

Extreme E-Service Learning (XE-SL): E-Service Learning in the 100% Online Course

*Aprendizaje-Servicio Virtual Extremo (XE-SL): Aprendizaje-Servicio Virtual
en un Curso 100% Online*

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Abstract

Service learning—where students perform work for a community partner in a manner that enhances course content—is a well-established tradition in academia, with many reported benefits. But is service learning technically feasible in a 100% online course format, where students will never have the opportunity to meet the community partner face-to-face? Evaluating two experimental courses taught by the authors, it is demonstrated that extreme e-service learning (XE-SL)—i.e., service learning where both the instruction and the service occur 100% online—can work, although the benefits and challenges are notably different from a traditional service learning (T-SL) format. Based on these experiences, best practices and lessons learned are provided to assist others endeavoring to incorporate the value of service learning online.

Keywords: E-service learning, service learning, online learning, nontraditional students, experiential learning, instructional design, public administration, marketing

Resumen

Aprendizaje-servicio - donde los estudiantes trabajan para un socio de la comunidad de una manera que mejora el contenido del curso- es una tradición bien establecida en el mundo académico, con muchos beneficios comprobados. Pero, ¿es el servicio de aprendizaje técnicamente posible en un formato de curso 100% online, donde los alumnos no tendrán la oportunidad de conocer al socio de la comunidad en persona? La evaluación de dos cursos experimentales dictado por los autores, demuestra que el aprendizaje-servicio virtual extremo (XE-SL), es decir, aprendizaje-servicio - donde tanto la instrucción y el servicio se producen 100% online - puede funcionar, aunque los beneficios y desafíos son diferentes al formato de aprendizaje-servicio (T-SL) original. En base a estas experiencias, se dispone de mejores prácticas y lecciones para ayudar a otros en el intento de incorporar el valor del aprendizaje-servicio online.

Palabras clave: Aprendizaje-servicio virtual, aprendizaje-servicio, aprendizaje online, alumnos no tradicionales, aprendizaje empírico, diseño instructivo, administración pública, marketing

Introduction

Service learning can be a powerful technique to enhance student learning while serving the community. Service learning is beginning to transition online, often in a hybrid format where either the service or the instruction is partially online. What has yet to be determined is whether or not service learning can be

effectively incorporated into a fully online course format, where students never meet the community partner/client or instructor face-to-face. Examples of extreme e-service learning (XE-SL), defined here as those instances where both the instruction and service are exclusively online, are exceptionally rare (two notable exceptions include Hunter, 2007 and Malvey, Hamby, & Fottler, 2006).

Some may suggest that service learning cannot work in a fully online format because there is no physical face-to-face interaction with the community partner. Using two case studies, we illustrate that extreme e-service learning (XE-SL) in a 100% online environment is technically feasible and can work well—however, the benefits and challenges are notably different from an onsite traditional service learning (T-SL) format. Based on these experiences, best practices and lessons learned are identified to aid others who plan to incorporate the value of service learning online.

The article begins with a brief description of service learning and how it relates to online courses. It then explores two case studies of XE-SLs in two fully online courses, one in marketing and one in public administration. Because of the paucity of literature on service learning in fully online courses, the authors used their own courses as case studies, thus permitting empirical insights. The courses selected were both graduate level courses at two separate institutions where online learning was well-established and supported. Both instructors had taught their course previously, and both had extensive experience with service learning and online instruction. Each course was a regularly offered core curriculum requirement in its respective program (a core course was selected as greater number of students must matriculate through these courses, thus providing a variety of students and a larger class size versus an elective course). Both courses served primarily non-traditional students.

In order to measure outcomes of these service learning experiences, we have included benefits and stakeholders considered essential to the service learning experience in the literature. These would include stakeholders such as students and community partners, and benefits such as real world projects, improved academic learning, sense of community, application of practical skills, and critical analysis (Elkins, 2009; Hagenbuch, 2006; Astin & Sax 2000; Elyer & Giles 1999). Based on those dimensions, the outcomes considered are (1) product completion; (2) client satisfaction and (3) student satisfaction, (4) client and student interaction, and (5) skill building. These have been identified as important to the traditional service learning literature (Elkins, 2009), and will now be measured as the result of an online service learning experience. To operationalize the measures, product completion was defined as the ability of students to complete the intended service or product; client satisfaction was determined by verbal feedback, client usage of product, or subsequent client partnership request. Student satisfaction was assessed through course evaluations, and client/student interaction through the number of client/student interactions. Skill-building potential relied on subjective instructor assessment as to whether the project provided students the opportunity to build real-world skills in the subject matter.

Service Learning, E-Service Learning, and Extreme E-Service Learning

Service learning is a “teaching and learning strategy integrating meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility, and strengthen communities” ([Learn and Service America](#), 2010). Service learning typically involves a community activity or project that links real world or hands-on experience to course concepts. The projects, designed to enhance student learning of course materials, generally include some form of personal reflection, enabling students to consider the meaning of their civic participation and its effects on both themselves and the community. Service learning should be an educational experience in which students participate in an organized service activity that meets identified community needs. Students should reflect on the service activity in order to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of civic responsibility (Hagenbuch, 2006).

Examples of service learning include developing a grant for a non-profit agency in a grant-writing course, or creating oral histories for the local library in a history methods class. Some hands-on forms of service learning, such as serving in a soup kitchen as part of a social studies course, may not translate well online. While some courses, due to their subject matter, may simply not be amenable to service learning, many online courses have the potential for the incorporation of a type of service learning described as “client-based” (Waldner & Hunter, 2007), wherein students produce useful products for a nonprofit or public organization as part of their coursework.

Elyer, Giles, Stenson, and Gray’s (2001) extensive literature review found that the benefits of onsite service learning included personal outcomes, such as moral development or enhanced personal efficacy and leadership skills (Wang, 2000). Service learning can also produce social outcomes, such as

increased racial understanding, a sense of social responsibility, commitment to service, and increased community involvement after graduation (Harkavy & Hartley, 2010). Some scholars have identified learning outcomes, such as a positive impact on academic learning, ability to apply knowledge in practical settings, enhancement of critical analysis, and other academic skills (Eyler & Giles Jr., 1999), and valuable professional skills (Simons & Cleary 2006; Bennett, Henson, & Drane, 2003).

E-service learning (E-SL) incorporates service learning into an online format. Malvey et al. (2006) define it as

“...an electronic form of experiential education and incorporates electronically supported service learning. It is delivered online and uses the Internet and state of the art technologies that permit students, faculty, and community partners to collaborate at a distance in an organized, focused, experiential service learning activity, which simultaneously promotes civic responsibility and meets community needs” (p. 187).

In a similar vein, Dailey-Hebert, Donelli-Salee and DiPadova (2008) describe the concept of service e-learning, wherein either the service or instruction occurs partially or fully online, often in a hybrid format.

Why service learning online? In addition to the general benefits of service learning discussed in the literature, there are additional reasons to facilitating service learning online. Service learning may be particularly useful for the adult learners often found online because it engages their life experiences and their ability to learn from hands-on tasks. Moreover, E-service learning may compensate for the lack of interaction that can occur in traditional distance learning courses. Combining service learning with internet instruction may introduce a new motivation to e-learning while applying knowledge in a real world setting. A third reason involves the viability of service learning itself. With so many courses and students increasingly online, service learning itself must go online in order to remain relevant and viable.

Other reasons include the fact that some courses require service learning, either due to accreditation or instructor preference, and there is institutional interest in transitioning those courses online. Additionally, e-service learning courses open up the world of service learning to students that would otherwise have limited access to it due to disabilities, rural location, or work or family schedule conflicts.

However, the concept of extreme e-service learning (XE-SL), where the instruction and service is exclusively online, is relatively unstudied. One can conceive of extreme service learning as the end of a continuum, where traditional service learning is fully onsite, and extreme e-service learning is fully online (Figure 1). The intent of the two case studies is to explore that far end of the continuum more fully, and to examine whether service learning is truly viable in a setting where both the service and the instruction occur fully online.

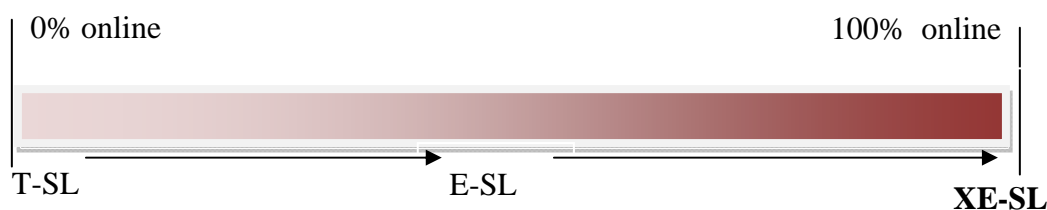


Figure 1. *Continuum of Service Learning*

Case Study I: Public Policy Course

The Task

Graduate public administration students in an online nine-week policy analysis course produced two products for the community partner (CP), a county in Georgia—best practices research and a policy analysis. The project involved health disparities, the vast difference in health outcomes between different populations in the county—for example, some parts of the county had 11 times the infant mortality rates than the national average and among the highest childhood asthma rates nationally. The CP had embarked on a project that endeavored to reorganize county health services to reduce health disparities. The first course product, best practices, asked students to find other local government examples of successful health equity programs or projects. The second asked them to evaluate three alternative projects the county could undertake to address health disparities.

The Class and the Client

Instead of simply learning about policy analysis theory, students would have the unique opportunity to actually do a hands-on policy analysis, in a manner that benefitted the CP. The instructor developed a draft syllabus with the CP's input. The instructor and partner jointly developed a mandatory student service learning contract to clarify expectations.

The CP agreed to provide feedback on the students' work. The CP also agreed to three real-time online sessions using audio-visual (AV) teleconferencing software—(1) an introductory session to brief students about the project and the requested products, (2) a second question and answer session for students to obtain feedback on assignment progress; and (3) a final session for real-time student presentations to the CP.

Pedagogical Design

In order to better meet the course learning objectives, the CP and instructor tailored six course components to the service learning experience: the syllabus, readings, discussion board postings, lectures, course shell, and the assignments themselves.

A section was added in the syllabus to generate excitement about the course mission and products, both to entice and educate prospective students about the project and the concept of [health disparities](#) and social determinants of health (the concept that social determinants such as race, socioeconomic status, and more may influence health outcomes). The instructor also modified the online course environment to add a health equity resources section, including video, document, and Internet links.

The discussion board prompts were also modified. Instead of generic textbook questions, the prompts each week asked how the readings related to health disparities. For example, students learned five different policy contexts, from economic to political. For one posting, they were asked to explain how the contexts affected health disparities. This ensured that course content was covered well, in a manner explicitly related to the real-world context. The postings served a reflection component. This component, considered important in service learning, (Hatcher & Bringle, 1997), allowed students to better integrate their knowledge and experience. The weekly postings provided a direct venue for this reflection.

The readings were also modified to include background readings and studies on health equity provided by the county, and a video about the county project in the first week for briefing purposes; subsequent weeks had standard textbook and article readings to ensure that required course learning objectives were met. The live course lectures and policy workshop were also modified to focus specifically on health disparities. The instructor and students jointly worked through the policy analysis, from problem definition to recommendations, using the health equity as the example of choice.

Both core assignments were modified to incorporate service learning, as discussed above. The first assignment, best practices research, was re-designed so that students would find other cities and counties that had undertaken health equity initiatives and relate the core components, strengths, and weaknesses of those programs. This gave the county information on innovations elsewhere in the country. For the second assignment, the major policy analysis, students proposed three health equity project alternatives for the county and recommended one based on cost, effectiveness, and political feasibility. This further helped the county assess respective strengths of potential alternatives.

Technology

To introduce the students to the CP, the instructor held a real-time "client reveal" session, and ran a three-way pilot session with the instructional design team and CP to identify potential problems beforehand. The students prepared for the session by e-mailing questions to the instructor. The session was archived to permit students who could not attend real-time to watch the archive at a later time.

The first client reveal session encountered technical challenges, despite the pilot run. The instructor brought her laptop to host the session, but was unable to get past the county's firewall without county staff assistance. The university's instructional design (ID) team was standing by virtually to ensure success of the initial session. The instructor walked the CP through the technology, including headset use, how to hold down the talk button, and how to monitor the students' text chat at the bottom of the screen, as well as the software symbols such as the raised hand symbol.

All parties, including the partner, instructor, students, and the ID team, deemed the initial session successful, and several students e-mailed the instructor noting how much they enjoyed actually "seeing"

someone, particularly a CP, through the teleconferencing software. The second session allowed students to solicit further information about the project, and to ask the CP for feedback on their assignment ideas.

The students participated by texting in the live classroom window, though two spoke using their microphone headsets. None of the students elected to use webcams. This meant the interaction was somewhat lopsided, as the students could hear and see the CP and instructor, but the CP and instructor could not see, and often not hear, the students. The CP and instructor continually monitored and reaffirmed the running textbox dialogues to actively encourage participation. Though the syllabus suggested a webcam and microphone headset, most students did not have the equipment and opted to participate by typing in the text box.

Outcomes

The first case performed well on all five measures of technical feasibility, suggesting that such courses are feasible in fully online environments.

Measure 1: Product completion

Despite the compressed time format, the client received two products, the best practices research and the policy analysis. This provided the client with concrete examples of health equity programs in other jurisdictions, as well as a better understanding of the strengths and weaknesses of such programs, including cost and effectiveness.

Measure 2: Client satisfaction

The client expressed satisfaction with the work, which was distributed internally in the county for review and consideration. The client subsequently asked to serve as the client for two more policy classes. The client also considered the increased student awareness of health equity issues a significant outcome.

Measure 3: Student satisfaction

The anonymous course evaluations suggested that the students highly valued the ability to conduct a real analysis. In the open-ended comment sections, one student noted that the instructor “did a great job of using technology to bridge the gap of online course and the lack of physical meetings. The information provided built on the (previous session) leading to a great understanding of course objectives.” Another commented that this “class should be one of the first, if not the first, class an MPA student takes....Having a real world problem to work on this showed me how you can get in the community and make a difference.” A third noted that “for (the instructor) to take the county and use real world questions and answers was true learning.”

Measure 4: Client/student interaction

Many instructors discount the potential for XE-SLs because students will not be able to meet the client face-to-face. However, adequate client/student interaction was provided with the three live class sessions using AV teleconferencing software. The sessions were supplemented with ongoing e-mail and phone interaction.

Measure 5: Skill-building

The students conducted an actual policy analysis for a real-live client, rather than a theoretical policy analysis based on student-selected topics. In this sense, they were better able to understand specific policy contexts. For example, the county experienced severe budget cuts during the class, thus potentially delaying project implementation. This forced the students to think about economic considerations of their recommendations. Though disheartening, it was an important lesson in real-world constraints of governmental policy settings.

Limitations and Challenges

Limitations and challenges revolved around technology as Malvey et al. (2006) and Hunter (2007) also found. As discussed above, the instructor frequently encountered minor technical problems with the software which the instructor jokingly referred to as “bad technomojo”, as well as lack of participation via webcam. Though the lack of webcam use did not affect the overall quality of the interaction or the understanding between the students and the CP, it did slow down the interaction slightly as it took students longer to type as opposed to speaking their questions. Timing the live sessions for all time zones was also challenging. Moreover, students lacked the training to do web-enhanced presentations, and the CP initially lacked training to conduct the real-time sessions, though this was readily overcome.

The intensive nine-week format also created issues, such as inadequate turnaround time for client feedback. Group projects would likely have facilitated more extensive feedback from the client (i.e., five group papers instead of 30 individual papers). However, this would have occurred in an on-site service-learning course as well. The workload was also a challenge. As Killian notes, hybrid service learning adds about 20% to the instructor's workload (2004). Not only must the instructor work closely with the CP, but s/he must also serve as a filter for student work, modifying or adding value if it falls short. In addition, the added service learning workload may have scared some students off. Although course evaluations were high, subsequent term enrollments were lower—perhaps due to the service learning component or the technology/webcam requirements. However, there may be some benefits to students self-selecting into a service learning class in terms of interest and dedication to the project.

Case Study II: Marketing Management Course

The Task

Students in an online graduate marketing management course collaborated with a non-profit foundation to develop a marketing plan for the organization as well as specific strategies for promotion and communication of the organization and its events. The organization was a four-year old foundation dedicated to education, fostering lifelong learning in public safety, and enhancing community awareness of public service. Students worked for the entire 12-week course with the client to develop a formal marketing plan, which included detailed recommendations for two critical tasks facing the organization: an annual fundraising gala and a new educational program targeting school age children. Students conducted primary research to address a prospective target audience and new programming ideas.

The Class and the Client

Marketing management is a core required course in the masters of business administration program. Thus, each student in the program, regardless of specialty (accounting, finance, marketing, management), must complete this course. The course is offered in both traditional and online formats.

The university, a private east coast institution, has approximately 2,800 students. The MBA program is one of the largest in the region. Approximately equal numbers of the MBA students are female and male, with a median age of 35. Eighty percent of the students in the program have taken an online course in the program, and the degree is also offered completely online.

The instructor had taught this 12-week course for nine years, in both traditional and online formats. This was the fourth time this course was taught online with a service learning component. The course was not advertised with a service learning component and service learning is not required for the university's graduates.

The foundation is committed to mentoring relationships between positive adult role models and children, preparing them for responsible citizenship. These relationships are developed and grown by working in conjunction with community members, local educators, public officials, and law enforcement agencies. The organization is located only two miles from the physical university campus, and the founders of the organization had a long-term educational relationship with the university.

The instructor met with the client prior to the semester and developed a plan relative to project goals and outcomes. The client agreed to provide students with access to unlimited organizational resources and to meet "virtually" in two way audio/video software at any given time during the semester. Two online meetings were planned: one at the outset of the semester and a second midway through the project timeline. The client was provided with access to the online course platform and would also be available for information on a continual basis throughout the course.

Pedagogical Design

Typically, the course delivery is a blended synchronous/asynchronous format with frequent use of discussion boards, live chat, and e-mail. A semester team project is considered integral to the MBA learning experience, so this course was a natural fit with a service learning project. The instructor is involved with community service and serves on the boards of several local organizations, thus providing excellent opportunities for project identification and development. For this particular course, the organization reached out to the educational institution seeking assistance in developing a marketing program.

Since the university had just begun using a new content management system for delivery of online courses, students were given the first week to familiarize themselves with the new software and explore

course logistics and layout as much as possible. Introductions were made, and any problems or issues were addressed in this first week. In the second week, the students were invited to view project details (which included an outline and project resources) provided in a link on the online platform. Material and websites about the foundation were also made available. The instructor held a chat with students to provide an open forum for student questions or any team development issues.

During week three, students were placed in teams, and the organization's founder joined the students and instructor in an online chat. At this point, all teams had reviewed the project material and had an opportunity to learn as much as possible about the foundation. Another synchronous chat was held in the third week to enable students to explore all electronic resources available from the university's library. An information librarian had been provided with the project outline, and she identified resources specifically for this project topic.

Notes were provided to students in PowerPoint files with recorded audio comments. These notes reviewed chapter concepts from the text, with specific project examples applied as well. Class discussion topics were also focused on the project. Each week, a discussion board article, case, or topic would be posted with pertinent questions. These assignments were directly connected to the project issues, and students were encouraged to share their ideas relative to challenges and successes they encountered in the project.

Finally, optional chats were held bi-weekly. Chats were recorded for the convenience of those who could not attend synchronously. The topics in chats were application oriented, and included real world profit and not-for-profit organizations and their marketing plans. In the first few chat sessions, an instructional technology team member participated in the chat to prevent any platform issues.

Students also conducted primary research in order to complete the project. This was required after the online chat with information librarians occurred. Students conducted interviews and focus groups as teams. Although some teams pursued virtual qualitative research, the majority of the teams conducted this research face to face. Outcomes for the client included a secondary review of demographic data and competitor organization profiles, as well as primary qualitative data.

Technology

Students used the online platform for course and project participation. This was a new platform, and much difficulty was encountered with communication and data exchange. Students were somewhat sympathetic and more focused on the project deliverables; the platform issues did not create negative perceptions of the project. The client was also provided with access to the platform and was able to participate in e-mail and chat sessions with students.

Team functions were enabled to provide each team with exclusive access to all platform communication tools. This facilitated team work, and enabled teams to share information with all course members, if necessary. Additionally, teams could conduct private chat and data exchange with the client and instructor as needed.

Because the content management system was new to the university, many technical difficulties were encountered in the chat sessions due to limitations or default settings on the platform. Often, students would join a chat and find 15 minutes later that the audio was not functioning properly. Additionally, encouraging participation was difficult. Students often "lurked" in the chat room online and would not say anything.

Most frustrating was the fact that IT support was unavailable to students on the weekends. For MBA and continuing education students, this is prime coursework time. Often difficulties were encountered on a Friday evening or early Saturday morning that could not be resolved until Monday. Though the problems vexed the instructor, the problems were temporarily glitches that did not notably affect learning outcomes.

Outcomes

Measure 1: Product completion

Student teams delivered both oral and written final reports to the client. The client was provided with four unique team perspectives on marketing recommendations that would provide future direction for the organization. Students also provided the client with access to electronic data that could be used for future decision making; the client has tangible reports upon which to base marketing decisions in the organization. These formal marketing plans included both primary and secondary research. The client has already implemented two of the suggested communication programs successfully.

Measure 2: Client satisfaction

The client, not having much knowledge of the marketing field, was very satisfied with the student projects. In fact, one of the student teams continued to work with the organization to follow through and develop and market an event specifically benefitting the client. The organization has expressed interest in a long-term relationship with the educational institution, which solidifies yet another goal of service learning, to establish a working relationship with community organizations.

Measure 3: Student satisfaction

Students were very positive about their experience in this course. Students were very excited to learn about all electronic resources available to them via the university's library. No one seemed to have had a virtual session with a research librarian prior to this point, and students clearly benefited from this knowledge. To date, there are students who still contact the instructor to identify resources for other projects or to gain access to databases following graduation from the program. This is valuable knowledge that can be applied throughout the students' graduate program.

Students had the opportunity to apply marketing theories and skills to an actual organizational plan in the project. In the student evaluations, students commented on the benefits of working in teams with their peers ("a great networking opportunity") and in developing a "real world" marketing plan. Not only did the graduate students benefit, but the clients' project deliverables will be very useful in growing the foundation in the next five year strategic time frame.

Measure 4: Client/student interaction

The technology used in this course to facilitate communication was pivotal to project success. Email, discussion boards, and two way audio/video were used for synchronous and asynchronous communication. Student feedback included comments such as "the client was readily accessible" and "we did not have to travel to a work site which made more efficient use of our time." The client empowered the students by working closely with them and providing a dynamic work environment. Students felt like "partners."

Measure 5: Skill building

Although students were satisfied in general with the knowledge they acquired and the course experience, some students commented about the level of expertise required to complete the project. Students felt challenged and felt as if they acquired much more significant knowledge in this team project than they would have with traditional course assignments and text book readings. Students kept a weekly journal to document their experience. Students were able to reflect and share their concerns about project deadlines and issues, and the instructor was able to monitor the groups' progress. This journal is the main vehicle for capturing students' perceptions of the project and their understanding of course concepts.

Not only did students have the opportunity to experience all areas of the business (an integrated approach), but students from all disciplines were able to apply their skill sets to a different area of the project (research, legal issues, communication, finance). Additionally, a few students with marketing backgrounds commented specifically on the fact that the skills would be directly transferrable to their work environments.

Limitations and Challenges

One of the greatest challenges for this course was surely the technology. The new platform was not familiar to all students and was new as well to the instructor. Issues from e-mail delivery problems to chat sessions with no audio and file exchange problems prevailed. The course was far from seamless and transparent.

Students seemed slightly overwhelmed by the project deliverables required in the short 12-week timeframe. The research necessary to understand the organization's mission, history, and issues in this project was substantial. Team dynamics led to challenges for some of the teams. Attempting to address these issues virtually was difficult in some cases.

Lessons Learned

Training for all parties is critical (instructor, CP, students, and the instructional design team). Moreover, ID staff must be brought in as a fourth partner in the service learning endeavor, and if the course involves research, the library team should be brought in as a fifth partner. These partners must buy into the XE-SL idea upfront or problems will arise (e.g., ID may not support outside community partner, or CP will not

interact enough with students, etc.). Ensuring adequate buy-in by all parties helps build involvement and interaction, helping create a “student connect” instead of a “student disconnect,” and allows students to apply knowledge to a real word problem and connect theory to practice by making a difference in the community.

Though the cases suggest that extreme e-service learning can work well in a 100% online format, it is not without limitations (Table 2). Both instructors encountered what is often referred to as “lurking” in online sessions, wherein students log in but then failed to actually engage in the discussion in any manner (in the public policy course, two of the fifteen attendees lurked in the first session (13%), and in the second, three out of 12 (25%). In the marketing course, three out of 15 students lurked in the synchronous sessions (20%). Possibilities for overcoming lurking include a “No Lurking” syllabus policy, or actively directing questions to the lurkers during the session.

The instructors also encountered lopsided participation wherein the instructor and CP primarily used audio-visual webcam/headset input and the students generally used the text-box chat function during the session. Though the students still interacted successfully with the instructor and CP, it is important to note this pattern in an era where more institutions are encouraging real-time audio-video interaction in online courses. If this is a matter of concern for individual instructors, an extra credit “hat point” can be awarded (encouraging students to utilize webcams by giving them credit for wearing unusual hats during live sessions). Texting within the real-time session remains an important option for effective interaction, and also provides access for students that may have visual or audio impairments.

Additionally, there are limitations with some online course delivery software applications, whereby only two to three participants can engage in discourse simultaneously. This hampered spontaneity in course discussion and may actually discourage student participation.

The unreliability of the technology caused problems in both courses, as might be expected from the previous literature on E-SLs (e.g., Malvey et al., 2006). This likely will be mitigated as the software improves and students and participants become more comfortable and familiar with the technology. In the meantime, training and solid informational technology support helps minimize the problems. Instructors should also plan for alternative participation methods (conference calls, discussion boards) in the event of technological failure.

Course timeframe must be a serious consideration for course planning. Depending on the scope and objectives of the project, a 12-15 week semester may be most appropriate for the comprehensive XE-SL experience. In the event of a six or eight week session, instructors need to consider project scope, outcomes, and the feasibility of delivering the eservice learning experience in a shorter timeframe. The instructor should also consider the CP time commitments. If, for example, the client partner will be out of town for two to three weeks, or respondent research is involved where response times are necessary, the instructor will need to consider these factors in course planning. Since many online courses are in compressed time-formats, this limitation may be one inherent to XE-SLs. To address this structurally, instructors can break up the class into teams to tackle different projects aspects, or can break up the project so that students can work on it in successive courses.

Student disconnect can be an issue in XE-SLs. For a completely online course offering where synchronous communication is not required regularly, students may not feel “connected” to the client, their class members, or their instructor. In this situation, it may be difficult to foster an environment of “teamwork” and collaboration, an essential element to a productive service learning experience. Instructors must plan accordingly and structure course components that build rapport with students and between teams and the client partner, such as live video sessions, breakout groups in the course shell, or group project work (see best practice discussion below regarding creating and maintaining “connections”).

Both instructors identified effective practices as well as limitations (Table 1). For example, XE-SL courses must consider instructional design (or information technology) staff as their fourth core partners. These courses cannot merely rely on the interface between student, faculty member, and CP, because of the fundamental reliance on technology. Thus, I.D. must be brought in as a foundational partner in the course, thoughtfully and strategically. For the same reasons, it is useful to bring in librarian expertise as a fifth partner for any course where the project is founded in research.

It is also critical to bridge synchronous and asynchronous materials through archiving and recording live sessions. This ensures that students in different time zones or with different work schedules are not excluded. To further bridge the synchronous/asynchronous gap, it is possible to assign “movie reviewer”

roles to students that cannot participate real-time. For example, students that miss live sessions can videotape a short Siskel and Ebert-type critique of the sessions with further insights/feedback.

Table 1. *Limitations and Best Practices*

Issue	Description	Best Practice
“Lurking”	Students log into the session but fail to participate	<ul style="list-style-type: none"> ➤ “No Lurking Zone” policy in syllabus. ➤ Actively direct questions towards lurkers
Lopsided Participation	Students type text in live sessions as opposed to visual or verbal participation	<ul style="list-style-type: none"> ➤ Award extra credit “hat points” to those using webcams
Technology	Software and hardware limitations, firewalls, individual skill levels, other unforeseen problems.	<ul style="list-style-type: none"> ➤ Provide training for instructor, students, client ➤ Evaluate software needs prior to course ➤ Have back up plan in case of technological failure (e.g. phone in to session) ➤ Avoid XE-SL courses when major software changes have just been implemented. ➤ Include instructional design or IT as a fundamental fourth partner; library services as a fifth ➤ Conduct trial run of the initial client session
Timeframe of courses	Compressed time (e.g., 9 or 12 week) online courses may hinder full product development	<ul style="list-style-type: none"> ➤ Set realistic goals for student products. ➤ Break project up over two or more terms.
Student Disconnect	Lack of student interaction among student, client, and/or instructor	<ul style="list-style-type: none"> ➤ Require teamwork; live client sessions; break-out discussions ➤ Choose client willing to work with technology ➤ Allow opportunities for reflection ➤ Archive synchronous events for later student viewing.

The case experiences suggest that instructor interest and experience plays a significant role in course organization, engagement, deliverables, and outcomes. An instructor skilled in service learning projects may have a very successful project experience in a traditional course environment, whereas that same instructor attempting the E-service learning project may encounter difficulties due to the delivery channel. Training is essential, and it is useful to have the instructor both experienced in online instruction and in service learning. Instructors lacking either experience set should be provided with an XE-SL mentor.

The CP’s willingness to embrace the technology and provide students with “tangible” touchpoints or “connection” (for example live chat sessions, live webcam sessions, live office hours, other feedback) also determines project outcomes. While the community partner must be engaged, this is largely determined

by the instructor and IT support provided by the institution. The client partner must be educated in use of the software and course platform, and feel comfortable communicating in the online environment with all technology (e-mail, chatware, presentation software). This will ensure success of other best practices discovered here such as pilot live practice session, and the all important “client reveal” where the students meet the client live. If the CP is not willing to undergo the training, the course outcomes may suffer. Thus, a CP “technophobe” may not be an appropriate choice for an XE-SL course.

In addition, it is important to include not only the best practice of “connection,” from traditional service learning, but also “reflection,” as also noted on the literature on E-SL courses (Strait & Sauer 2004; Hunter 2007; Mills 2001). These components change in translation—such as reflection through discussion board postings or blogs, chats, or connection through synchronous online sessions, and weekly online office hours; however, reflection will still be critical for XE-SL success.

Implications

Extreme e-service learning (XE-SL)—defined here as service learning where both the instruction and service occur 100% online—can clearly work if the right structure is in place. Both courses studied were readily able to meet all five criteria for viability (including product completion, client satisfaction, student satisfaction, client/student interaction, and skill-building) (Table 2).

Table 2. *Viability of Extreme E-SLs: Criteria and Outcomes*

CRITERIA	• OUTCOMES
#1: Product Completion	<ul style="list-style-type: none"> •Case 1: Best practices research; policy analysis •Case 2: Marketing plans; marketing research data
#2: Client Satisfaction	<ul style="list-style-type: none"> •Case 1: Continued relationship/subsequent client request •Case 2: Continued relationship/subsequent client request
#3: Student Satisfaction	<ul style="list-style-type: none"> •Case 1: Positive course evaluations •Case 2: Positive course evaluations
#4: Interaction	<ul style="list-style-type: none"> •Case 1: Live class sessions; phone; e-mails. •Case 2: Live classes, discussion posts, phone; e-mails.
#5: Skill-building	<ul style="list-style-type: none"> •Case 1: Hands-on policy analysis •Case 2: Hands-on marketing plan development

It is clear that extreme E-SLs are technically feasible. However, the small sample size of two courses makes it difficult to generalize the conclusions. As more XE-SLs are implemented, more sophisticated survey measures should be deployed among a larger sample set. Beyond viability, future studies should explore to what degree service learning enhances online course learning outcomes.

Future research should also explore whether XE-SLs and T-SLs differ in learning outcomes. In other words, XE-SLs work, but how well do they work in comparison to traditional service learning courses? The two case studies do suggest that XE-SLs clearly differ from T-SLs. For example, online courses are often in compressed time format, and thus, the project needs to be structured at the onset of the semester (online students have limited tolerance for syllabi changes, in our experience). Students interact with the client differently. Technology training is required, as also noted in the E-SL literature (e.g. Strait & Sauer, 2004). Moreover, the outcomes may differ. For example, it is unrealistic to expect the kind of moral development, or potential job offers, that emerge in T-SL courses. Extreme e-service learning may offer

its own unique set of benefits, including useful products for the CP, and the ability of students to add a tangible skill to their resume.

The degree of benefits/outcomes may vary based on several factors, including the discipline, student class level (freshman, graduate, etc.), student motivation, and more. The import of these variables warrants further study. Future studies should include a comparison of disciplines as well as student class level (freshman, graduate, etc.). Traditional undergraduate students may very well differ in their approach and experience from non-traditional online undergraduate continuing education adults.

Future research must also explore the issue of what we termed "lopsided participation" and "lurking." To what extent do these patterns affect course and learning outcomes, if at all? To what extent, if at all, do they inhibit interaction? How do we balance the increasing emphasis on audio-video participation with the different medium represented by text chat within the same live session? Do different modes of participation within the same session influence learning outcomes? Results to these and other questions can help maximize the interaction in XE-SL courses.

As the two cases suggest, extreme e-service learning can work well in diverse disciplines from business to public administration. Indeed, because it deepens student engagement, it may compensate for the perceived lack of interaction present in some online courses. Through XE-SLs, students learn that they can make a positive difference online rather than merely attending class online.

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Appendix: Additional Service Learning Resources

- Campus Compact (2010) <http://www.compact.org/>
- Corporation for National & Community Service Resource Center (2010)
<http://www.nationalserviceresources.org/service-activities/service-learning>
- Learn and Service America's National Service Learning Clearinghouse (2010)
<http://servicelearning.org/>
- Learn and Service America's National Service Learning Clearinghouse (2010) Service learning journals and periodicals <http://www.servicelearning.org/library/journals/index.php>
- Michigan Journal of Community Service Learning (2010) <http://www.umich.edu/~mjcs/>
- National Service-Learning Partnership (2010) <http://www.service-learningpartnership.org/site/PageServer>
- Partnerships: A Journal of Service Learning and Civic Engagement (2010)
<http://www.partnershipsjournal.org/index.php/part>

Manuscript received 15 Sep 2010; revision received 20 Nov 2010.



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