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## Moving from Theory to Real-World Experiences in an e-Learning Community

by Ana-Paula Correia

Many programs in higher education are focused more on the transmission and replication of knowledge than on providing opportunities for learning in real-world contexts and "[testing] in action what [students] have learned" (Kolb and Kolb 2005, 208). Similarly, many online courses deliver enormous amounts of information instead of offering pedagogies and processes that might allow for the development of transferable and professional skills (McLoughlin and Luca 2002). This pedagogical tendency to privilege information transmission over experience is a problem because employers expect colleges and universities to produce workers capable of leveraging information and communication technologies and instructional techniques to perform highly demanding tasks at work. Accordingly, classes need to offer [experiential learning](#) opportunities—activities that go beyond case analyses and technical training to provide real-world experiences.

This article demonstrates how real-world applications were brought into a graduate education course in instructional design, Curriculum and Instruction 503 (CI 503), using David Kolb's model of experiential learning to structure learning activities. Experiential learning is "a process of constructing knowledge that involves a creative tension among the four learning modes" (Kolb and Kolb 2005, 194). The four learning modes—concrete experience, abstract conceptualization, reflective observation, and active experimentation—are organized into a cyclical pattern known as the [experiential learning cycle](#). While course activities in CI 503 invoked the complete cycle ([Exhibit 1](#)), this article focuses on the final component, active experimentation, in describing the central activity of the course: the creation of an instructional product for a real-world audience to meet an identified need in the community.

In CI 503, teams of two to three students designed and developed instructional experiences to meet needs identified through community and professional contacts. Students designed programs to

- assist new international students, faculty, and staff and their families in adjusting to the culture and life of graduate school in the United States;
- help parents and caregivers teach math to preschool students as part of their daily home life;
- train college communities about cold-weather preparedness and response;
- teach fourth-graders to understand the delicate balance of natural habitats; and
- assist in-service teachers on virtual schooling issues.

In developing their projects, students explored the use of information and communication technologies to solve instructional problems as they applied the instructional design principles and models taught in the online course. Concomitantly, they relied on the course's virtual learning community to discuss their current and previous experiences as educators, to solicit input on the design of course activities, and to reflect on the class projects and share some of their challenges and victories.

### The Case of CI 503

Experiential learning in e-learning situations is often approached through case analysis, role-playing, and live or computer simulations. These learning activities allow learners to apply what they are learning in new situations and to learn by doing, but they lack the messiness of reality because they neglect critical relationships that can only be encountered when working in real contexts. The case described below shows

how experiential learning can be braided into e-learning in an authentic context. The analysis is based on personal reflections and dialogues posted in the course management system that hosted the e-learning community. The learning activities designed for the course offered extensive opportunities for reflection on practice and for discussions of instructional design principles, models, and theories. Most of the activities, however, were performed as part of a design team working mostly at a distance on a real-world project of the students' choice. By focusing on real-world problems in real-world contexts, CI 503 students gained first-hand experience using information and communication technologies to solve instructional problems. Beyond practical experience, students used these experiences and concurrent reflections to move toward a greater understanding of instructional design issues.

### ***The e-Learning Community of CI 503***

The subject of this study, CI 503, was offered by the Iowa State University (ISU) Center for Technology in Learning and Teaching (CTLT), whose program in communication technologies and teacher education is a recognized leader in the field (Davis 2003). CI 503 is the fifth course in the ISU [Master's of Education-at-a-Distance in Curriculum and Instructional Technology](#) program. This program was created to serve K-12 teachers working across rural Iowa who otherwise would not have access to an advanced degree in education.

An e-learning community is defined as a group of geographically dispersed learners who are taking the same course in the same institution, led by the same instructor (Henri and Pudelko 2003). This offering of CI 503 comprised an e-learning community of 17 students, 4 of whom were male and 13 female, ranging in age from 22 to 45 years old. Eight of these students, part of the first cohort pursuing the master's of education-at-a-distance, were elementary and secondary-level teachers teaching a variety of topics, including history, English, art, and technology, in schools across the state of Iowa. The remaining nine students were traditional master's and doctoral students in curriculum and instructional technology taking this course as part of their program of study. The online version of the course was especially attractive to some of these students because they had full-time jobs that required significant time commitments and offered less flexibility to attend face-to-face courses. These students were involved in a variety of different professional activities; this group of professionals included an instructional designer at the college of veterinary medicine, a faculty development officer for the university, a teaching assistant for undergraduate courses, and a distance education specialist at the college of agriculture. The course's e-learning community was hosted on WebCT ([Exhibit 2](#)).

When I taught this course, I was a newly hired CTLT assistant professor and had just completed my doctoral degree in instructional technology. Although I had extensive experience in instructional design for diverse contexts in North America and Southern Europe, this was my first time leading an online class in the North American context. My teaching philosophy and approach to the course emphasized two core types of activities:

- *Working in real-world situations.* People learn better when they are actively engaged in learning tasks that are directly related to their needs and interests. Most of the learning in this course occurred within the context of projects and situations similar to those that students were experiencing or would be likely to encounter in real-world contexts.
- *Working as a team member.* In addition to introducing models and theories of instructional design, this course provided students with concepts, tools, and techniques to help them learn how to work through the design process in teams. The course required that participants be active members of their design teams as well as of the e-learning community formed by all of the participants in the course.

As an instructor I also wanted to work in partnership with my students. By constantly eliciting student input on

course activities as they develop, I believe, instructors can tailor activities so that they truly meet learner expectations and inspire learner interest. One way to encourage students to work with real projects was to strongly support making their course project relevant to their current professional activity. This way they would feel that they were accomplishing more than a mere class project. Working in virtual teams is a growing demand in today's workplace and this course offered plenty of opportunities to practice that skill. Since most of the students were full-time professionals, they related to that need and embraced the opportunity.

### ***The Team Projects***

The main learning activity for the course required students to work in a design team to develop an instructional experience that taught a specific topic to a particular audience. Teams were encouraged to create an experience that either addressed a social need or connected in some way to their community, preferably targeting an underprivileged or underrepresented audience. If at all possible, students were to avoid addressing a computer-related skill. In addition to the topic to be taught, teams were responsible for identifying the target audience (the learners) and a real-world context (the situation in which the learning would occur).

The major tasks of the team project included

- selecting a specific topic and identifying a context;
- conducting needs, learner, and context analyses;
- justifying the need for the instruction;
- developing design specifications;
- creating instructional materials;
- delivering the instruction; and
- conducting a formative evaluation.

The skills necessary to carry out such a project included not only knowledge of instructional design models, processes, and techniques, but also competence in applying this knowledge to novel situations and the ability to work as part of a design team. Students had to manage their projects to meet aggressive deadlines while figuring out the best ways to manage their teams, which mainly operated at a distance.

As the instructor, I acted as an expert in instructional design and as a facilitator. Teams could ask me for help at any time as they moved along on their projects. Live chats and discussions were critical for assisting the students. Two all-day, on-campus course sessions were used to share professional practices in instructional design, socialize, and build community. The students took the lead in planning, organizing, and hosting the second on-campus meeting, at which the teams presented their final instructional products ([Exhibit 3](#)).

The team projects covered a wide array of topics, formats, and approaches to instructional design ([Exhibit 4](#)). Students developed six sets of instructional materials, two of which were selected for the course showcase:

- [Winter Weather Driving](#), a Web-based tutorial designed to prepare learners for cold-weather dangers. The primary goals of this instruction were to promote confidence in dealing with winter weather and to promote appropriate behaviors associated with preserving health in such conditions, such as layering clothing and safe winter driving. The ISU Department of Public Safety published this tutorial.
- [International Community Resources](#), a Web portal that brings together a collection of existing and new resources to assist new international students, faculty, and staff and their families in adjusting to the culture and life of ISU and Ames, Iowa. One measure that the team believed would be crucial in helping the new international residents was the development of a weblog of stories, which would allow the learners to build a sense of community and offer a place where they could share, reflect, and find

support on a variety of topics and issues. This online resource is currently available from the ISU Center for Excellence in Learning and Teaching ([CELT](#)) Web site.

## Evaluation

Evaluation is a critical element in e-learning communities, as learning is the formal goal of such communities (Henri and Pudelko 2003). The instructional materials created by the teams were graded based on the rationale presented for design decisions, the extent to which efforts were conducive to formative evaluation, the appropriateness of the materials to the task and audience, the visual design quality, and the use of motivational elements. Students' course grades depended on a range of other factors, including team participation and peer and self-assessments ([Exhibit 5](#)).

## Students' Assessment

One element of evaluation was a collaboratively created assessment instrument ([Exhibit 6](#)). I created a rough draft of the assessment instrument and posted it in the WebCT space. Students made suggestions on how to shape the instrument to assess more effectively the work they were doing for their projects. This collaborative process was designed to give the students ownership of their learning so that, as Brown and Knight (1994) explain, "assessment is not then a process done to them, but it is a participative process in which they are themselves involved" (52). Students used the resulting instrument to provide peer feedback on the materials presented by each team during the second on-campus meeting. This feedback was provided to each team as a design critique that teams could include in their final reports under recommendations for improvement.

The peer critiques were carefully analyzed and the majority of the student comments taken into account in the final grade. A specific weighting of my judgment and the peer critiques was not preestablished, but most of the student comments echoed my own preliminary assessment of the instructional materials, reinforcing my assessment and providing a stronger rationale for the final grade.

## Course Evaluation

One of the requirements for the course was a four-page, individual, reflective paper that included a brief summary of the student's experiences in the course and some discussion of the professional or personal insights gained. Students were asked to reflect on what they had learned from the team project (both in terms of subject matter and teamwork processes) and how this helped them to understand the course content, broaden their understanding of instructional design, and enhance their practice as educators. Students were also encouraged to voice their opinions about the course in general and invited to make suggestions for future improvements.

An analysis of these reflections shows that students unanimously agreed that they had learned a great deal in CI 503, not only about instructional design but also about being a successful virtual team player. However, the complexity of the real-world instructional projects and the complicated nature of the virtual teamwork are evident in the student reflections, where students voiced contradictory feelings and discussed different learning foci, challenges, and victories ([Exhibit 7](#)).

## Conclusion

I have continued to develop this ee-learning approach in subsequent courses. Later iterations linked student teams to real clients with instructional design needs. For example, one team developed a Web-based tutorial on tornado preparedness for which the county emergency management agency had expressed a need. The agency wanted a Web-based tutorial in order to help the public (and particularly university populations whose familiarity with this severe weather hazard might be limited) learn how to stay safe in case of a tornado disaster. This revision to the approach exposes students to the complexity of the consultancy relationship, providing further valuable experience.

Learning activities for distance courses need to be designed to allow learners to apply what they are learning or have learned in real educational contexts, provide opportunities for reflection, and offer instructor facilitation. As Boettcher (2007) explains, "the more dynamic and interactive the learning experience, the more likely students will invest greater amounts of time in the learning process" (¶37). Distance learners need real-world learning opportunities so that they leave online programs prepared to deal with situations that occur in their professional activities. The methodology described in this paper offered such opportunities, and its fundamental principles would apply to a range of other learning contexts as well:

- Start with your learners.
- Build on their interests and incorporate their insights into the course design.
- Add a reality dimension to the learning activities.
- Support the design teams.
- Offer students not only the opportunity to take the course but also the satisfaction of giving back to the community by applying their knowledge and skill set.

By creatively employing e-learning pedagogy to bridge the gap between learning and practical, applied experience, instructors can ensure that their students are more fully prepared to face new challenges in the world beyond the virtual classroom.

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