model permissible within prisons, and describe the benefits and costs of this conversion process. Ashley Walker and Jody Oomen-Early present a different perspective on the importance of access to technology in Chapter Twenty-Four, which focuses on their use of PhotoVoice with nongovernmental organization (NGO) workers in Sierra Leone in a community-based research project. Facing one of the highest child mortality rates in the world, these NGO caregivers have developed critical expertise in medical and social management. By providing digital cameras and training in how to use them, the researchers on this project offered communities an opportunity to document their knowledge, reflect upon their experience together, and share their perspectives with policy makers. The authors highlight the challenges of finding sufficient electricity to keep the cameras charged and on the cultural complexities of capturing images in pictures, but more significantly they demonstrate the potential to initiate social change through technological empowerment and through engaging local leaders in educational work.

Indeed, several of our authors make the point that capacity building for technology use remains a critical objective in many parts of the world. James Kariuki Njenga and Louis Cyril Henry Fourie offer a vision of online learning in Africa, particularly in South Africa, in Chapter Twenty-Six. They describe the increasing demand for workforce development through higher education and a number of challenges ranging from lack of reliable sources of electricity to strict governmental policies related to communication technologies, limited bandwidth, and pedagogical barriers. The authors ask if e-learning is truly a viable current option in their country and others in the region and speculate on what might be required to make it a widely available option. In Chapter Thirty-Three, Alfredo Alejandro Careaga and Alberto Ramirez-Martinell describe the model their organization has developed for bringing digital tools to remote areas of Mexico to build human and technological capacity. Their network of mobile digital production centers offers “a modular, scalable scheme for the development of educational and cultural content in schools and nongovernmental organizations (NGOs) in the state of Veracruz, Mexico.” The projects described in this chapter explain how taking technology into undeveloped areas can have the three-fold impact of helping to provide education to local residents, allowing outsiders to become aware of the residents’ stories and situations, and offering both groups opportunities to collaborate on mutually beneficial environmental and cultural sustainability projects.
As noted above, though access to technology is a critical global issue, simply securing access is only a beginning place for creating solid technology-based partnerships. Educators and partners need to be involved with shaping and developing the tools that impact our communities. In Chapter Twenty-Five, Karla Kitalong describes her work as an evaluator for a National Science Foundation-funded research project that examines ways in which middle school students engage with educational technologies in an informal (non-school) setting. She argues that the 21st century evaluator “not only confirms that project goals and objectives have been met, but also evaluates collaborative processes and facilitates collaborations among the myriad stakeholders.” Kitalong’s analysis suggests that educators across the disciplines need to engage with industry and nonprofit agency partners to design communication tools of the future for a range of settings and offer strategies for handling situations in which the perspectives of stakeholders collide. In the book’s conclusion, Chapter Thirty-Seven, my co-editor Russell Carpenter describes the cutting-edge learning and collaboration space he administers at Eastern Kentucky University to argue that higher education administrators on all levels need to be involved in imagining and creating spaces where students, faculty members, college staff, community members, and industry partners can come together to discover models for solving problems that affect them all.

Not all educational spaces are physically tangible, of course. When we began to conduct our own relevant research and to receive proposals for the book it became clear that online education is increasingly a staple of academic training for professionals, and it is extremely challenging. In Chapter Thirteen, Kristine Blair articulates the institutional pressures to increase online instruction on many campuses and the corresponding challenges that make it difficult for administrators and faculty alike to maintain appropriate workloads while delivering high-quality educational experiences for students. Drawing on her experience as a department chair, Blair argues that “21st-century colleges and universities need to develop ways to align technology with both pedagogy and policy to bridge the divide between the academy and the community to maintain our relevance in both realms in the digital age.” Will Banks and Terri Van Sickle describe in Chapter Fourteen their process of moving a decades-old model for training K-12 writing teachers into an online environment that makes resources more easily accessible for teachers throughout North Carolina. The authors argue, furthermore, that in addition to making available training that would not otherwise have been offered, the online format creates a good forum for training teachers to respond to writing in an online environment. The authors offer a number of best practices, though they do not advocate that all training of this sort be placed online. In Chapter Sixteen, Trae Stewart, Rebecca Hines, and Marcey Kinney describe their success with a teacher training program that incorporates a range of digital communication tools, including Web conferencing and online discussion boards to create what they call “high-tech, high-touch service-learning with special populations.” Pre-service teachers around the state of Florida engage in face-to-face encounters and online learning experiences that prepare them to work with exceptional students. The university team works closely with the local affiliates of a national nonprofit organization to leverage community resources to provide training and services to a wide range of people. Technology is a critical element of the training model.

Despite the exciting activities many chapters describe, others underscore a reality that underlies all of our efforts: funding problems today are making partnerships simultaneously critical and difficult to sustain. In Chapter Fifteen, Kathleen Schisa and Anne McKinney describe a multi-state collaboration among graduate programs in library and information science that takes advantage of the expertise and resources on numerous campuses to offer students unprecedented access to training with experts around the nation. These authors describe how their team of collaborators from California, New York, and Illinois developed a system that allows students on campuses in all three states to take online classes together,
maximizing the potential offerings available to each student and the sustainability of each university’s program. The authors explain in detail the complex and impressive system that allowed each participating institution to collect tuition, award credits, and otherwise take advantage of this system. They also explain some of the challenges associated with sustaining this kind of cross-institutional endeavor. Chapter Eighteen highlights another multi-campus educational undertaking; this time in the area of public health. The authors, Aleshia Hall-Campbell, Pamela Connor, Nathan Tipton, and David Mirvis, describe the successes between 2003 and 2009 of the Tennessee Public Health Workforce Development Consortium, a collaborative effort among three universities and a government entity. The chapter describes the critical role technology played in making this collaboration possible, and explains how the multi-strand model of programming offered learning opportunities for a wide range of constituencies. Public health education became a shared focus among the parties involved. In Chapter Twenty, Thomas Cavanagh describes a program in which two universities partnered with a public school district to provide professional in-service training in the science, technology, engineering, and mathematics (STEM) fields for teachers, particularly those in low-performing elementary schools. This program brought these teachers into contact with experts from around the state. Cavanagh explains the grant-funded system that allowed teachers to opt to either take individual courses and modules or to pursue a Master’s degree. He describes assessment outcomes for the program, which exceeded its initial goals in many ways. Unfortunately, all of these programs, which have innovatively attempted to leverage resources from multiple campuses to address significant community education needs, have ultimately ended or been significantly curtailed or modified due to funding problems. These stories underscore the need for new program development approaches and funding models among as well as within colleges and universities.

Though the adoption of new technologies often signals the decline of old models of interaction, one important lesson that emerged from our work was that online engagement is not a substitute for face-to-face connections. Many of our authors understand technologies as a way to facilitate and supplement this in-person engagement, and several argue that a hybrid approach combining in-person and online engagement is the best model for creating successful partnerships. Jim Henry presents a model of collaboration using cloud-based document development tools in a service-learning technical writing class in Chapter Six. The author describes the ways in which his students successfully created a document in collaboration with a representative from the Hawai’i Division of Forestry and Wildlife primarily online, but he underscores the importance of the hybrid model for the success of the project, explaining that initial and periodic in-person meetings started the project in the right direction and kept all parties focused on shared goals. Henry asserts that these in-person elements were and are critical to collaborative client-based document development success. In Chapter Seven, Matthew Turner, Michael Benfield, Dawn Utley, and Cynthia McPherson present a model for international collaboration between students in engineering and other disciplines at the University of Alabama at Huntsville, their industry-based clients, and students in Europe as they work on an engineering capstone design course. The authors offer significant teaching-focused recommendations for project planning. They compare the effectiveness of a number of digital collaboration tools used by the students and, ultimately, conclude that students prefer what they call “informal” collaboration tools, but even more importantly, that collaborations across the board are more successful when they include at least one face-to-face meeting. When in-person meetings aren’t possible, synchronous sessions using videoconferencing afford some increased success in the collaborations. The program described in Chapter Nineteen relies heavily on “online face-to-face” initial orientation (synchronous Web conferencing) for a distance-based mentoring program supporting beginning teachers in North Carolina. Janice Holt, Lori Unruh, and Michael Dougherty offer detailed
analysis of the challenges of recruiting and retaining new teachers in rural areas and of the impacts of the program their university team has developed for providing highly relevant assistance to teachers around their state through this system. Though budgetary constraints make it difficult to create actual in-person encounters for their teams, this program offers an alternative to previous models that provided only matches based on convenience and proximity and, instead, enables leaders to match participants based on their roles and interests. Strategic use of technology makes the program possible.

As we reviewed the materials for this project we consistently noted the importance of the role of the university as a responsible citizen within a community. Theresa Dolson describes in Chapter Eleven the challenge her suburban university faced as they worked to connect with real needs in their community. Like so many campuses, the University of Richmond is geographically isolated from the most critical needs in the town where it is located, which made it challenging to identify problems to work on and to arrange logistics for service-learning activities and other kinds of engagement. Dolson describes ConnectRichmond, an interactive website that resulted from collaboration between the university and the city and that facilitates meaningful connections between local nonprofit organizations facing real challenges and faculty and staff members on campus. This creative use of technology helped to establish the university as more of an active citizen and created stronger ties between the campus and the city.

In Chapter Thirty-Two, Cheryl Cates, Kettil Cedercreutz, Anton Harfmann, Marianne W. Lewis, and Richard Miller describe a robust system used at the University of Cincinnati for channeling performance feedback from cooperative education processes back into the curriculum to create a closed assessment loop that builds strong partnerships between the university and the businesses where students are placed, as well as providing excellent learning experiences for students. This project demonstrates the role of the university as a partner to local industry and underscores the importance of using university research capabilities to assess and improve the contributions our students make to their work with partners. In Chapter Thirty-Four, Lois Gander and Diane Rhyason argue that, “the widespread adoption of technologies among universities’ allies, competitors, students and faculty that characterizes the electronically defined era will compel universities to adopt both the habit of partnerships and the habit of technology.” Their analysis of the history and impacts of the Legal Resource Centre in Alberta, Canada, demonstrates ways in which universities can partner with citizen groups to improve the process and outcomes of democracy. Marco Adria and Yuping Mao offer different perspectives on related programming in Alberta in Chapter Thirty-Five. The authors offer an intriguing definition of community that focuses on cross-sectional representation of citizens in a university partnership. They focus on the “citizen panels” whose collaboration with the university and a municipal government incorporated social networking, Web conferencing, digital video production, and other digital technologies to create an environment to support and foster citizen involvement in local government. Each of these examples demonstrates that colleges and universities can be integral parts of their local communities and that the outcomes from those collaborations can be powerful.

Anyone exploring this book will find that it not only features compelling concepts, models, and practices of the use of emerging technologies to forge partnerships between higher education institutions and community organizations, but that it also includes a number of inspiring and informative narratives of the hard work of all contributors to these projects. This reality underscores a final observation that is central to this book: telling stories is a valuable process. In Chapter Twenty-Eight, William Shewbridge describes a project that brought college students and senior citizens in his community together to create short digital movies. The seniors had an opportunity to share stories of their lives with the students, who worked to engineer and distribute the final products. Through this technology-based project, all
participants gained a sense of the value of sharing our experiences with others. Cora Allard, Deborah Whittington, and Barbara Speziale share an example in Chapter Thirty-Six of a university, public school and community collaboration that included the use of Web-conferencing and asynchronous bulletin board tools to connect people across the state of South Carolina in the SC Life project. Students of all ages around the state worked together to tell the often vexed story of the role of tobacco in the state’s economy and culture. Their collaboration created an artifact that is a testament to their work together and will provide important information for current and future generations. The project was made possible through innovative uses of digital technology.

CONCLUSION

Not since the launch of Sputnik in 1957 has American education faced such a demand to develop a productive and well-trained workforce for managing international competition and nationwide challenges as we do today, and other nations around the world face similar situations. In this moment of economic recession, universities and colleges of every size and sort around the country are struggling to maintain enrollments, retain talented faculty members, and continue to pursue excellence in research and education. Meanwhile, industries of all kinds are being forced to rethink corporate missions and shuffle priorities to remain profitable and whole. Public school districts are expected to continue to educate an American populace with growing economic and social needs while their resources are steadily being cut. Non-profit organizations are asked to provide services for more and more needy people while their base of donations is steadily declining. All of these groups and institutions face different difficulties, but in this volume we argue that one important strategy for helping these groups to survive and thrive beyond these challenges is to promote innovative cross-category partnerships among them. We see thoughtful use of emerging and established digital technologies as an important piece of this collaboration in the future, and we look forward to seeing what resourceful and dedicated leaders will do to address these concerns.

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