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The Benefits and Challenges of Implementing Service-learning in an Advanced Instructional Design and Technology Curricula: Implications for Teaching Professional Courses

Abstract

This paper reports on the benefits and challenges of integrating service-learning pedagogy into a professional course taught at a US Midwestern university. Data were collected via observations, interviews and analyses of students' online discussions, written reflections, and project work. Findings revealed that the service-learning approach improves academic learning, increases motivation to learn and serve, escalates civic values and develops a sense of concern over broader social issues. Most importantly, it prepares students to be civic-minded professionals who are concerned with the betterment of society. Additionally, the authentic and open nature of service-learning was found to contribute to intense group conflicts. Suggestions to eliminate such challenges are also discussed.

Keywords: *service learning; social responsibility; social issues; higher education; professional education; civic-minded professional*

Introduction

Over the past several years, there has seemed to be a growing interest in conducting research to discover the best pedagogical practices in educating future professionals in higher education institutions. Many scholars recommend application of community-based approaches (Wilson & Schwier, 2009) due to their benefits of

providing real-life learning experiences to students and consequently preparing them for future careers.

One of the most beneficial approaches is service-learning pedagogy. It focuses on efforts that can make a difference for individuals in the community and for students' commitment to the general welfare of society, i.e. to "doing good" (Aslanargun, 2012, p.113) to society. Service-learning is a teaching and learning method that allows students to learn a specific curriculum by providing services to real-life community members. Typical projects include serving at soup kitchens and satisfying the needs of others (e.g. Aslanargun, 2012). Advocates assert that service-learning can increase students' personal efficacy, ability to work well with others, and develop leadership and communication skills (Eyler, Giles, Stenson, & Gray, 2001). Also known as the "pedagogy of social change" (Peterson, 2009), service-learning has been successful in increasing students' desire for community involvement and allowed them to actively construct knowledge and develop their problem-solving skills (Peterson, 2009). Thus, service-learning can be seen as an effective way to re-focus students' education on human relationships rather than merely on course content (Matthews & Zimmerman, 1999).

While much has been written on the impact of implementing service-learning in undergraduate education, there is a lack of research specifically conducted to understand its impact in postgraduate education, let alone in the professional education. With some exceptions (e.g. Matthews & Zimmerman, 1999; O'Hara, 2001), most discussions on the impact of service-learning in higher education have been theoretical and quantitative in nature (e.g. Astin & Sax, 1998). Moreover, research on the actual challenges students have experienced in service-learning activities is rarely highlighted in service-learning and higher education literature compared to research on the benefits of service-learning.

This paper addresses these gaps by examining the benefits and unforeseen challenges of integrating service-learning into an instructional design and technology (IDT) postgraduate course offered at a large research-based university in the Mid-western US. It offers some critical accounts of the actual experiences of students in their journeys toward becoming "civic-minded instructional designers" (Authors, 2012). It is hoped that understanding these experiences will inform other educators of the physical, mental and emotional consequences that may be expected in undertaking such journeys in their own settings.

Context of the study

The study took place in a postgraduate IDT course offered at a large Midwestern USA research-based university. The objective of the 16-week course was to introduce students to basic concepts underlying instructional design processes, including understanding of the assumptions and theoretical understanding underlying each instructional design model, and to enhance student abilities to perform a variety of analyses sufficient to support informed design decisions, to conduct summative and formative evaluation of instruction, and to design small units of instruction incorporating appropriate instructional strategies. To achieve these objectives, the course emphasized the application of knowledge into real-world settings via service-learning projects and collaborative work among students in class.

Students were required to create two to three hours of instructional materials on a topic of interest for their self-selected and targeted learners. The materials needed to address a typical social or community-related issue beneficial to the betterment of society. The students were also required to document, in their final reports, details of their design and development processes, including those underlying the instructional models used. Three mini-assignments were advanced every three weeks to assist course completion. The instructor made herself available, both online and face-to-face, for individual team consultations. The students interacted with their group members via WebCT's chat and discussion tools, personal emails, and face-to-face meetings, both during and after class hours. Table 1 describes the students' service-learning projects.

Table 1. List of service-learning projects undertaken by the students

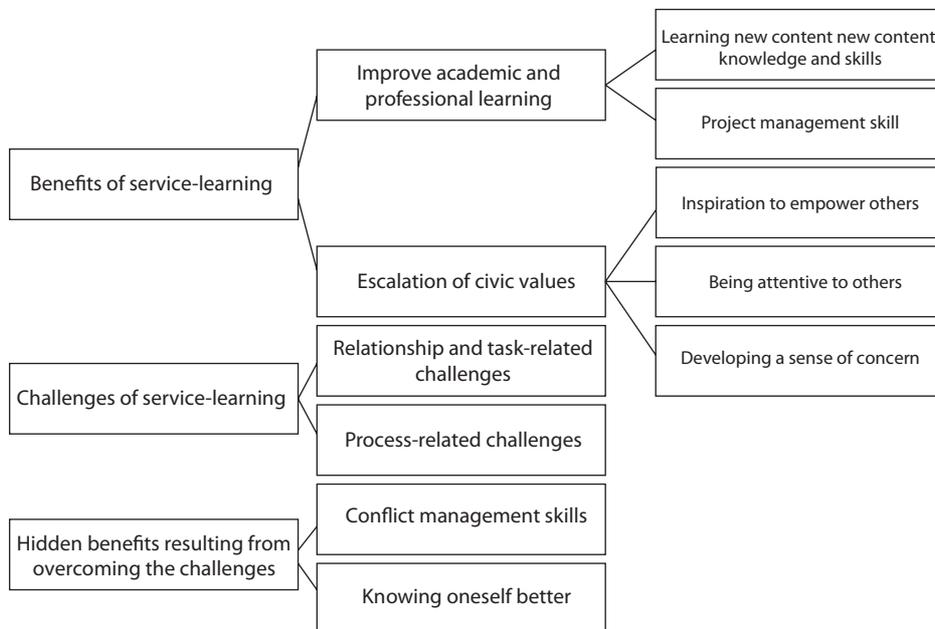
Student(s) or group	Social issue addressed	Project(s)	Final products
Diane and Jenny	Moral and ethical behaviours	Re-design the Positive Behavior Support (PBS) program that focused on encouraging positive behaviors among elementary students.	A student guide, featuring several activities related to the program A teacher guide, detailing information to be used with the student guide
Rick	Personal safety	Production of a video-based instructional unit on safety issues when operating mechanical equipment.	An Instructor's instructional video manual, featuring instructions on correct and effective ways of using the video

Student(s) or group	Social issue addressed	Project(s)	Final products
Nina	Copyright	Development of a website to educate pre-service teachers on how to legally use copyrighted materials for teaching purposes.	An open-source website

Methodology

This study aims at providing an in-depth understanding of the incorporation of service-learning pedagogy in a professional education course. The participants in the study were four (4) postgraduate students enrolled in the course. Three (3) of them had experience teaching at primary and secondary schools, while one (1) had experience teaching at a local community church. Data were collected through observations of the 16-week classroom interactions, and through interviews at the end of the course. Those interviews sought to understand the students' service-

Figure 1. The benefits, challenges and hidden benefits of service-learning



learning experiences as they designed and developed instructional materials for their chosen community members. The researchers also wrote analytical and reflective notes in a research journal to document their insights, observations, and reflections on the situation. Additionally, course-related documents, including course syllabi and schedule, the students' WebCT discussions, written reflections, and written materials such as design analyses and final products were analyzed to supplement the observations and interviews and to provide a "big picture" view with respect to the investigated phenomena.

Following Charmaz's (2006) recommendations, data analysis began with conducting an initial/open coding technique to represent the data. In this focused-coding technique, some relevant open codes were selected and grouped into categories and, later on, into themes. The themes were organized into three broad categories: the benefits, challenges and hidden benefits of service-learning. Figure 1 provides an overview of the findings within these three categories.

Findings: Benefits of service-learning

a) Improvement of academic and professional learning

The findings revealed that pedagogy had improved the students' academic and professional learning and had escalated their civic-minded values.

Learning new content knowledge and skills

Nina was committed to educating pre-service and in-service teachers to be aware of copyright laws, illegal copying of educational media, and the ethical aspects of the issue when utilizing online resources for teaching purposes. Aware that there was no website specifically designed for teachers, she decided to develop an online "one-stop reference center" in which teachers could easily search, read, and refer to information whenever needed. To be able to do this, she realized that she needed to master both the content and the technologies needed to develop such a website.

The majority of Nina's time was divided into learning about the topic of copyright in education, as well as the technical aspects of website development to publish her instructional materials. While these learning processes were time-consuming, she admitted that she enjoyed and learned a lot from the experience. She wrote:

I tried to find ways to incorporate different ways to make the site engaging and motivating for students. I brainstormed with my friends... [on] how I could improve the design,

and we all learned new ways that we could incorporate on [the software]... [I]t provided opportunities for all of us that we could use beyond this class. (Nina's written reflection)

Learning about project management

Knowledge with respect to project management is an important aspect of a professional education. However, there is limited literature that truly discusses how this topic can be taught to students. This study shows that service-learning is a potential instructional strategy for achieving such instruction.

Rick, for instance, learned the importance of organizing all his electronic files and documents. While working on producing an instructional video by himself, he initially found it difficult to keep track of all his appointments, studio reservations, and survey instruments. As the volume of paper-based storyboard drafts, design sketches, and inventory lists gradually mounted, he became frustrated for not being able to find a file. Finally, he resorted to a mix of electronic and paper-based filing systems for storing project documents. Such experiences helped him realize the importance of having a good organizational and record-keeping plan when working on a project.

b) Escalation of civic values

This study supports other findings that participation in service-learning projects succeeds in escalating students' civic values. They were found to become inspired to empower others, and were increasingly attentive and concerned with others' needs and perspectives.

Inspiration to empower others

Rick decided to improve the poorly-managed monthly safety training sessions in his workplace. In the interview, he described how he and his co-workers had been made to join the training lectures at night after they all had just completed their full eight-hour shifts. Additionally, the supervisors' read-the-training-materials-aloud approach created negative perceptions among the employees, who felt that "the management sort of talks down to the blue-collar workers" (Rick's interview) and that they belittled their employees' ability to read the materials themselves.

On the other hand, Rick was aware of his supervisors' difficulties in scheduling appropriate training-session time for all employees, since various workers had different working shifts. Likewise, it was uneconomical for the supervisor to conduct multiple training sessions, given the huge number of employees needing training. Thus, Rick's instructional video was based on the concept of empowering his co-

workers in determining their own learning paths while simultaneously “uplifting the load off the supervisor’s plate” (exit interview with Rick).

Utilizing his video-production skills and his own perspective as an employee, he created stand-alone instructional materials that would allow employees to engage in training by themselves at their own convenience. It also “places the responsibility for learning in the hands of the learners themselves” (exit interview with Rick). To ensure quality learning for his co-workers, Rick decided to create an instructor’s manual explaining how to effectively use the materials.

Being attentive to others

It was also found that the students became more appreciative towards others’ perspectives. Even though they were initially taken aback by target audiences’ negative comments, they finally learned that these comments were crucial to the process of constructively re-designing the products. In Rick’s own words:

When I took time to experiment with the recommended changes I realized that the video was better with the changes. I could understand what the person saw that concerned him though I may not have agreed initially. (Rick’s written reflection)

However, listening to other’s opinions resulted in a conflict of perspectives for the students. Jenny, for instance, had a dilemma in balancing her own designers’ perspectives with those of others. She explained:

Her comments kind of hold us back when she thought it was bland... [W]e didn’t want to just add a bunch of pictures or colors ‘cause... we thought like it was against the whole purpose of [our] design. (Jenny’s exit interview)

Nevertheless, from an instructional point of view, such dilemmas contributed to rich and meaningful learning experiences as designers learned to balance the needs and preferences expected by various stakeholders. It also helped them mature as instructional designers, since they were made to creatively think of design methods alternative to those of the current model-centric approach used in designers’ education (Authors, 2012).

Developing a sense of concern

It was found that the students were very concerned about the applicability of the instructional materials they created to a wider set of audiences. They were concerned with the breadth of the information their instructional materials provided.

This had encouraged design of materials that were sustainable, reusable, and useful to other groups of people as in Rick's case.

Although the targeted audiences of Rick's video were technicians, he had always thought of other public as well. To him, the actual emphasis of the video was the issue of personal safety, which should be of everyone's concern. He also thought of his video as his small contribution to educating the public on larger social issues related to safety and ethics. Once the video was ready, Rick began distributing it to the members of his church, his neighbourhood area and to the community center where he worked.

Findings: Challenges of service-learning

Data analyses revealed that intra-group conflicts were the most dominant challenge for all the students in completing their projects. They were so intense that it caused the students to openly display their emotions, resulting in tears and outbursts in one of the course meetings as well as in the anonymous course online WebCT postings, and affected one of the students' health.

While group conflicts are not necessarily unique to a service-learning environment, and can occur to any collaborative setting, we argue that in this case they were exacerbated by the authentic and open-ended nature of service-learning itself. Because the students were required to work collaboratively to solve a real social issue, they were physically, mentally and emotionally challenged to balance their personal needs and perspectives with those of others. They also needed to learn to tolerate others' views and gradually develop trust in their own team members. In fact, it is argued that building such trust is the most crucial yet the most challenging task for service-learning instructors. This is because each student comes from different professional background and holds certain professional values, which makes tolerance to others more difficult.

In this study, three challenges were identified: relationship, task, and process. It is important to mention that these challenges are closely interrelated in that they tend to build upon each other to contribute to an overall group conflict.

a) Relationship and task-related challenges

Both Diane and Jenny stated that their group conflict began as early as during the group's initial brainstorming process. They were unable to reach agreement on the scope of their work. Two of the group members, Diane and Jenny, who had formal teaching experience, were more inclined towards the re-designing of the

Positive Behavior Support (PBS) educational program while Rick, who was actively involved in a community-based youth mentoring program, suggested a broader scope. Even though they all eventually worked on the PBS program, conflicts kept on mounting and became so intense that Rick finally decided to opt out of the group and work individually.

Upon closer analyses, we believe that this conflict was closely related to the students' unique individual qualities such as their professional backgrounds, prior education or training, and idealism. In this case, Diane's and Jenny's interests in the PBS program can easily be associated with their professional backgrounds in education in contrast to Rick's technical background. These explanations seem to support some researchers' suggestions to tailor service-learning projects based on students' strengths, interests and qualities (Peterson, 2009), rather than trying to force them to work on projects in which they have little motivation to participate.

b) Process-related challenges

While it was expected that group division would ease group tension, it subsequently created other challenges. The students who left their groups were pressured to complete the tasks within a short period of time to manage things by themselves. Those who stayed in their groups had to make adjustments to their original design plans and re-divide the remaining work. With the deadline nearing, they used their remaining time to come up with material that, while viewed as simplistic by the course instructor, was of sufficient quality for them to pass the course requirement.

Additionally, those who worked independently were allowed to work on a project different from their initial group project. Such practice was surprisingly seen as unfair to the students who stayed with their groups. During Jenny's interview, she mentioned her jealousy directed towards those students who were allowed to embark on a different project while she and Diane had to clear up "...the mess that he (i.e. Rick) helped us create".

Such remarks brought up the question of how course instructors can best handle group conflicts. Though there could be many alternative approaches to overcoming this situation, we are inclined to support Schine's (2001) statement that a service-learning program needs to be carried out with sufficient duration so that students can develop trust and understanding with the people with whom they serve. Time is also needed to develop trust and understanding *among* the students themselves *before* they set out to offer their services to others.

Findings: The hidden benefits emerging from the challenges

Although challenges are usually associated with a negative impact, we viewed them as hidden learning opportunities for the students. The conflicts exposed the students to real challenges similar to those they would most likely encounter in their journeys of being professionals in the field. Exposure to conflicts in this course prepared the students for facing bigger challenges in the real world. As Diane noted:

I learned patience from this class project. I learned that not everyone is interested in putting their best foot forward. I also learned that (sometimes) I should just expect to always do more than my share of the work. It's not fair, but it's life. (Diane's written reflection)

Additionally, some students asserted that they gained a better understanding of their own individual strengths and weaknesses. For Jenny, the conflicts taught her to be emotionally strong and independent. She also learned approaches, such as creating a support system and discussing her feelings with the instructor, for handling such conflicts. As an adult and teacher herself, she at first hesitated to inform the instructor because she did not want to be labelled as not having group skills or being accused of “trying to get out [of the situation] than to deal with them” (Jenny's exit interview). We believe that the students' discovery of their own strengths and weaknesses was an important step in understanding not only who they are as professionals, but also what they can do to contribute to the betterment of society.

In sum, we are in agreement with Matthews and Zimmerman (1999) who argue that these challenges are the reason why we more than ever need service-learning and other types of experiential learning, because they help to “provide students with open-learning situations, with group work, ... and with taking responsibility for their own learning” (p. 396).

Concluding remarks

The findings of this study proved that service-learning was a powerful pedagogy in preparing future professionals. It does more than exposing them to relevant professional knowledge and skills; but most importantly, it prepares them to be civic-minded professionals – professionals who utilize their professions to improve and advance the well-being of society (Authors, 2012).

We found that immersion in service-learning projects can improve students' self-confidence to make a difference in their communities using their professional knowledge and skills. The students were thrilled at the idea of "...changing someone's life by providing sound, effective, and efficient instructional materials" (Diane's written reflection). They also experienced a sense of joy and fulfilment knowing that their work might empower other people's learning.

However, we also agree that such a sense of joy and self-fulfilment, if not carefully guided, can sometimes trap students to fall into the paradigm of 'helping' and 'serving', a thinking fallacy that there is "a void, a deficit, a need in the community (a community that is often considered poor and less educated), and that the agency (which is often considered richer and better educated) has the solutions to 'help' the 'needy'" (Peterson 2009, p.546).

Additionally, we believe that the authentic and open-ended nature of service-learning may negatively affect students' learning experiences. In this study, we identify intense group conflicts resulting from a mix of relationship, task, and process challenges (Jehn & Mannix, 2001) as the dominant obstacle that prevents students from reaping the benefits of service-learning. Nevertheless, these conflicts also taught some students to better understand their own individual strengths and weaknesses, perhaps preparing them to be better professionals in the future.

To reduce or eliminate these conflicts, instructors interested in designing and developing similar educational experiences may consider these recommendations:

- Design instructional activities that allow students to get to know their potential collaborators before assigning them into groups;
- Prepare students who choose to work individually for the heavy workloads they will encounter;
- For small-size classes, allow students to choose their own group members. The instructor should, however, reduce the possibility that they will choose only people who have similar backgrounds by offering suggestions and guidance on selection criteria;
- To maximize service-learning benefits, instructors must educate students with respect to service-learning via readings and discussions;
- Assist group work processes by discussing ways to solve group problems; and
- Provide an open environment in which students can express their thoughts and emotions, perhaps by using a variety of communication tools such as journals, blogs, and anonymous messages, as shown in this study.

This study provides first-hand information on students' perspectives of service-learning, in contrast to the dominant service-learning literature that has sought to

understand the phenomenon only from the instructor's perspective. Consequently, it sheds some light on the emotional challenges experienced by students, an overlooked aspect of the dominant service-learning literature. Perhaps the most valuable part of this study was illustrating the fact that, in some cases, intense group conflicts can positively assist students in better understanding themselves as individuals and professionals.

Several questions that could be useful in designing future research emerged in relation to the conflicts described in this study. The service-learning model used was a production-based model (Authors, 2009) that focused on product development rather than social relationships between the server (i.e. students) and the served (i.e. community members). Future research should be specifically designed to investigate its application in other settings as well.

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