



Preparing students and community organisations for effective use of ICTs through a service learning initiative

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While “net generation students” are said to respond best to the use of information and communication technologies (ICTs) that foster participation through collaborative and networked environments, the same cannot be said of the majority of community sector organisations. There is a growing body of evidence (Barraket, 2005; Department of Communications Information Technology and the Arts, 2005; Knox, 2005; Stillman et al, 2010; Yerbury, 2007) suggesting that the community sector is not yet harnessing the full potential of ICTs and that they could be using these technologies much more effectively (Barraket, 2005; Productivity Commission, 2010; Stillman et al, 2010; Yerbury, 2007). This paper describes a case study of service learning involving a cross-sector partnership between the public sector, university and community organisations aimed at developing student skills in web design through service learning, while also empowering community sector organisations to make more effective use of ICTs. The case study reported is based on a program which is a joint initiative of the State Government of South Australia, Office for Volunteers, and the School of Communication, International Studies and Languages at the University of South Australia. The case study describes key issues associated with developing and delivering a service learning model in partnership with government and in collaboration with community sector organisations that harnesses the power of Web 2.0 and CMS technologies to engage learners and community sector organisations through service learning. The findings from evaluations of student and community stakeholder satisfaction are reported and suggestions for addressing identified challenges are proposed.

Key words: Information and Communication Technologies, Web 2.0, Content Management System, CMS, service learning, community sector organisations

Background

While Australian universities have a relatively short history of involvement in public scholarship (Langworthy, 2007), there has been growing interest in service learning as an approach that can strengthen the integration of teaching, research, knowledge transfer and community engagement (Zubrick, Reid & Rossiter, 2001, p. xi). Public Scholarship has its roots in service learning (Cohen & Yapa, 2003) and has gained increasing attention among scholars as a means by which higher education can fulfil its mission to educate for the “public good” while also fostering the development of students’ life-long learning skills and the achievement of graduate attributes.

The case study presented in this paper, the Sustainable Online Community Engagement program (SOCE), is based on such a service learning model. The program is a joint initiative of the State Government of South Australia, Office for Volunteers and the School of Communication, International Studies and Languages at the University of South Australia. It was established in 2001 and since that time more than 300 South Australian community groups and 400 students have participated in the program. The program involves recruiting community sector organisations that are seeking the design of a website or other multimedia services. Students from nominated courses are matched to the organisations and work with their allocated community group throughout the semester. The findings from stakeholder evaluations are reported and the benefits and challenges associated with a service learning model aimed at facilitating the development of students' graduate attributes, while also empowering community sector organisations to make more effective use of ICTs are discussed.

The paper begins with a discussion of the changing nature of our student population and the need to harness the power of ICTs to engage learners within a service learning model. In the second section of the paper, the potential of a service learning model that connects "net generation" students with community sector organisations is explored. In the third section of the paper, concerns about the need to better prepare community sector organisations to make effective use of ICTs are discussed. The fourth section of the paper presents the case study and in the final section of the paper, the benefits and challenges are summarised and areas for further investigation proposed.

The changing student demographic

Over the last ten years we have witnessed significant changes in technology and in the prior experiences and expectations of students entering universities. As Krasue et al (2005) have reported, students entering universities from 2005 represent a new generation of technoliterate "Y-ers"; young people who have grown up with digital technology and demonstrate differences in preferred approaches to learning. These young people are said to prefer multi-modal activities, have a need to be networked, respond best to experiential activities and are interested in "things that matter" (Oblinger, 2008). At the same time, educators are looking for new approaches that will re-engage students in the face of growing concerns about disengagement and high levels of attrition (Krause et al, 2005).

A recent study undertaken at the University of South Australia (Wood et al, forthcoming 2010), which involved undertaking an online anonymous survey of all undergraduate (30,170) and graduate students (8,086) to assess the readiness of students for the use of information and communication technologies (ICTs), revealed that of the 812 students who completed the online survey, more than half (433 students) reported that they were also undertaking employment of some kind. Students who reported that they were undertaking employment also reported less use of a range of ICTs such as creating audio and video, playing digital files, playing games, and instant messaging. Moreover, the 100 students participating in the survey who reported that they were both studying part-time and employed, also reported less use of a range of technologies than other students participating in the study. It was evident from this study that there may well be a significant negative impact on student engagement with ICTs for students who are studying part-time and also in employment. This poses a significant challenge, particularly since our findings also suggest that there is much greater diversity in student engagement with ICTs than the popular rhetoric has previously assumed. Consistent with the findings of Kennedy et al (2009) our studies suggest that there is an unequal distribution of use of and engagement with ICTs by students from diverse backgrounds in our student population.

Langworthy (2007) has highlighted similar concerns noting that students today are less involved with campus life and performing less favourably than previous generations of students as they try to balance study with other competing demands such as working long hours in paid employment. Service learning programs, particularly those which provide flexibility and make effective use of online technologies to engage learners, have the capacity to increase student perseverance, improve retention and success (Janke, 2006) and re-connect disengaged students with the university learning community (McInnes, 2003). Yet as Langworthy (2007) argues, "students must be engaged and this purpose is one of the most powerful arguments for the development of service learning". The question is how to best construct a service learning course in such a way that it re-engages students in making effective use of the available ICTs, while also connecting them with the community organisations to which they have been assigned so that they can make a "real difference" to these organisations.

Service learning

Service learning is regarded as an effective strategy for integrating service and academic learning through community engagement, while also helping students develop “knowledge, skills and cognitive capacities to deal with complex social issues and problems” (Hurd, 2006). The scholarship of engagement has its roots in Boyer’s (1990) framework in which the scholarship of teaching, application and integration are considered essential for quality teaching and learning. Boyer later extended this framework to include the scholarship of engagement (1996), which involves a reciprocal relationship between students, teachers and the community. Barker (2004) asserts that the interest in the scholarship of engagement has emerged in response to three related trends: 1) increasing specialisation of academic knowledge into discrete disciplines, which produces highly complex and technical knowledge that is not effectively communicated to the public; 2) reaction to the dominance of “a positivist epistemology, which emphasises value neutrality and objectivity” (p. 125) rather than effectiveness of the application of knowledge; and 3) growing concerns about the corporatisation of higher education and a desire to engage in public participation with a focus on addressing community issues through the integration of the scholarships of teaching, application and integration.

Numerous studies have documented the benefits of service learning for communities, universities and students (Blouin & Perry, 2009). The benefits are said to include: gains in students’ self-esteem, career knowledge, social responsibility and academic performance (Howard, 2003); an increase in the level of student insight, their ability to apply academic skills and a greater understanding of social issues (Kenworthy-U’Ren, 2008); as well as the capacity for such programs to advance the goals of social justice and contribute to the public good (Harkavy, 2006). However, service learning programs that contribute to and enhance capacity building in the community sector are not without their challenges. Such challenges arise from the complex interaction of students, intended learning outcomes and the nature of differing service activities involved in such programs (Furco, 2003). The barriers to service-learning integration including faculty resistance, negatively perceived program outcomes, workload issues, personal agendas of academic staff and potential resistance from the community organisations (Kolenko et al, 1996).

Universities provide a unique opportunity with their pool of young adults who are developing professional skills that are applicable to the community sector (Wood and Dodd, 2010). As Cohen and Yapa (2003) argue, service learning is more than active learning. What is critical is that students learn the integration of scholarship and civic engagement and that it is through this engagement with the community that new knowledge is generated. Increasingly, teachers are seeking opportunities that enable their students to develop these kinds of “real world” experience within the learning environment. A clear synergy exists between the needs of universities and the needs of the community sector. This alignment provides a real win-win situation for students who are able to learn in an “out of classroom environment” and gain an appreciation for a sector previously unknown to them. On the other hand, the community sector receives a free and tangible product aimed at supporting their organisation as well as gaining an opportunity to impress upon younger individuals the benefits of volunteerism, which may in turn lead some to become volunteers themselves. In this next section, we explore how this kind of service learning can help build the capacity of community sector organisations.

ICT use by community sector organisations

The findings of a Productivity Commission study focusing on the contribution of the not-for-profit sector (also known as the community sector and third sector) and impediments to its development published in early 2010 report that this sector has grown rapidly in the last decade and now makes up just over 4 per cent of the GDP with nearly 5 million volunteers contributing their time in unpaid work (Productivity Commission, 2010, p. III). The report further notes that the Australian Government “acknowledges the changing relationships between government, business and community organisations and wants to explore their impacts and future opportunities for optimising such relationships to further the well-being of society” (p. III). More specifically in relation to information and communication technologies the report states that ICTs have “the potential to enable more cost-effective and higher quality human services” (p. XLVII).

Despite this potential, there has been a growing body of Australian research undertaken in the last five years reporting the challenges for community sector organisations in making effective use of ICTs (see for example, Barraket, 2005; Department of Communications Information Technology and the Arts,

2005; Knox, 2005; Stillman et al, 2010; Yerbury, 2007). Similarly, the Productivity Commission (2010) reports that Australian not-for-profit organisations continue to lag in the adoption of ICTs, and they are therefore failing to benefit from the productivity growth that might otherwise be realised (p. 230). As the report suggests, training and support for the implementation of ICT solutions need to be part of capacity building programs for such organisations (p. 231). Stillman et al (2010) have reported similar concerns in documenting the findings of the *Doing IT Better project*, which was established to build the ICT capacity of the Victorian community services sector. The recommendations arising from the study include: 1) the need for “ICT leadership to enable the community services sector to take on the programs that allow it to become a ‘smart’ sector”; 2) the need for “public policy and investment that support ICT solutions for the community sector”; 3) the opportunity for universities, “to help develop mechanisms, information processes and, potentially, products to support the ICT needs of the community services sector”; and 4) recognition that “individual community sector organisations will have their own circumstances, opportunities and limitations which determine how they can take advantage of ICT for the betterment of their client base” (p. 5). The report further notes the need for more information, education and networking on ICT opportunities within the sector.

The case study reported in the next section of this paper describes a cross-sector partnership program that responds to the challenges and opportunities arising from the identified need for universities to collaboratively work with community sector organisations in developing information processes, solutions and education programs that can build the capacity of the sector to make more effective use of ICTs such as Web 2.0 and CMS technologies. The case study describes the impetus behind the establishment of the program, the benefits for students and the community organisations they serve, as well as the challenges encountered in balancing the needs and interests of these different stakeholder groups.

Case study

The case study reported in this paper is set in an Australian context, one which Langworthy (2007) notes differs in many ways from the tradition of “education for the public good” that has been integral to the development of higher education in the United States. According to Langworthy (2007), “given the political drivers, competitive context and lack of history, the concept of service learning is not readily understood or embraced widely in Australia”. Despite these challenges, Langworthy highlights the value of such community engagement and advocates for innovative and flexible models of service learning in which the participation of students in community projects is integral to the curriculum, and fosters individual learning skills and the attainment of graduate attributes.

The model adopted at the University of Australia (UniSA) is based on this service learning approach and is consistent with the university’s Teaching and Learning Framework (University of South Australia, teaching and learning framework, 2007). This framework provides an institutional approach aimed at fostering student engagement and experiential learning involving practice based and service learning, and by strengthening the nexus between teaching and research in the undergraduate curriculum. UniSA places considerable importance on student engagement, which derives from the institution’s commitment to student-centred learning. Student engagement is said to involve the active contribution a student makes to his or her own learning, combined with institutional provision of educational opportunities that are empirically linked to quality learning outcomes in order that students move successfully into professional employment or enjoy enhanced career mobility and personal achievements as citizens (UniSA student engagement statement, 2010).

The Sustainable Online Community Engagement (SOCE) program is founded on this service learning model and is consistent with the University’s mission and commitment to student engagement through experiential learning. The program involves recruiting volunteer organisations via the SOCE website that are seeking the design of a website or other multimedia services. Students from nominated courses offered are matched to the organisations and work with their allocated community group throughout the semester. Interaction between community groups and students is done online throughout the website building process. As Marriott and Patterson (2004) noted, such a strategy was believed to be a key factor in the long term success of the project since it provides an alignment with the capabilities and preferences of the students while also introducing the community groups to online technologies. Ongoing support to community groups is provided online by a project officer with funding support from the South Australian Government, Office for Volunteers. Face-to-face training has also been provided by the project officer and contract staff to ensure that community groups are able to maintain and develop their websites after the student(s) have exited the relationship (Marriott, 2007).

In these next sections we focus more specifically on how the SOCE program has been integrated into a third year web design course, Electronic Publishing on the Internet (EPI).

Electronic Publishing on the Internet (EPI)

Electronic Publishing on the Internet (EPI) is a final year course for students undertaking a major in either interactive media or web design. The course places emphasis on applying the principles and elements of design to the creation of websites, communication skills, team work, and designing a compliant and accessible website.

By the end of the course students should be able to:

- understand the nature and formats of electronic publishing via the web;
- understand the factors affecting the electronic publishing industry;
- critically analyse and create effective online publications;
- understand and discuss critical issues such as accessibility, copyright and security.

Students undertake 3 assignments:

- Design proposal outlining target audience and design specifications
- Prototype of the final website design created in Photoshop
- Final website publication.

The first author has been coordinating this course since 2002. Over the last eight years the course has been redeveloped to strengthen the link between the activities undertaken through the assignments with their application in solving “real world” problems.

Previous evaluations

The findings from evaluations including anonymous online course evaluations conducted at the conclusion of each offering of the course, bi-annual anonymous online surveys completed by the community groups participating in the program, and customised online surveys completed by students undertaken over the last eight years have been reported in detail elsewhere (see Wood and Dodd, 2010). The principal findings from these evaluations are as follows:

The students’ responses to previous course evaluations and anonymous online surveys suggested that they gained an increase in their confidence in dealing with real clients and enhanced knowledge about how to apply the skills gained in the course to solving real world problems. The community member responses emphasised the reciprocal nature of the service learning relationship, whereby community organisations gain from having the support of students trained in particular activities that can benefit their organisation, while also acknowledging the benefits gained by students in the process.

On the other hand, several challenges associated with the service learning approach were evident from analysis of the findings of student evaluations, and both student and community member surveys. The findings suggested the most significant issues for both students and community members related to the lack of regular and timely communication, and the challenges associated with mediated communication. Other concerns noted by community members included not being assigned a student or students not completing the project. The most common request from community members was for ongoing training and a student to assist with getting the group started in maintaining the site.

Changes implemented in 2010

In response to the identified challenges several initiatives were introduced in the 2010 offering of EPI including:

- Increased focus on developing students’ business communication skills;
- Introduction of measures to enhance the engagement of students and community members such as:
 - conducting social events throughout the semester enabling students, community members and other stakeholders to meet regularly in an environment that is conducive to increased social interaction;
 - providing each student with their own business card that they can give to their allocated client;

- establishing a community consultation committee made up of community members, students and State Government funding bodies to ensure that all stakeholders have input into decision-making about the program;
- Re-developing the SOCE program website as a Web 2.0 enabled environment that includes profile pages for community members, a shared wiki so that students can communicate with their clients and vice versa on a regular basis, and a content management system enabling community members to maintain their site more easily after handover by the student.

Method

As with previous offerings, the anonymous course evaluation conducted at the end of the first semester (S1), 2010 offering of EPI was based on the standard Course Evaluation Instrument (CEI) mandated by the University. The CEI comprises a series of 10 5-point Likert Scale items including one criterion focusing on students' overall satisfaction of the course. In addition, eight custom 5-point Likert Scale items and three open ended text fields were included to provide further insight into students' experiences through the service learning program. These items addressed student experiences communicating with their clients, their perception of how the service learning relationship benefited their client, the benefits of service learning, the value of the community engagement sessions in facilitating communication with their clients and their overall experience of the course. The findings from the course evaluations are reported in the section below.

Results

Table 1 below shows the mean ratings on a scale of -100 to +100 of student responses to the 10 standard items in the course evaluation conducted at the conclusion of the 2006-2010 offerings of the course. As Table 1 shows, the highest ratings across all of the criteria were obtained from the Semester 2, 2006 offering of the course with an overall satisfaction level of 90. The offering of the course that scored the least favourably overall was in Semester 1, 2009 when students created their own portfolio websites rather than sites for SOCE clients, indicating that students appear to favour projects for "real" clients.

Table 1: Student ratings for course evaluation criteria (-100 to +100) for the 2006- 2010 offerings of EPI

Course Evaluation Criteria	2006 S1 n=9 21%	2006 S 2 n=5 29%	2007 S1 n=10 17%	2009 S1 n=25 32%	2010 S2 n=12 23%
1.I have a clear idea of what is expected of me in this course.	39	80	80	50	50
2.The ways in which I was taught provided me with opportunities to pursue my own learning.	61	80	55	60	62.5
3.The course enabled me to develop and/or strengthen a number of the qualities of a University of South Australia graduate.	50	80	70	36	58.3
4.I felt there was a genuine interest in my learning needs and progress.	72	90	55	40	58.3
5.The course developed my understanding of concepts and principles.	61	100	65	42	50
6.The workload for this course was reasonable given my other study commitments.	44	90	50	32	45.8
7.I have received feedback that is constructive and helpful.	61	100	55	36	50
8.The assessment tasks were related to the qualities of a UniSA graduate.	44	90	50	42	58.3
9.The staff teaching in this course showed a genuine interest in their teaching.	72	90	55	36	54.2
10. Overall I was satisfied with the quality of this course.	61	90	55	25	50

Given that new measures were introduced to strengthen student engagement with their clients in 2010, it is at first surprising that the 2010 offering of the course scored significantly lower than the 2006 offering on all criteria. However, the findings can be better understood by referring to the eight custom

Likert-scale items incorporated into the evaluation focusing more specifically on the service learning aspects of the course.

Table 2 below shows the mean score ratings of the custom Likert-scale items according to class of students. Given the relatively low response rate (12/52 – 23%), the numbers in each class are too small to be able to make any statistical comparisons. However, it is evident that half of the students (Gp1 and Gp2) were considerably less satisfied with their experience over all the criteria than students in Gp3 and Gp4 classes. Since the same teaching staff members were involved with all classes, this obvious contrast between students bears further analysis. Indeed, comparison between student responses by class to the core course evaluation questions for each shows an obvious relationship between student experiences with the service learning aspect of the program and their satisfaction with the course itself.

Table 2: Student ratings for custom evaluation criteria (-100 to +100) for the 2010 offering of EPI

Course Evaluation Criteria	2010 Gp1 n=4 28.6%	2010 Gp2 n=2 11.8%	2010 Gp3 n=4 28.6%	2010 Gp4 n=2 11.8%	2010 All n=12 23%
1. Please indicate the extent to which you agree that you felt comfortable and confident in your communications with your client	-12.5	25	62.5	100	43.7
2. Please indicate the extent to which you agree that undertaking a project for a "real-life" organisation was worthwhile.	87.5	25	100	100	78.12
3. Please indicate the extent to which you agree that your client learned new things about web technology through your interactions with them.	-12.5	25	37.5	75	31.25
4. Please indicate the extent to which you agree that you think they will successfully maintain their site after handover.	-50	25	62.5	75	28
5. Please indicate the extent to which you agree that community events are helpful in keeping you in contact with your client	-16.7	25	62.5	50	30.2
6. Please indicate the extent to which you agree that the Moodle system is user friendly and more interactive than other course systems.	50	25	62.5	100	59.37
7. Please indicate the extent to which you agree that the journal approach using a Blog is an effective technology for documenting your process of communicating with your client and documenting the design specifications.	12.5	25	75	100	53.12
8. Please indicate the extent to which you agree that it would be good to use this Web 2.0 environment in future courses.	37.5	25	62.5	100	56.25

Table 3 below shows a more detailed analysis of student responses to the 10 core course evaluation according to the class in which they were enrolled. It can be seen from Table 3 that overall satisfaction with the course was highest for two classes (Gp3 and Gp4), and students from those classes rated their experience with the service learning program and their clients higher than the other half of students enrolled in Gp1 and Gp2 classes.

Table 3: Student ratings for course evaluation criteria (-100 to +100) for four classes and all EPI students

Course Evaluation Criteria	2010 Gp1 n=4 28.6%	2010 Gp2 n=2 11.8%	2010 Gp3 n=4 28.6%	2010 Gp4 n=2 11.8%	2010 All n=12 23%
1. I have a clear idea of what is expected of me in this course.	50	25	37.5	100	50
2. The ways in which I was taught provided me with opportunities to pursue my own learning.	87.5	25	50	75	62.5
3. The course enabled me to develop and/or strengthen a number of the qualities of a University of South Australia graduate.	50	25	75	75	58.3
4. I felt there was a genuine interest in my learning needs and progress.	62.5	0	62.5	100	58.3
5. The course developed my understanding of concepts and principles.	37.5	25	62.5	75	50
6. The workload for this course was reasonable commitments.	37.5	25	37.5	100	45.8

7. I have received feedback that is constructive and helpful.	62.5	0	37.5	100	50
8. The assessment tasks were related to the qualities of a UniSA graduate.	37.5	25	75	100	58.3
9. The staff teaching in this course showed a genuine interest in their teaching.	62.5	0	50	100	54.2
10. Overall I was satisfied with the quality of this course.	25	25	62.5	100	50

An analysis of student qualitative responses to the evaluation provides greater insight into the possible reasons for the polarisation of student satisfaction with the service learning experience and the course. While one student in the Gp1 classes commented that they found the service learning “Challenging but [a] valuable learning experience” another stated:

My client was not helpful and this affected my process of working through the course. I was constantly trying to communicate with my client and worrying about the site design that I was not as focused as I could have been on the content provided in both the lectures and tutorials. The client communication obviously worked well with most other students but there does need to be a plan in place for students such as myself who lost all communication with their client early in the process...when I had finished designing the site I did not feel any satisfaction as there was nothing achieved in terms of the site’s purpose and intended use and no client acceptance.

Another student in that same class commented that the experience was “Terrible, she barely replied or seemed to care and I was building her a website for free... Clients were painful. Paying to build a website for free when the content in the course is nil, didn’t learn a whole lot”. These two comments reveal the impact on student learning if the relationship between students and clients is not reciprocal. The student who noted that they paid to build a site for free clearly did not engage in the course due to this breakdown in communication as indicated by their comment that “the content in the course is nil” and that they “didn’t learn a whole lot” even though there were formal lectures, practical web design activities each week, industry presenters discussing web design as well as comprehensive guides on web design together with podcasts posted weekly to the Moodle course site. The fourth student in that class noted “Because I never write a blog so I always forget to update my blog and then I get lose [sic] from this marks” indicating this student was not as comfortable with the Web 2.0 environment as most of the other students in the course. In contrast, students in the class (Gp4) who were most positive about the service learning experience and the course commented “It was great, we both were committed to contact each other. I liked how it was all on a blog, making it so much easier, we could update anytime, however we like it. Also that we dealt with a ‘real client’ was great” and the other student noted “I had no problems, my client was very good at giving me quick replies I was extremely impressed with the whole course”.

While one must be conservative in interpreting the findings given the low response rate for all of the course evaluations, it was apparent that while most students believe undertaking a “real-life” project is a worthwhile experience as indicated by their high rating of this criterion (78.12) the quality of communications with their clients had a significant impact on learning outcomes. Not surprisingly, the same students also rated the likelihood that their clients benefited from the experience and would be able to update the site after handover lower than students in Gp3 and Gp4 classes.

Discussion

The case study reported in this paper demonstrates both the benefits and challenges associated with service learning in an online community engagement project. On the one hand, all but one of the students who responded to the online course evaluation at the end of the course reported that they strongly agreed (9) or agreed (2) that undertaking a project for a “real-life” organisation was worthwhile. The one student who did not agree with this criterion was a student from the Gp2 class who rated this criterion as neutral. Interestingly, even the students in the Gp1 class who rated criteria relating to their communication with their client considerably lower than other students, still agreed (3 Strongly Agree and 1 Agree) that undertaking the “real life” project was worthwhile. On the other hand, the lower ratings for most of the service learning related criteria and the core evaluation criteria, together with student qualitative comments demonstrates the negative impact that a “one-sided” service learning relationship has on students. As Cohen and Yapa (2003) argue, what is critical in a service learning relationship is the engagement that students have with the community, which facilitates the

generation of knowledge. Moreover, for the community sector organisations to benefit from the relationship, they too need to be engaged with the students assigned to work with them. It is hardly surprising that the students who had the least favourable experiences communicating with their clients were the same students who rated the criterion relating to the extent to which their client learned new things about the web technology and the possibilities that these technologies afford their organisation the lowest. Similarly, these students also strongly disagreed that their clients would maintain the site after handover.

In contrast students who reported a positive relationship with their client strongly agreed with criteria relating to the benefits for their clients. While follow up evaluations with the community organisations involved in the program this year have not yet been conducted, unsolicited emails from three clients who were very engaged with their students attest to the benefits they received from their experience. As one of the community sector clients stated following one of the community events hosted for students and their clients:

“I was very impressed with the whole event, the direction [in which] the program is heading, [the] value of the SOCE program to the groups involved and the CMS system, which will provide much needed functionality to help improve the operation of the groups. Also the fact that you were "oversubscribed" for this semester, again highlights the value of the SOCE program”.

These findings highlight the potential benefits for the community sector in engaging in service learning such as the SOCE program providing their members are engaged with their students.

As the *Doing IT Better project* findings report (Stillman et al 2010), there are tremendous opportunities for universities “to help develop mechanisms, information processes and, potentially, products to support the ICT needs of the community services sector” (p. 5), and the SOCE program provides a mechanism to facilitate this process. However, as the findings from initiatives implemented in the 2010 offering of EPI highlight, programs designed to facilitate the development of graduate attributes and promote life-long learning through service learning as well as build the ICT capacity of the community sector need to achieve a balance between student and community needs. When a truly reciprocal relationship occurs, both students and community groups benefit. When the relationship is one-sided, neither student nor their community organisation can achieve their individual and mutual goals.

The initiatives introduced this year aimed to address student and client concerns expressed in previous offerings about lack of communication between students and the groups. In implementing the changes described in previous sections we aimed to address these concerns. However, it appears the outcomes were one sided. While the strategies implemented appear to have helped students to take greater responsibility in maintaining contact with their clients, this was not always reciprocated. In future offerings of the course there will need to be contractual obligations in place to ensure that if community organisations sign-up for the program, they also commit to maintaining the required reciprocal relationship. Without this in place, neither students nor their clients will benefit from the potential that such a relationship affords in preparing students and their communities for the opportunities that new and emerging ICTs offer to the community sector.

Finally, the findings indicate that the majority of students were comfortable with the Web 2.0 Moodle learning environment implemented. However, the comments by one student about their lack of experience and uncertainty in using a Blog highlight the findings from our previous studies that suggest not all students are already equipped with the skills required to harness the benefits that Web 2.0 learning environments afford. We need to be mindful of the challenges that these ICTs can pose, even for our young “net generation” learners who are undertaking ICT related courses.

Conclusion

The case study reported in this paper demonstrates the benefits as well as the challenges associated with service learning in an online community engagement program. Consistent with the literature, the findings from stakeholder evaluations show that benefits of the reciprocal relationship that characterise the service learning relationship, but also highlight the problems that arise when the service learning relationship does not operate in a reciprocal manner.

The initiatives outlined in this paper were implemented to address the identified challenges. However, as our findings have shown, there are a number of complex challenges that need to be overcome to ensure the benefits for students and the community sector are realised through service learning aimed at enhancing students' professional skills while also building the capacity of the community sector to make more effective use of Web 2.0 and CMS technologies. While the findings are limited to evaluation responses by students undertaking one specified course at one institution, and taking into account the low response rate, it is not possible to generalise the findings more widely. However, the findings informed by student qualitative comments suggest that strategies need to be in place to ensure that service learning relationships such as the SOCE program described in this paper, operate in a truly reciprocal manner. We have not yet finalised our evaluations of the community organisations involved. The findings from these evaluations will provide further insight into strategies for strengthening the service learning relationship, as well as the impact that the introduction of a Web 2.0 and CMS environment has had on the capacity of these organisations to manage their sites after student handover. Once these objectives are realised, service learning programs such as SOCE will be more able to facilitate the development of the knowledge, skills and cognitive capacities that students and the community sector organisations they work with require to deal with the complex social issues and problems (Hurd, 2006) of an unknown future through the effective use of information and communication technologies.

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