

Empowerment through Service-Learning:

Teaching Technology to Senior Citizens

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Abstract

This case study describes a two-year (five semester) analysis of service-learning lab reflections from university students in a mid-sized private Midwest university who tutored senior citizens in computer and technology skills on a weekly basis, in order to empower seniors as digital citizens. Consequentially, students reported empowerment, as participatory citizens in the larger campus community, capable of closing the “gray gap.” Students participated in a one-semester service-learning lab tutoring elderly citizens about Information Technology (IT) as part of a *Digital Citizenship* course where students explored the impact of digital communication and web-based access on citizenship. In the lab, students studied ethics of volunteerism, social action as a civic responsibility, and impact of digital citizenship on disenfranchised populations. Service-learning lab reflections (N = 87) were analyzed with ATLAS-ti for Search Institute Internal Assets©. Findings revealed students held increased social competencies, strong levels of engagement in IT instruction, awareness of digital inequalities with high value on promoting equality, and positive values with expressed desire to continue to future volunteerism. Conclusions support service-learning pedagogy as a way to empower both students as participatory citizens and seniors as digital citizens.

Introduction

The emergence of service-learning in higher education with renewed emphasis on developing citizenship and community involvement presents colleges and universities with unique opportunities for campus-community partnerships. Today’s service-learning movement extends the traditional interpretation of service to include participatory citizenship challenging students to build community relationships and analyze social

issues and community-based needs. The junction of service and learning go beyond independent contributions of each other. *Service* is valued as a civic responsibility whereby service is with, rather than for, the community partner or agency. *Learning* about critical issues in one's own campus community develops ethical grounding, intellectual facility, and resourcefulness required to meet the needs of others experientially. Therefore, service-learning in this study, is viewed as a pedagogy that promotes mutually beneficial partnerships between academic institutions and communities, requiring reflection on particular challenges posed in the delivery of service, in this case information technology literacy (ITL) to an underserved, elderly population.

According to Jacoby, "Service-learning is a form of experiential education in which students engage in activities that address human and community needs" (1996, p. 5). One university student in this study, Katie, states, "Service-learning is not something that is easily explained. On paper it means one thing, yet when you actually do it there is a totally different feeling to the whole thing." Battistoni (1997) gives perhaps the most extensive structural suggestions for integrating an effective experiential learning program. He believes the following must be foundational goals of a service-learning program. *Intellectual understanding* must accompany service with cognitive development creating a "thinking citizen" (p. 151) capable of making assumptions regarding human nature, society, and justice. *Civic skills and attitudes* must be developed through persuasive thinking, writing, listening skills as attributes to communicate and deliberate in the public area that democracy embodies. Finally, *civic action* within the service should engage students in direct, not passive problem solving and discussion. Engagement in service to others holds the utmost potential to motivate college students' lifelong participation as citizens in their communities. This study supports service-learning pedagogy as a way to empower both students as participatory citizens who can make a difference and seniors as digital citizens whose technology skills are heightened.

Students in their Digital Citizenship course learned that citizenship is increasingly mediated by digital communication. For example, political parties interact with members online; interest groups use Web sites and electronic mail to woo the public; media organizations perpetually update the news on their information-rich sites; government makes vital information and documents available via the World Wide Web. These are aspects of emerging digital citizenship, yet participation is inequitable by disenfranchised populations. Digital disparity exists among populations who differ in socioeconomic status, educational background, gender, minority status, and age (Wilson, Wallin, & Reiser, 2003). Access to home computers is dependent on income and education with increased use among males (Beisser, 1999; NTIA, 2002, 2000; UCLA, 2000; Roblyer, 2000; Wilhelm, 2000). The "gray gap" population (i.e., senior citizens over the age of sixty-five) are less likely to use digital technology due to concerns about privacy, irrelevance, cost, and perceptions of the steep learning curve required to use computers and the Internet (Lenhart, 2000; Seiden, 2000). As an often economically vulnerable group lacking disposable income to purchase hardware and software, seniors are not equipped or experienced in using technology. As new technologies transform exponentially, elderly persons, not growing up in the Information Age, are unable to draw on the existing skills and competencies required to learn new Information Technology (IT) applications. However, this study reveals two findings. First, senior citizens are

eager clients in acquiring technology competencies. Second, university students are willing tutors who empower them and contribute as citizens in their campus communities (Beisser, Shulman, & Larson, forthcoming 2005).

The Digital Citizenship course prepared students for the service engagement by exploring critical concepts of technology-enhanced empowerment and IT instruction (National Research Council, 1999). They faced a challenge to confront the digital divide and to explore the impact of digital communication on citizenship. They learned that as a group, the elderly are not highly represented as e-citizens.

In the service-learning lab, students studied the ethics of volunteerism, different types of service, and the meaningful delivery of service-learning (Conrad & Hedin, 1991; Beisser & Schmidt, 2001, Beisser, 2002). They learned how to teach computer skills then practiced those skills weekly tutoring senior citizens in the campus area. Following the service-learning lab experiences, subsequent reflection invited feedback linking the community intervention to an analysis of theory and practice (Shulman, Beisser, Larson, Shelley, & Thrane, 2003). Importantly, students learned they were citizens within their university community and were challenged to understand local social issues. They collectively benefited as citizens as a result of their interpersonal interactions with senior citizens

Methodology

Three research questions driving this study were: a) As a result of a service-learning lab with a disenfranchised group such as elderly citizens, did participating university students reflect on social injustice? b) Do known building blocks for development of healthy, caring, responsible children (e.g., External and Internal Developmental Assets) manifest themselves in adult development of college students and c) What indications were there that either the university students or the seniors experienced a sense of empowerment as citizens.

All university students (N = 87) participating in the service-learning lab sessions completed an end of semester reflection paper sharing multiple anecdotes and analytical examples to summarize experiences in the computer lab, offer explanations for the digital divide, and provide evidence of understanding principles of service-learning. After compiling five semesters of students' reflective journals across six classes, reflections were analyzed with Atlas-ti qualitative software. Using the Search Institute 40 Development Assets (1996) as a lens for evaluating the reflections, researchers looked for twenty external and twenty internal developmental assets of healthy, caring, and responsible young adults. The framework of developmental assets offers a way of understanding the strengths young people need in order to be productive members of society. Criteria for analysis was built on core principles in the Search Institute's research-based (1996) framework of *20 External Assets* such as family, neighborhood, school, and community support and influence along with *20 Internal Assets* such as commitment to learning through motivation and engagement, positive values through promoting social justice and caring, social competencies such as interpersonal competence, and positive identity through personal power and positive view of the future. We wanted to measure the presence, or absence, of assets in young people's lives as they continue in their postsecondary development. The developmental asset framework and

terminology, first introduced in 1990, surveyed over 350,000 sixth-through twelfth-graders in over six hundred communities to learn about risks and resiliency. Findings suggest that these assets encourage pro-social behaviors and decrease risky activities (Lerner & Benson, 2003; Scales & Leffert, 1999). On one level, the forty developmental assets represent everyday wisdom about positive developmental outcomes. On the other hand, experiential learning through volunteer service empowered college students to reach out to elder citizens.

While unable to critically evaluate *external assets* of college students' backgrounds (e.g., support and empowerment from family, neighborhood, school, or peers activities) that remained unexpressed in the students' reflective papers, narratives were scanned for representation of *internal assets* (e.g., commitment to learning, positive values, social competencies, and positive identity) in response to their service activity. Almost 700 pages of electronic data were analyzed by multiple readers to categorize incidence of the following themes: commitment to learning, positive values, social competencies, and positive identity. Because the Digital Citizenship course fundamentally focused on the digital divide, responses for equality and social justice, appearing under the positive values asset category, were coded separately. For the five categories, a total of 624 quotations were coded (See Appendix A). Results indicate that thirty percent (30%) of responses reflected social competencies; twenty-three percent (23%) commitment to learning; twenty percent (20%) social justice; sixteen percent (16%) general positive values and eleven percent (11%) positive identity (See Figure 1).

In their papers, some respondents demonstrated an appreciation of multiple asset categories.

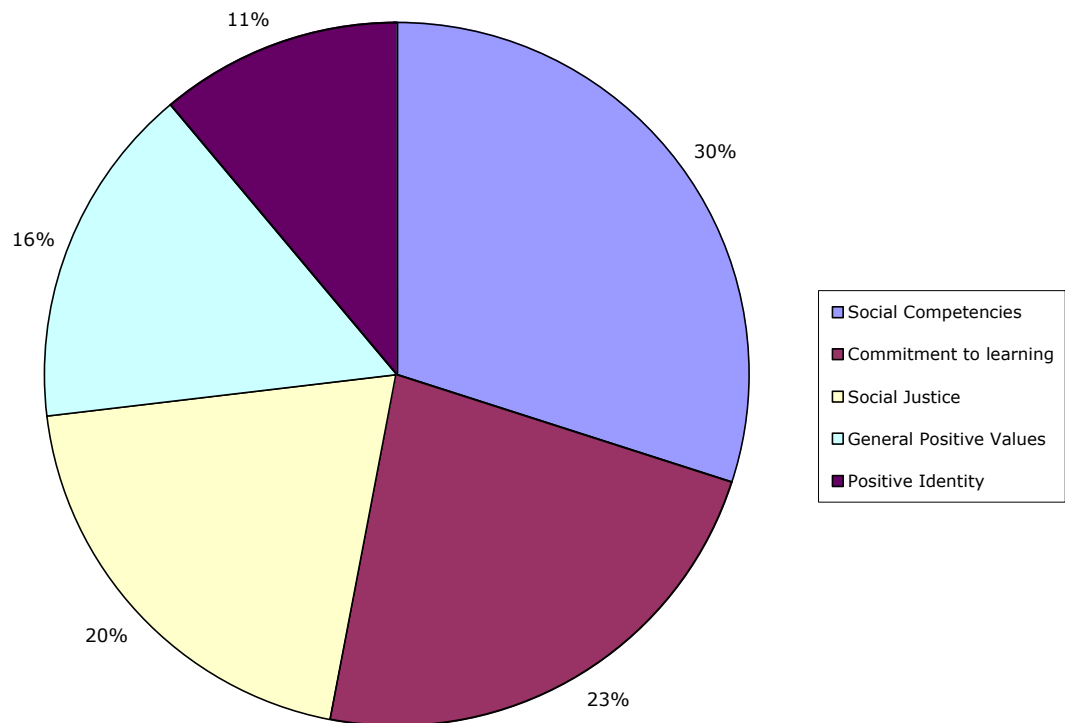
Qualitative Analysis

The internal asset categories were collapsed into four areas of importance, as expressed throughout student narratives revealing importance of social competencies, strong levels of engagement in IT instruction, awareness of digital inequalities with high value on promoting equality, and positive values with expressed desire to continue to future volunteerism. As a result, the university students viewed themselves as engaged citizens capable of closing the digital divide by empowering those who are disenfranchised from IT communication and information applications

Social competencies: Nearly one-third of student responses focused on social competence through planning and decision-making, interpersonal competence, and cultural competence. They demonstrated a commitment to empowering people different from themselves. Student comments are represented by pseudonyms.

Planning and decision-making. University students were engaged in planning social connections as tutors. One student planned lessons to teach her senior citizen to learn to use email to "keep in touch with her grandbabies." Another helped her client understand the distinction between ".com and .net sites." Christy wrote, "When our session was complete, we had begun to use search engines. I planned time for us to meet after class, and I could continue lessons. Mary [the senior citizen] was ecstatic. I found by writing procedures for her, she could more easily use computer functions." Andi explained to her client that she needed a password for her email that protected her

Figure 1



identity. He told her not to use her real name. Andi wrote, “The concept that there were millions of other people online with the same first name [Edith] or last name [Smart] was unbelievable to her.” Doug’s client went home happy with new information prepared for him by his tutor. “I made sure she had my e-mail address in case she ever decided she wanted me to answer more questions.” One student learned how to help a client who wanted to “look up public records to see who owned the house that she and her husband had owned for many years.” Rebecca prepared ways for her senior find websites in her own language, Chinese. Students had to plan differently for different seniors. “It is here that we were forced to scrutinize ourselves,” Josh noted. “Not only did we have to question what we would teach, but how to teach it, and the impact it may have.” Josh summarized that planning needed to be intentional. He states, “I found that the techniques I had used for Glenda and Lewis were no longer adequate for Howard.”

Interpersonal competence. Responses expressed unexpected social interaction within the tutoring relationship as a result of their mutual experiences. Kathryn said, “We cared about many of the same things. I taught them computer and Internet skills in exchange for their life experiences and further training in communication and teaching.” One student said, “It was not only his first experience with a computer, it was my first experience tutoring. I was quite uncomfortable at first, not sure exactly what to say or do. I was overly conscious of our age difference and afraid of offending him. By the end,

however, I worked up to a level of comfort.” Michael reports, “Delilah was unsure how to use search engines. I showed her Google, Yahoo, Go, AltaVista, and AskJeeves. We focused on political and governmental searches. We eventually visited the websites of Iowa Senators and the government homepage for Social Security. She loved these sites and planned on e-mailing her Senators. Delilah came back the next week all excited to learn about copying pictures from the Internet and putting them in e-mails. As she went to the URL to drag it down to Google she accidentally clicked on an Asian pornography site. We burst out laughing uncontrollably and I had quite a time explaining that we were not the only group that used these computers and that our class was definitely not responsible for putting that site on the computer. At the end of the semester, she left she slipped me a \$5 bill and told me to get myself lunch. I tried to refuse and told her that taking money might violate the spirit of the project, but she would have none of it and she demanded that I take it. I’ll always remember this.” One student said, “I have formed relationships that I would have otherwise never sought. I was able to influence their lives in a small way just as they have influenced mine.”

Cultural competence. One aspect of learning across cultures involves intergenerational empathy, sensitivity, and friendship skills. Students need to experience comfort with people with backgrounds different than theirs. A student mused, “I learned a lot about the lives of people who are a couple of generations older than I. I learned about the history that these people experienced before I was even born!” Amber says, “Ideally service learning is a two-way street, with both student and client gaining.” Says Rebecca, “Not only did students teach senior citizens, but the senior citizens were partners in showing us how the community needed a project like this.” With each client, we spoke about our lives and experiences, and created a bond that provided a sense of trust and comfort in ways that transform my thinking. Arsen and I exchanged school assignment problems and he told me about the woman he wanted to date. Joyann and I talked about our families and she explained where to go for the best shopping deals in town, while Chuck told me about his experience in World War II. I learned about my clients as people and went beyond our original relationship as teacher-client.” Nicole shares, “These six people and their life stories have changed the way I think about technology, and they have changed me. Wherever I end up after graduation, I hope to find a program similar to ours to assist people in becoming better citizens and bettering themselves while opening my horizons about groups I incorrectly stereotype.” One student summarizes, “All of my experiences with clients showed that service-learning provides more than learning for students and a service to the community.” Indeed, it is an opportunity for college students to increase knowledge and comfort with people different than themselves.

Commitment to learning: Nearly one-fourth (23%) of the students reflected on their deliberate preparation for the lab experiences including the importance of the role as tutor, as well as their awareness of building skills of the seniors with whom they worked. Most students in this study were not education majors, yet were committed to the pedagogy of the tutoring experiences, as well as to the learning success of their senior buddies. Adam states, “In teaching the seniors I used many methods. When I first met with my senior partners, I got to know their hobbies in to attempt to mold their learning experience. With Lee I used a parallel to golf, one of his passions. I told him the Internet

explorer was like the cart, used to explore the course. Jake noted that many of his clients came with specific questions pertaining to their own computers and some of their own software. He said, Mr. Cayom wanted to learn how to make a web page with Microsoft FrontPage 2002 and even brought his unopened CD package to our first session. Luckily I could answer his questions.” One senior asked for help with Internet and Photoshop while others learned to use spreadsheets and Microsoft Office©. Remarkably, students went beyond what was expected in the learning relationship. “In addition to the classes offered in the lab, I met with Priscilla once at her home to help her use her own computer.” Kyle summarizes, “Moreover, through the classes, the clients began understanding the value of computers and their impact on everyday life. Additionally, the appreciation for information technology grew. For example, Mr. Wong had no experience with computers. However, by attending this class, I was able to teach him simple skills so that he might navigate on his own in the future. No matter the experience or expertise of the clients, all were able to understand and value the skills, benefits, and disadvantages of computer and information technology.”

Social justice. One fifth (20%) of all student responses centered around convictions to reduce inequalities. Student responses indicate that they place high value on narrowing gaps between the “haves and have nots.” Students care about disparity and are motivated to make a difference. One student, Kendra, writes in her reflections, “We are old enough to change the world and young enough to do it.” Katie describes her motives to serve the elderly by stating, “We worked with seniors because they do not have the latest technology, yet they are the greatest age group to vote.” Ashley reflects, “I am extremely fortunate to be one of the ‘information rich.’ This course has prompted me to research the societal effects the digital divide has upon the citizenry of the United States and inequalities that result. I am now a strong proponent of bridging the gap that exists between the information rich and the information poor.” Becky writes, “We would like the digital divide to become smaller. It our goal to help people without information technology through our classes.” Kristina summarized “Working with the senior citizens made me realize that the digital divide does exist and that the people that I was working with were at an inherent disadvantage because they did not have the skills that I have to access the same information, so therefore it is not available to them. Amy reflects, “I knew that I was contributing a very small amount to the closure of the digital divide which made me feel like I could influence democracy and politics by helping ‘level the playing field’ for these senior citizens.” Students were actively engaged in the improvement of those disenfranchised; those most affected by the digital divide. Therefore, service-learning empowered students to think critically about politics, citizenship, and the ways of knowing that they take for granted.

Positive values and identity. Overall, students exhibited positive values toward interaction with the seniors and indicated intentions to continue volunteering. It was clear that this experience wasn’t just about teaching technology to a group of elderly people. This was about getting in touch. Connecting through a mutual medium [technology], and keeping in touch. One student said, “My client asked me about my hobbies.” Kathryn said, “We keep in contact. ‘I’ve e-mailed her, and she e-mails back.” Abby writes, “An important role I played was to build her self-esteem through my encouragement.”

Rebecca declares, “The great thing about e-mail is that if my senior buddy has future troubles with computers, they can reach me no matter where my career takes me after graduation!” Jake says, “A very important part of the digital citizenship lab experience is relationships between student and client. It is crucial that students treat the senior citizens with the respect they deserve.” Jason sums it up, “I feel as though I have a better understanding of a whole new population of people within the community I already live in.” Adam realized he had a common bond with his client. “I learned that Lewis was a member of Delta Sigma Pi, my business fraternity. One of our key teachings is to help a brother in need if they call upon you, to the best of your ability. He wanted to know how to use chat rooms and search engines. I started by teaching him about Yahoo, Ask.com and Google. He found them easy to use so we proceeded to set up a profile on Yahoo so that he may chat for free. We chatted with different business people for the rest of the hour.” Finally, Vern states, “The bottom line is this. Service-learning is an amazing experience for anybody. It is more than just teaching—it's about improving lives.”

Significance/Impact

Clearly, this case study concludes that college students experienced a sense of empowerment, as participatory citizens in the larger campus community, capable of closing the “gray gap” through technology assistance for senior citizens. Students were not only committed to closing the digital divide through technology tutoring, they better understood complex issues influencing such gaps. The benefits were reciprocal. As students viewed themselves as citizens in their university community to assist others, the seniors themselves heightened their technological skills. This study supports college student engagement in service-learning in order to build internal assets that empower them as citizens to build relationships between campus and community. Results show that students built social competencies through planning and decision-making, interpersonal competence, and cultural competence- all aspects of engaged citizenship. Service-learning can influence emerging **citizenship** of university students and technological **empowerment** of seniors in their campus communities.

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Appendix A

Coding guidelines 40 Developmental Assets©

Reflection Papers from Service Learning Lab
 Adapted from the © 1998 Search Institute, 700 S. Third St., Ste 210
 Minneapolis, MN 55415

The Search Institute has developed the following building blocks of healthy development that help young people grow up healthy, caring, and responsible. From the INTERNAL ASSET list the reflection papers were analyzed. Those defined, as EXTERNAL ASSETS (e.g.; family, school, and community backgrounds or individual experiences) that could not be identified in the service learning lab reflection papers from university students.

INTERNAL ASSETS			
General Asset Category	Asset #	Name of Asset	Description of behavior in the reflection that service learning paper that reflects the Asset Descriptor
COMMITMENT TO LEARNING	21	ACHIEVEMENT MOTIVATION	Motivated to do well in school [shows motivation to do well in the service activity or general studies at the university level]
	22	“SCHOOL” ENGAGEMENT	Actively engaged in learning [shows participatory engagement in service learning lab]
	23	Homework	Does 1 hr+ of homework daily [an expectation of college level academics-but unobserved here]
	24	Bonding to school	Cares about his/her school [shows attachment to service learning]
	25	Reading for pleasure	Reads for please 3+ hrs per week [unable to be determined in the reflection paper]
POSITIVE VALUES	26	CARING	Places high value on helping other people [indication of valuing the service]
	27*	EQUALITY & SOCIAL JUSTICE	Places high value on promoting equality [relates value in reducing inequities]
	28	Integrity	Acts on convictions and stands up for his or her beliefs [reports on convictions]
	29	Honesty	Tells the truth when it is not easy [indicates honesty as important to decision-making]

	30	RESPONSIBILITY	Accept and takes responsibility [shows responsibility or initiative in service to seniors]
	31	Restraint	Important to not be sexually active or on drugs [not revealed in these papers]
SOCIAL COMPETENCIES	32	PLANNING & DECISION-MAKING	Knows how to plan and make choices [shows planning for the service experiences with the senior citizens with whom they worked and tutored]
	33	INTERPERSONAL COMPETENCE	Empathy, sensitivity, friendship skills [shows empathy, sensitivity, friendliness to seniors-seniors reciprocation of kindness, etc, back to the students]
	34*	CULTURAL COMPETENCE (with regard to AGE)	Knowledge or comfort w/ people of different cultural/racial/ethnic backgrounds [shows knowledge & comfort with cultural/racial/ethnic OR elderly citizens-people different than themselves]
	35	Resistance skills	Resist negative peer pressure and dangerous situations [not observed in these papers]
	36	Peaceful conflict resolution	Seeks to resolve conflict nonviolently [if conflict IS reported, has a positive outlook]
POSITIVE IDENTITY	37	PERSONAL POWER	Feels they have control over “what happens to me” [shares a feeling of personal control or power in the service activity with the senior citizens]
violet	38	SELF-ESTEEM	Reports a high level of self-esteem [reveals or indicates +self esteem]
	39	SENSE OF PURPOSE	Reports that ‘ my life has a purpose ’ [shows service as purposeful in the present or the future]
	40	POSITIVE VIEW OF PERSONAL FUTURE	Optimistic about her/her personal future [shows optimism in future life or service to others in their future experiences—sense of reciprocity]