

# A Comparative Case Study of Approaches to Authentic Learning in Instructional Design at Two Universities<sup>1</sup>

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## Abstract:

This paper compares how two universities, Iowa State University and the University of Saskatchewan, exploit a service-learning and authentic learning approach to instructional design. Both programs emphasize student engagement and responsibility, as well as projects that have social significance. At the same time, the courses offered by the two programs differ in significant ways. One program puts students in the role of project manager, while in the other the instructor plays the role of project manager. This proposal explores the intentions, the pedagogical and design decisions, and the implications of the two approaches for preparing instructional designers, and for informing the use of authentic learning approaches in ID programs elsewhere.

## 1. Purpose

This paper presents two case studies from two different universities that adapted the experiential learning approach into their graduate instructional design (ID) courses. One is a Midwestern university in the United States which applies service-learning practices and principles as framework for action while the other is a university in Canada that integrates authentic learning approaches in their course design. Both programs engage students working *for* and *with* real clients in community-driven projects that have social significance, require the completion of a product that meets client specifications and are aimed at small size classes, with a total course enrolment equal or less than ten students.

The courses offered by the two programs differ in significant ways. First, the US program puts students in the role of project manager, while the instructor plays the role of project manager in the Canada program. Secondly, the US program distributes smaller projects among individual students who have individual responsibility for completion with support from their peers; the Canada employs larger projects that are completed by teams of five or more students. Differences in the approaches result in different benefits and limitations, strengths and weaknesses.

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<sup>1</sup> Correia, A.P., Yusop, F., Wilson, J. & Schwier, R. (2010). A Comparative Case Study of Approaches to Authentic Learning in Instructional Design at Two Universities. Paper presented at the *American Educational Research Association 2010 Annual Meeting*, Denver, CO, April 30 - May 4, 2010.

This paper contrasts the intentions, the pedagogical and design decisions, and the implications of these two approaches for preparing instructional designers, and for informing the use of service-learning and authentic learning approaches in ID programs elsewhere.

## **2. Theoretical perspectives**

Current practices of instructional design education have focused on engaging students in real-world situations, either with the purpose to improve students' technical abilities in doing instructional design, for instance, using studio-based, (Boling & Smith, 2009) or model-centered instruction (Gibbons, 2008) approaches, or to learn instructional design principles based on the idea that instructional designers are potential agents of change who are able to use their talents to do good for the world (for instance, Schwier, Campbell & Kenny, 2007; Correia & Yusop, 2009). The authors of this proposal believe that designers' education then must be designed to expose students to real societal issues and needs while providing them the opportunities to work on potential solutions using their knowledge and skills.

Authentic learning and service-learning pedagogies can be promising vehicles that help achieve this mission. Authentic learning must be personally relevant and connected to the real world (Stein, Isaacs & Andrews, 2004) emphasizing something Brown, Collins & Duguid (1988) refer to as "the ordinary practices of the culture." Creating a successful authentic learning experience requires a proper mix between the students' world and the world of work they are about to enter (Wilson & Schwier, 2009).

Meanwhile, service-learning has the ability to boost students' desires to be involved in the community (for instance, Manley Jr., Buffa, Dube & Reed, 2006) which led to enhance their sense of social responsibility and commitment to service (Eyler, Giles, Stenson & Gray, 2001). In this proposal, it is defined as a pedagogical strategy typically rooted in formal, credit-bearing courses or academic experience in which students learn academic course content by participating in an organized service activity that meets identified community needs (Bringle & Hatcher, 1996; Furco & Billig, 2002; Root, 1997).

The concept of learning *with* and *from* each other in service-learning requires regular ongoing communications among service-learning partners about the needs, development, implementation and evaluation of a project; clearly defined roles and responsibilities for project partners; and a vision of shared outcomes (Donahue, Bowyer & Rosenberg, 2003). These elements are consistent with instructional design principles and framework of which are among the main components of designers' education.

## **3. Research Strategy**

This proposal applies comparative case study as the main methodology. As Stake (1995) explains, a multiple case study, otherwise known as a "collective case study," offers a

better representation of a phenomenon. Multiple case studies are also “often considered more compelling, and the overall study is therefore regarded as being more robust” (Herriott & Firestone, 1983, cited in Yin, 2003, p. 46). Two different cases are presented in this proposal. One is the application of service-learning pedagogy in the US setting while the Canadian setting uses authentic learning in its instructional design courses. Consistent with the philosophy of practice-as-inquiry (Schön, 1984), authors of this paper critically reflected on their experiences designing and teaching these courses supported by supplemental data described below.

#### **4. Data sources**

The main data sources came from the instructors’ (i.e. authors’) critical reflections. These reflections are supported by instructors’ (a) direct observations of students’ activities (e.g., contracting, project management strategies, and commitment to service) and consulting meetings with their clients (mostly initial and final meetings); (b) interview with students in this course; (c) analysis of students’ reflections of their experiences in the course; and (d) teaching reflective notes.

#### ***Design of the courses***

##### *Case 1: USA setting*

The *Advanced Instructional Systems Design* (CI 603) course aimed at teaching the theory and practice of instructional technology in the context of an entrepreneur spirit whilst educating civic-minded professionals in instructional technology. The term “civic-minded professional” was used to describe a professional who had the public interest at the forefront of their professional work and a sense of civic responsibility to conduct their work to advance the social good (Dewey, 1954).

This course was designed under the guiding belief that educational technologists have the power to create new products and experiences, “to do more good for the world.” The Nobel Peace Prize-winner, Muhammad Yunus (2007), was one of the inspirations for this design. CI 603 mimicked a small, multi-team instructional consulting company which provided professional-level service to community organizations, who were otherwise unable to get professional help. Students, in the capacity as instructional technology consultants, worked with their clients to identify instructional problems, design and develop effective instructional solutions addressing organizations’ needs and issues. One of the underlying principles for this course was the “Principle of No Surprise,” (Lincoln & Guba, 1985, p.358). In CI 603, this principle meant that no one including, instructors, clients, team members and colleagues would be surprised at any moment, since the development of trustworthy relationships were at the core of the consulting process.

Regarding resources available, the development of this course was partially supported by a seed grant from the campus entrepreneurship center awarded in the spring of 2006 (\$5,000). A modest grant of \$500 from a campus center for technology in learning and teaching was also received.

*Course content and activities.* Prior to the beginning of the course, the instructor presented students with clients' profiles and needs. Students were required to select two potential clients of interest and initiated the first contact with them under instructors' supervision. To assist students with these processes, the course readings were designed to inform students of the appropriate strategies. For instance, students were required to read about a chapter on initiating contact in the first weeks of the course as they moved in contacting clients. The first weeks of the course were quite intense because there was a strong sense of urgency on establishing a memo of understanding (MOU) with the client and start the design and development cycle. However, creating a MOU and negotiating it with the client was an important skill for the course focus on instructional technology consulting.

To expose students to real-life experiences as instructional technology consultants, they played the roles of 'project manager' with minimal intervention from the course instructor. The graduate students enrolled in the course were totally responsible for contacting potential clients assessing their needs and expectations for educational technology services, negotiating the scope and limits of the projects based on course objectives and timeframes, development of the instructional technology client package, and delivering the final products.

Instructor played the role of facilitator and served as internal consultant to the students for their projects. This was done during weekly class meetings when students reported their progress to the whole class as well as out-of-class meetings and e-mail communications. As the students themselves noted, these weekly meetings served as the most important event in the students' experiences as consultants where they could share their concerns about the projects and/or clients and exchanged feedback with the instructor and peers. The students were expected to comply with the rules for project critique when evaluating his/her peers' projects. Since participation in a structured process of collaboration needs to be professionally conducted, it was instrumental for the success of the course that students abide by these rules.

*The consulting projects.* Students in this course conducted real world educational technology work at no cost for different client/organizations. This study took place from January 2009 to May 2009 with students working with three different clients: (1) first, a voluntary disaster recovery organization who needed to re-design their existing sandbagging training to volunteers as a preparation for flood recovery efforts, (2) second, a non-profit and advocate of low-income women's and children's health who wanted to develop awareness among women about the high-cost of pregnancy without insurance, and (3) third, a state-owned public television network who needed to improve their training on using Moodle to teach online.

In addition, to the instructional analysis, design, development and evaluation requested by each client project, students were also expected to act as project managers and were responsible in contacting and identifying clients' needs, negotiating the scope and limits of the projects based on the course objectives and timeframes, carrying the projects and

delivering the final products. The instructor played the role of process facilitator and internal consultant to the students and their projects during weekly class meetings.

### *Case 2: Canadian setting*

The instructional design experience at the second university is a combination of two courses that introduce students to the concepts and practices of instructional design. The first course, Instructional Design (ETAD 873, is intended to cover basic concepts and procedures and the second, Advanced Principles of Instructional Design (ETAD 874), provides an authentic component where students work with a real client on a real project for a community organization.

The content of the first course covers a basic introduction to the concepts of instructional design using case studies and the experience of the instructor. It is the instructors' belief that a strong theoretical background is necessary to prepare the students for the authentic aspects of the second half of the experience.

In ETAD 874, projects are chosen in advance to allow the students to begin the practical component. The instructor meets with potential clients to determine the suitability of the project. The project must have a social agency component in that it makes a positive contribution to the local society and should be compact enough to be completed in 14 weeks. When the project is decided upon the instructor negotiates with the client and creates a memorandum of understanding. This process can take many weeks or months. The instructors believe it is important for students to have the project parameters in place before the course begins. The importance and process related to these negotiations is shared with the students but they are not directly involved. This approach removes the student from some of the management tasks but they are still very important to the team and the completion of the project. The motto of "on time, under budget and beyond expectations" is used to focus the students on the most important aspects of instructional design in the real world. A number of diverse roles make up the team under the project management supervision of the instructor. Students are supported and encouraged to take on a role that is new to them to enhance the learning experience. This new career opportunity is often the most significant event in the students' experience in the program. Trying a new job has far reaching impacts for skill development and increasing levels of confidence. Students are expected to work closely with the clients to cover everything needed to complete the project. The team meets weekly to update one another on the progress of the project. During these meetings the instructor, as project manager, gives advice or determines if any scaffolding interventions are necessary. The approach to this course is partially based on the knowledge that in the future students will work for an organization in a team, rather than act as independent instructional designers. The instructor as project manager approach allows the students to be part of a team and see what other team members do rather than try to manage an entire project. To ground the experience in research, students are required to share reviewed research articles related to the specific focus of the instructional design project. Each month (at a minimum) a review must be shared by each member of the team at one of the weekly meetings. This sharing guides and informs the practice of ID that the students are experiencing. Monthly peer evaluations are also sent to the instructor by each member of the team to assess

everyone's performance. Students are asked to record the number of hours they spend on the various activities during the project. Upon completion of the project these hours are totaled and put into a spreadsheet to show the amount of time and the actual costs incurred by the project. This reinforces the value of the students' efforts and gives them an indication of the value of their services for future contract work.

Although different in many ways, the projects in ETAD 874 have all achieved their main goals. Projects have ranged from website design and development for a senior citizens organization to information design for an association that works with people with intellectual disabilities to publication redesign related to Fetal Alcohol Syndrome for First Nations people. All of the projects have been completed successfully and have benefitted organizations and people in society who would not have the financial capacity to engage the services of an instructional design team.

## **5. Major Findings**

At the end of the instructional projects in CI 603 at Iowa State University, clients were invited to write the student team an acknowledgement letter where they would describe the main contributions to the group on solving the instructional problem at hand and the impact of the project for the organization. Project clients were very receptive to the course services and responded highly positively to the experience. For instance, one of the CI 603 client explained:

*They [students] were very available to meet to discuss the project, and proposed a few different options on how best to present the topic. I was impressed with their knowledge of how to train or educate people and what kind of design would work best for our particular situation. They were extremely thorough, detail-oriented, and had excellent follow-through, down to a written executive summary of the project. They were enjoyable to work with and receptive to input from our group. They produced a product that was very well done and received well by the Coalition members. The first training, using the new curriculum was very successful. I am hopeful that we will be able to utilize their expertise again as we move forward on our Sandbagging curriculum.*

At the end of the projects, CI 603 students were required to submit a four-page reflection on for a detailed reflection covering the overall course experience. The reflective paper should include, but was not limited to, the following:

- a brief summary on the instructional project;
- some discussion of students' insights about the project they were involved in;
- how the project impacted (or not) their perceptions on their role and development as an educational technologist
- a discussion on how the involvement in the project helped (or not) the students learn the course content, broadened their understanding of

entrepreneurship within educational technology , enhanced their practice as educator

Below is a summary of quotes from students who enrolled in this service-learning instructional technology course:

*I think part of my motivation to take this course is that I wanted to create a workplace in which I would really enjoy my work. I could be challenged, I could do something meaningful, I could work with great people, and we could all learn together. Creating a community in which we can share our talents with each other, learn new ideas and skills, teach the next generation, and make a difference in the community is very important to me. This course was important in as much as it helped me to see how great it is to have a group of people with whom you can discuss your project and be able to get productive feedback, yet still maintain creative control over my own project. It was one of the elements of a creative and entrepreneurial workplace... I really liked that!*

*My motivation to join this consulting class was the benefit of gaining related work experience and being able to interact with real clients. From taking this course, I started to realize that instructional design experiences are crucial for students. However, with the economic situation nowadays, it will be extremely difficult for graduate students to find a perfect internship or working opportunities while pursuing graduate degree. Moreover, this course also provided us with a taste of instructional design in a consulting situation and I want to keep doing it.*

As CI603 instructors we found that students had grown as consultants in instructional technology as a result of taking this course. Since it was the students who contacted the community partners, they were responsible for all communication; with limited assistance from the instructors. As project managers, students increase their confidence with expressing their thoughts and negotiate the scope of the projects based on course's objectives. One of the students wrote on her reflection: "... when we first had to call the client to talk about the project I planned what to say but was surprised to see that I was not sure how to answer some of her questions. I had to improvise and do whatever I felt was most appropriate. Moreover, working with real people who have real problems makes you feel even more committed to the project. It seemed important to me to do as I agreed on in the Working Agreement."

The students reported time limitations and building trusting relationships with clients as major challenges in this course. Having to initiate the first contact with potential clients themselves was a major source of stress. Consequently it limited their product design and development processes, and impacted the way they were perceived. One of the students specifically reported that the client perception of her was not of a professional consultant in training but instead of a "free intern." Accordingly, they recommended the instructors negotiate the projects' scope with the clients beforehand. However, the instructors

believe that learning to initiate contact with clients, maintain reliable relationships, and negotiate their own needs and wants as consultants are critical skills and the main focus of CI 603 course.

In the ETAD 873 and 874 courses instructors are able to develop a strong team of dedicated entry-level instructional designers, at least partly because of the design of the course, but also because of the persistence and dedication of the students. The year-long exposure brings the students together and gives them the opportunity to learn and then live the instructional design experience. The connections to the issues of the real world have a lasting impact on the students and for many of them it is the most enjoyable educational experience they have encountered. The work is often much greater in terms of time commitment and problem solving but this again increases the satisfaction for the students. One of the students summed it up this way “The learning “stuck” like it didn’t in other courses because I used it later in my work. It stands out for me most vividly of all my master’s courses because I was engaged in work that was significant.” This feedback was echoed by many others students. Our experience suggests that the authentic approach we have implemented is not only preparing students for work as instructional designers in the real world, it is also expanding their appreciation for the variety of contexts that can benefit from instructional design, and challenging them to see themselves as agents of social change.

At the University of Saskatchewan, we operate on a 13 week semester, so it is somewhat shorter than we find at most universities in the USA. By building the student team around a project that was negotiated prior to the official start of the course, we found that students were quickly absorbed into the experience of building solutions to real learning problems. They did not spend time negotiating a contract and leap-frogged some of the initial challenges of beginning a designer-client relationship. This was beneficial, particularly considering the compressed time line of the course, and the pressing need to begin working on the project. The quick start injected a sense of urgency into the class, and this encouraged a level of attention and energy from our students we seldom saw on the first day of class with conventional courses. At the same time, this approach had drawbacks. By negotiating a Memorandum of Understanding prior to beginning the class, the students were denied the opportunity to experience the uncertainty and slippery interactions that necessarily accompany the negotiation phase. In particular, they do not get to be part of assigning responsibilities, identifying key players and their roles, and even determining how expenses will be handled. As experienced designers know, the success or failure of a project can happen during these negotiations, so it is a significant lesson we are reluctantly neglecting.

Some of the significant advantages of the experiential learning approach are difficult to measure. One is the enthusiasm and the growth in professional identity that students experience. They invest differently in the work, perhaps because there is no perceived gap between learning about the practice and theory of instructional design. Through direct experience they develop an understanding of the instructional design process, and even challenge the myths that seem to permeate our profession. They typically try to rigorously apply any existing model of ID to the project, and then reject it when they find



they need to invent a model and process that fits the needs of a that specific project. We have not typically seen this transition in other instructional settings, and it is an epiphany for our students when they deconstruct the very models they have come to trust, and reconstruct their own models from the rubble.

Involving students at a distance has been an interesting and successful aspect of the 874 course. As they are unable to be physically present the team must find innovative ways to include the distance students. Surprisingly the distance students are able to be just as active as the other members of the team. Their involvement includes interacting with clients, completing components of assessment and evaluation, and even participating in the final presentations. Although completing an ID project with an entire team of distance learners would be difficult it is possible to accommodate one or two on each project successfully.

Another unexpected finding was that as instructors, our confidence in our students to be successful instructional designers in the workplace soared when they completed this kind of experience. We felt that students were well prepared to begin as fully franchised professionals, and we had no reluctance encouraging them to find positions as instructional designers. If students do not have this experience, we sometimes wince when we hear they are employed as instructional designers, and we worry whether they have the requisite skills to succeed. We also worry about the effect that their inexperience will have on our program's reputation. In other words, our students develop greater confidence, we develop greater confidence in them, and we suspect that their employers develop greater confidence in our program.

Another deep finding, we think, is the respect students develop for instructional design. They do not see it as an exercise in following a procedure from beginning to end. Instructional design is demystified. There is no nice and tidy process to follow that results in a learning product that is exceptional. Rather, they see ID as a process of negotiation, of problem solving, and of fighting your way through frustration to an outcome that both clients and designers can share pride in creating.

*When you don't sit in the negotiating, wrangling and excitement as a project develops it appears to be very easy from the outside. The groups would explain their reasoning for decisions or their struggles and it all seemed so "of course". Yet, you knew there was so much work/thought behind the scenes.*

## **6. Implications for preparing instructional designers**

In comparing the approaches and outcomes of these two programs, we see that there are more shared outcomes than differences, and this speaks to the rigor of the instructional design process and the resilience of our students. In a sense, they learn powerful lessons by experiencing instructional design in authentic settings, and differences in those settings invite different types of learning, but do not diminish the strength of the learning. It has been our experience that each offering of the courses has resulted in a unique learning experience for the group. We cannot predict, with any reasonable certainty, what

lessons about ID will be learned or that will predominate in any given setting. But we can state with some confidence that each of the settings and the associated learning are important and useful. Ironically, in a field like ID that values predictable outcomes and intentional design, we find that the uncontrolled outcomes and contexts of experiential learning are necessary to promote a round and satisfying experience in instructional design.

A seldom mentioned implication of teaching in these kinds of settings is that the teaching is much more time consuming and emotionally draining than conventional teaching. In order to succeed, it is absolutely imperative that an instructor commits to the process and is willing to allow the cadence and tempo of the project to determine the intensity of the instructor's investment. That investment is considerable in our experience. The instructor is making a public commitment, not only to her/his students, but also to the client groups that projects will be completed at a professional level. Ultimately, this commitment is borne by the instructor.

It is also necessary to recognize that the instructor needs to be sensitive to the tension between controlling the learning experience and allowing the students to blunder through an experience. A balance is necessary, of course, but finding that balance is a challenge every time a course is offered. An instructor must remain vigilant throughout a project, prodding, encouraging, applauding and criticizing. Rarely, an instructor needs to intrude on the process to prevent a team from doing harm to themselves or the client. Unfortunately, we have found no reliable method of determining when that should happen beyond attention, courage and common sense. One possible strategy may be keeping open channels of communication between instructors and students at all times, especially outside the classroom and any pre-scheduled time. Since there is so much more in stake than in any "regular" course, students must be able to reach the instructor by phone, email, or instant messaging and get a quickly response from him or her.

Each approach to offering a genuine instructional design experience has its strengths and it is up to the institutions to decide what is best for their particular situation. Managing challenges is part of offering courses like those we describe. Creating a successful experience includes limiting student burnout by monitoring the time the students devote to the project, maintaining a team approach through regular meetings and peer support and assessment, and stressing the importance of completing the project to satisfy the needs of the client. Using a group approach means having the right number of people to contribute to the success of the project. Too many and there are not enough opportunities for meaningful involvement. Too few and the task becomes overwhelming and the opportunity for success decreases. Not only are these important issues for those learning the craft of instructional design but also valuable information to be applied when practicing ID outside of a University-based learning situation. Another aspect is the group formation strategy, which can also be challenging. One of the most common tensions are between letting the students choose their own group members or assigning them to pre-defined teams. One possible rule of thumb is to keep the groups as heterogeneous as possible based on students' skill set, previous experience in ID and life

experiences. The goal is that students learn from each others' strengths as they work together.

Our experiences in designing and teaching these courses led us to believe that authentic learning and service-learning has the abilities to support the vision of producing professional, knowledgeable and skillful instructional designers who significantly contribute to good of the society. However, we also concluded that such vision may only be achieved by carefully planned and well-designed courses so as to ensure both students and community members mutually benefit from it.

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