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Graduate Students in a Service Learning Design Case: The Development of a Parenting Program

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Abstract

The following design case illustrates the approach a group of advanced graduate online-

design students, two design coaches, and an instructor used to design an online

instructional intervention as a service-learning project for parents interested in improving

their parenting skills with their pre-teens. This design case is distinctive in that it explores

the online collaboration for this service-learning project using email, instant messaging,

Google Hangout, Google Documents within Google applications and Skype.

Introduction

This design case focused on a service-learning project, which included the design

and development of a six-week online parenting program in an effort to assist parents

improve their skills. This parenting program was created by a group of graduate students

in a capstone course taught in a Midwestern university's Masters of Instructional

Technology program. The group worked virtually to achieve this goal. The aim of the

project was to have students not only apply the knowledge and skills from their

instructional technology coursework, but to participate in a project that would have

mutual benefit from the service provided to the end users, in this case, parents, and the

learning experience gained by the students (Furco, 1996).

Background

Applying the principles of instructional design in a classroom-simulated environment is unlike applying the same principles virtually with an actual client, a deadline, and all of the constraints inherent in the process (Tracey, Chatervert, Lake, & Wilson, 2008). The service-learning framework provided the environment needed to create a real world design opportunity for the virtual students. Maddrell (in press) states that service learning, also called *experiential learning* and *authentic learning* emphasizes the need for an authentic real-life experience, active engagement by the students in interactions with both the content and others, inquiry that is tied to problems and/or opportunities in the experience that create uncertainty and challenge and activities related to the student's self-reflection on the experience and the mutual benefit of the community. We trusted that students given an opportunity to design a solution to assist parents in overcoming the challenges of raising children would provide a chance to develop students' commitment and engagement to the project above and beyond achieving the course requirements. As the instructor and graduate research assistant, we wanted to emulate our commitment to the community while practicing our teaching and learning philosophy, which we maintain, includes the need for authentic experiences. Finally, we wanted to support the community of parents of challenging pre-teens, in an effort too not only design a solution, but to develop a relationship with others outside of the university.

Project Initiation and Client Memorandum of Understanding

In a service-learning situation, we believed it was important to work with a community partner who was attempting to help others but could not, due to budget or size constraints hire designers to create the instructional services our students could design.

We met our subject matter expert/client (SME/client), a psychotherapist, seeking assistance in developing an instructional program for parents dealing with challenging behaviors from their children. Our SME/client noted that time and again, he found parents facing common challenges with their children and was searching for a means to offer a free service that assisted parents raising their children. Prior to the graduate student's involvement in the project, we conducted an initial analysis consisting of three simultaneous activities. We participated in numerous meetings with our SME/client, conducted parent focus groups, and reviewed copious artifacts including books, workshop notes and articles (Tracey & Quinn- Grzebyk, 2014).

The results of the focus groups uncovered the struggles parents were experiencing raising their children and their desire to have access to some type of tool to assist them. The data we collected in these focus groups revealed that parents were open to a virtual learning experience, they hoped to collaborate and share ideas with one another, they valued our SME /client's expertise, and they wanted a resource they could access when they had time. Through a series of interviews with the SME/client, we discovered the SME/client had access to a variety of reference material from the psychotherapy field that he used as the foundation for his career's teachings and therapeutic approach. These included books, workshop notes from past presentations and articles. Based on focus group results, recommendations from the SME/client and the materials reviewed, we identified themes that would eventually be the content used in our design. One important initial finding was that the most intense parental challenges seemed to be from those with children who were entering or currently in their teenage years. We determined the target audience for this instructional intervention would be parents aged 30-55 with children

aged 10 to 16. We believed if we started here and it proved successful, we could work

with our SME/client to expand this free service to other audiences. Due to the time

constraints of a 15-week semester, the scope of the project was agreed upon with the

client before we introduced the class to the assignment. We created a memorandum of

understanding with our client, which included:

- The scope of the project and our services; four online weeks of parenting
  instruction sessions, each one hour long.

- The reporting procedures and chain of command; the students reported to their
  design coach and the instructor and the design coaches and instructor reported to
  the client.

- The understanding that all final products produced by the student service-learners
  was the property of the client and that the student service-learners might not
  produce a completed product in the timeframe given although every effort would
  be made to complete the project.

- The agreement of availability on the SME/client's part for weekly conference
  calls or meetings to support the team in completing the project.

Next, is a discussion of the online graduate student design teams.

Virtual Student Design Teams and Design Coaches

With our initial learner and content analysis completed and a preliminary design

idea of four online parenting sessions in place, we were ready to introduce our graduate

students to the project, the client, and the content. We required the students in this online

graduate capstone course to work with an authentic client to design and develop an

instructional intervention. We divided the students into four design teams based on experience, recommendations from other faculty, and our own observations. Each team was assigned the same client and all of the content to use as a reference, but each team had a different section of content to work with. Our intent was to have four aligned but different online parenting sessions. Each team would be designing a one-hour session, so our hope was that by the end of the semester we would have four online weeks of a six-week parenting program. We realized this approach might result in four very different prototypes, but we thought we could use the one that we and the SME/client agreed was the best fit for him and the end users. We solicited an additional doctoral student who was also an instructional designer to work with the two of us in this service-learning project. The team now consisted of the instructor, and two *design coaches* each having more than five years of design experience, had previously completed this course and were active designers.

Considering the advanced instructional design course was delivered online and there were many dynamic elements to be developed, it was important that the instructor and design coaches were continuously informed of each other's work with the students. This communication was also important because all of the teams were designing a part of the same SME/client's program. We created a Google document, shared with the instructor and the design coaches that helped us discuss each team's progress, updates from the client, challenges the design coaches were having, and solutions to constraints as they surfaced. We used this document as our main source of communication and reflection of the process, sharing our lessons learned, questions asked, small successes and failures. Every other week, the design coaches met with one another online, via

Skype, to share their team's progress and work out issues. This meeting was followed with a report out session to the instructor, where important items were discussed and resolved. Finally, when ad hoc issues needed to be addressed, the design coaches would text or call one another to solve the issue. All of this communication was documented and applied to continuously improve the design teams' productivity and their final product (Tracey & Quinn- Grzebyk, 2014).

The E-Service-Learning Project

The process began with each design coach coaching/mentoring and working with two teams. The design coaches started the process by emailing each team to come to consensus on a weekly meeting time that worked for team members and coach. Once the time/day was confirmed the students were directed to add the information to their calendars for the semester. The design coaches and the students agreed that Skype would be the best format for the initial meeting. All students were sent a link to Skype and step-by-step instructions on how to set up a Skype account. The students were encouraged to post any questions or comments they had for the course in an open space on the course website so that the entire class could view the questions and comments raised. Students also had the option of contacting any of the design coaches or the instructor via email, instant messenger, text or telephone.

Before the initial meeting with students, the instructor and two design coaches discussed the three main outcomes for the first meeting; the first was to build relationships and trust within the team and the design coach, the second was to discuss the overall scope of the project, and third was to discuss successful virtual team approaches and online collaboration. Taking time for team introductions and building

community was vital to maintain team cohesiveness and promote success. We wanted to give the students a chance to meet each other and work to identify each team member's strengths and weaknesses. We believed this interaction would result in the selection of team member's roles on the project to allow the team the maximum productivity in completing the project for the client.   During the introductions, students described their design experiences and personal goals for this class. The design coaches discussed their design experiences and how they would assist the team in designing and developing a prototype design. The graduate students were given a summary of the needs assessment and current status of the project. The design coaches updated their teams on the opportunities that were discovered via review of artifacts, the feedback that was collected from the focus groups, how the project had progressed to date, and how all four teams fit in the picture. We also described the client's overall goals and reasons for inviting the instructional designers to work on the project. This discussion was an effort to provide the students insight in their role and how it was much broader than working with just a client; they had an opportunity to in one small way impact the community.

Many students were new to the online course environment so the design coaches spent an extensive amount of time working with the teams to embrace strategies for collaborating online. In addition we discussed the actual online tools provided tutorials on how to use them. For example, each design coach confirmed with their groups that the groups created and shared a Google Document with the entire team, the design coach and the instructor. The design coaches also worked with the students with any other concerns or issues each had involving the technology.

Virtual Collaborations

Our students collaborated virtually throughout the semester using Google applications. They created Google Documents (Docs) and shared them with each other, the design coaches and the instructor. Google Docs is an online word processor that allows everyone who has access to the document to work together in real time. Students had the ability to collaboratively design using a Word document, Excel document, or a PowerPoint presentation. The students had the ability to simultaneously work on the document online or work on the documents individually.   One of the only challenges for group collaboration was to determine which student contributed what to the documents. If each student worked on the document using the same font color (for instance black), there was no way to determine who contributed what piece to each assignment. To offset this, students were required to choose one font color for the semester to identify their work in the Google document. For example, Susan chose the color pink and used this color to reflect what words she had written online so that the other group members knew what she contributed to in their weekly assignments and design. A key identifying the name of each team member and their font color was placed at the top of the document so that everyone knew each team member's color and who contributed what to the project. This small detail was extremely helpful to the instructor and the design coaches as they were able to see who was participating when and where. Initially as the students began collaborating on an assignment, one student would respond, and then hours later the document would be filled with color reflecting the online collaboration.   As each student added his or her input or feedback we could see the collaboration unfold. Students also collaborated within the Google Documents through instant messaging. When working, Google notifies the users when others were online in their email accounts and when

others were in a shared document. Team members knowing when others were

simultaneously online allowed for impromptu collaborations via the instant chat feature.

This impromptu collaboration happened numerous times throughout the semester. In

addition to impromptu design sessions, students scheduled time to be online together

working on their shared documents. As opposed to talking with each other, they would

use the instant messenger or chat feature. If student's noticed that they were doing a lot

of typing back and forth with each other, the chats were moved to Skype with the shared

document open and the students worked together more efficiently. In most cases the

instant messaging occurred over one to five minute period as the students unexpectedly

found each other in the document resulting in brief discussions about one or two design

issues. They addressed them via the chat feature and then ended the discussion.

Coming to consensus in a face-to-face environment can be difficult, and we

believed that this task might be even more difficult in a virtual environment. To help

each team move forward with their design, we advised students to create a team contract

in conjunction with the memorandum of understanding for the client. The contract was

voluntary and not all of the teams completed it. Students were sent a template for the

contract electronically via Gmail and directed to use a shared Google Document to begin

discussing and collaborating on what they wanted their team contract to entail. Two of

the four teams voluntarily completed and shared the contract with the design coaches and

the instructor. It should be noted that these two teams were actually more successful in

their design activities and final design product.

Students had two scheduled synchronous Skype meetings every week. These

meetings were often held after normal business hours to accommodate each team

member's work schedule. Students were required to participate and attend the meetings that lasted from one hour to two hours. As students worked on their prototypes they worked within the Google Document, then met virtually on Skype to make final decisions and create a 'clean' document to send to the instructor for review. We encouraged students to submit drafts often to receive feedback ultimately improving their designs. When students submitted a design prototype, the design coach reviewed the assignment and provided written feedback and then walked through that written feedback with the students during their scheduled meetings. In addition to feedback given during the meeting times, the design coaches assisted students with team collaboration and guided the teams to continue to move the design forward.

There were numerous weeks when although not required, the students asked the design coaches to participate in more than one virtual team meeting. During these additional meetings, the design coaches tended to lead the discussions, guiding and reassuring the students, as they were often uncertain of their design activities (Tracey & Hutchinson, 2013). The design coach provided feedback throughout the week at least 3-4 times giving students real-time feedback to respond to and make decisions with. This feedback allowed the prototypes to evolve at a more rapid rate and the students did not need to wait until the weekly design meetings to obtain feedback. This evolving process was particularly important because many of the students in the course were somewhat new to design and constant feedback to their prototypes not only helped them in the process but also helped them innovate a better product. New ideas emerged constantly altering the design. Throughout the week, students were encouraged to email, call or instant message the design coaches as they were instructed that the client was waiting and

the students were not to hesitate to contact their coach if they had a question or were stuck in the thick of the design and needed someone to talk to. As students worked virtually with their design teams and design coaches, they also participated in individual check-in meetings with the instructor discussing their progress.

The students also communicated virtually with the SME/client during scheduled Skype sessions with the design coach and instructor. To prepare for the 30 – minute meetings, students worked together within the shared Google Doc to create questions for the SME/client. Prior to meeting with the SME/client, one team took the initiative to have each team member write and share with the rest of the team at least one question. The entire team carefully read each other's questions and provided critical feedback to each other to ultimately have a list of pertinent questions. They decided to keep the Google document going and after the interview with the SME/client they added detailed explanations of the answers to the questions underneath each question and then posted the document so that all the other teams could see the SME/clients responses to their questions. The initiative this team exhibited was extremely helpful to the overall project, as students in the other three teams learned from this teams questions and answers and were able to build on these questions during their SME/client meetings.

Student Roles and Responsibilities

Each team was assigned a specific session that addressed identified content. They were all aware of the content that came before and after their session, and they had all of the documentation necessary to understand what the content entailed; however, their goal was to design a session based on their assigned content area.

One of the first milestone team assignments was to complete an initial design prototype for the team, coach, and instructor to review. The students took several approaches to the design prototype, as we did not want to inhibit innovation by forcing them to adhere to a specific template. Each group worked in a shared Google document and we discovered that each group had their own form of communication and collaboration with this assignment. One particular group inserted a table at the beginning of their document to help keep group members on task and to keep each member accountable. Within this particular group, the students checked their Google Doc to find out the status of the assignment. Specifically, they were looking for which action items needed to be completed, who was going to complete them and a space for updates and reviewed the notes on where each group member was at with whatever task they were completing. As students worked together in most teams, we noticed they would insert comments or write feedback before or after their peers content as opposed to deleting or changing their group members work. We discovered that the prototype also served as a communication and collaboration tool with these virtual teams.

Student Support

Student support included peer support, design coach support, and instructor support. We have discussed and provided examples of design coach and instructor support, but we observed that the teams with the most complete and innovative product were the teams who provided continuous peer support. Not only did these team members provide critical feedback to continuously move the design forward, but they also supported each other personally. It was not uncommon in the design prototypes to see

comments by students to each other personally such as "Great Job" and "Thank you for getting that done so quickly". One way the students supported each was by writing critical feedback into the document in response to what one of their team members created. An example of this was a situation where one team member liked the idea of another member, but thought it could be written differently, so she wrote "instead of saying what you said this way, how about we write it like this". Another way students supported each other was by inserting comments within the Google Doc. In this situation, students were prompting their team members to add or develop a specific thought or sentence in the design. An example of this was "I'm not sure I understand where you were going with this, can you develop this more." We observed that the teams with members supporting each other verbally as well as through critical feedback stayed on task, participated more often in the Google documents and shared their perception of feeling successful and enjoying the design team experience. They also expressed satisfaction in working on a service learning project, with feelings of "making a difference" often articulated.

Deliverables

Once the teams submitted their final work, the four prototypes were reviewed. All student designers were permitted to view the work of other teams at this time. Of the four prototypes that were developed, the instructor and design coaches determined that one was worthy to be presented and reviewed by the SME/client. While it covered only one of the four sessions, it offered a common layout and structure that could be applied to all of the sessions. The student design team for that session met at the SME/client's office

with the design coaches and the instructor and delivered a formal presentation of the final prototype.

The design team presented the one-exemplar design product to the SME/client. It was interesting to see this team the night of the presentation as they physically met for the first time that evening. The relationship the team had built was done through online meetings, so they were not only excited to meet the SME/client and see his reaction to their work, but were also excited to meet each other. The presentation was extremely well received by the SME/client, who spent several hours with the design team, asking questions and providing feedback. The team then went out together for a celebratory dinner.

Two students from this design team followed up with the instructor expressing interest in continuing to design the remaining sessions. They were heavily invested in the project, and since both were graduating soon after this course, they wanted to use this design for their Master's Final Project, a requirement of the Masters in Instructional Technology program. Each student wanted to see this work come to fruition and we wonder how much of this was a carry-over of that night when they physically met with the SME/client and their teammates. The design coach who had worked with their team agreed to continue and provided them the necessary guidance to complete the project. By this time, the two student designers were very familiar with the entire project and comfortable with one another's strengths. The SME/client had already accepted their entire layout, they were each lead designers from earlier in the project, and they utilized content and some design from the three other prototype designs. The designers completed the three other sessions and reworked a bit of the original approved session.

All elements were tied together so that a participant could move seamlessly from one session to the next. After all sessions were complete, the lead designers—design coach and instructor—presented the sessions to the SME/client. After a few small modifications, the SME/client approved the program to be fully developed by a web designer.

It is important to note that while the other three prototypes were not accepted for their overall layout and structure, there were valuable elements. Designers rarely use everything they've designed and this was no exception. Many of the elements from the other three design prototypes were in all of the sessions. This process ensured the most innovative and effective elements were used in the final product design.

Lessons Learned for Future Service-Learning Projects

Although there were numerous lessons learned in this design case, we focus our discussion on two themes that emerged throughout the entire case, one in particular at all levels, communication and collaboration and the other as a philosophical and practical element, service learning as a component in instructional design.

Communication and Collaboration. Many students were new to virtual teams had difficulty working with the technology associated with online communication and collaboration. As we move forward with incorporating virtual design environments into our projects we are spending more time teaching the use of the virtual communication and collaboration tools as well as demonstrating how the tools will help increase design productivity. We overviewed and provided click-by-click instructions for some of the Google applications, such as how to set up, share and access a Google document, but we only included one tip (using different font colors to organize who was adding what to the

document) in the actual use of the Google document for communication and collaboration. Some of the teams created excellent forms of communication that we have used as lessons learned and now incorporate in all of the teams for this capstone class. The results of this case showed us that we need to include additional information on how often team members should be working in the design prototype and provide examples and modeling on the use of productive critical peer feedback.

Communication and effective collaborative synchronous Skype sessions were a challenge for two of the design teams. We observed that at times it took some team members valuable online Skype time to get organized on the phone and come to consensus on how to work together effectively online. In one particular case one team member emerged as quite vocal causing others to disengage in the design sessions. We have since established and added to the required contract, ground rules regarding online communication. We review these rules with the design teams during the first virtual design session to help team members feel safe in brainstorming and providing innovative ideas as opposed to letting one team member's ideas dominate. We hope this will improve the collaborative efforts of all designers on the team with the ultimate goal of producing the most innovative collaborative design possible.

We have added an online project management tool to use during this capstone masters project course. Some design teams were extremely productive and organized their tasks, but other teams were somewhat lost and in many cases the design coaches spent critical time helping the teams focus and organize their time. We now incorporate a Google Calendar with a checklist each week for what is due and where the teams should

be in the design process. We also use this system as a checkpoint for teams to provide

peer feedback on the design prototype.

The use of documented reflection from all of the designers was another critical

communication tool used in the process. Reflection journals the students shared with their

design coaches and with the instructor helped us identify issues and ideas, addressing

constraints and design inhibitors on a weekly basis. The continuous meetings, texting,

and reviewing of documents were all important communication and collaboration tools

in this project.

Service Learning. A key to the success of a service learning project is a

committed SME/client and a project that is achievable within the framework of the

design teams abilities. The relationship we built with the SME/client made the design

personal to us and the commitment so deep in spite of the inherent challenges involved

with working with an outside client on a real design project with virtual teams, the project

was going to be the best design possible. In turn because of our SME/client's

commitment, time invested, and general personality, we learned from him and he learned

from us. He became an important part of the design and the final design product,

something we had not intended on happening in the beginning. We became continuously

invested in this project because of the relationship we had with each other and more

importantly with the client. The more we interacted with him, the more we wanted to

design an innovative product. We had lived with the SME/client and the content for

months creating a foundation we believed advanced design students could build on. And

yet, the final product could not be produced in the 15-week timeframe of the capstone

course. This timeframe is something we continue to grapple with, what is doable with the

constraints including a short timeframe (15 weeks), lack of experience working within the assigned design team, the pressure of a grade and a lack of design experience for design students to accomplish?   What must we provide in terms of tools and support to give our design students every opportunity to design an innovative product while serving the community in a service learning project? This case assisted us in identifying a virtual process that works while aiding us in assembling a toolbox of tools we will use with future design student teams. We believe that service learning is an excellent means of contributing to the community while providing our students with valuable design experience so we are committed to this process and will continue to improve it for our students, the clients and the community.

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