

Toward a Model of Experiential E-Learning

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Abstract

While e-learning has experienced rapid growth, it is hampered by being based on classroom models of learning. This article demonstrates how concepts of agency, belongingness, and competence that are central to experiential education can explain difficulties students encounter in e-learning courses. This article documents an inter-institutional graduate course on instructional design that was designed as a problem-based, service-learning course taught entirely online. While the underlying model for this course featured more active learning than simple, knowledge transmission models and while considerable learning resources were made available to students, at times students experienced difficulties similar to what has been reported in other e-learning courses. By applying concepts from experiential education, adjustments were made in the course design to support learners developing a stronger sense of agency, belongingness and competence. Typical e-learning environments require students to abandon their familiar ways of achieving agency, belonging, and competence that had been comfortable and effective in traditional classrooms. When stripped of this in e-learning courses, students often flounder. The addition of concepts from experiential education can bolster e-learning environments because these concepts attend to some of those factors that cause students to struggle in e-learning courses.

Key Words: e-learning, experiential education, e-learning models, experiential e-learning taxonomy, lessons learned, problem-based learning, service-learning

Introduction

There seems little doubt that e-learning has rapidly become a major influence on how instructional programs are offered. Universities, corporations, and public schools are increasingly turning to e-learning to deliver education and training. However, the underlying conceptualization of many e-learning courses is based on traditional models found in classroom instruction (Hannum, 2001; Twigg, 2001; Engelbrecht, 2003). This has been a familiar pattern when technology is used to provide instruction. Too often the newer technology is crippled by being based on an underlying model of classroom-based instruction. For

example, early uses of television for instruction were mainly the broadcasting of instruction from existing classrooms. To a large extent the early uses of computers for instruction involved placing traditional instructional content in the form of textbooks, workbooks, or flash cards onto computers for delivery to students. Today this is happening in e-learning; many, even some of the best e-learning courses, seem little more than attempts to use technology to mimic traditional classrooms only at a distance. As a result, some of the possibilities e-learning offers are missed. New models and new ways of thinking are needed in order to optimize the value of e-learning (Kumar, 2004; Clark, 2003; Larreamendy-Joerns & Leinhardt, 2006).

Models for e-learning In addition to being modeled on traditional classroom instruction, current e-learning courses are also modeled on how educators view the Internet. Some educators view the Internet from a publishing perspective – as a way to distribute content to learners, often printed materials (Hannum, 2001; Bates, 2005). E-learning courses modeled in this way feature websites or course management systems that house and distribute content. As Malikowski, Thompson, and Theis (2007) noted, the main use of content management systems in e-learning has been to distribute printed course materials. Students who enroll in such courses go online to find readings and assignments for that day or week, complete the readings or assignments, and in some cases post something they produce for others to see. Other uses of e-learning within the publishing metaphor can be complex, such as having students complete elaborate simulations or view sophisticated interactive multimedia. Regardless, this model of e-learning is essentially content-sharing in which the Internet is used to publish the content and make it more widely available.

Others view the Internet from a communication perspective in which the technology brings people together in a common space for conversation about content (Hamada & Scott, 2000). E-learning courses modeled in this way feature conversations that may be asynchronous like discussion boards or synchronous like chat. They may take place in text, audio (VoIP), or video. Whether synchronous or asynchronous, though, the goal is the same – bringing people together to enact the communicative purposes of instruction in a way that mirrors what happens in classrooms. This view is consistent with a cognitive learning perspective that holds that individuals develop knowledge through discussion and collaboration with others (Kwok, Ma, and Vogel, 2002).

Arguably the very best current e-learning courses combine the above content and communication factors into a suitable online simulacrum of traditional classroom instruction. Unfortunately, though, whether alone or in combination, these classroom-based models limit the effectiveness of e-learning much as they limited the effectiveness of instructional television and computer-assisted instruction (Hannum, 2007).

Stronger models If e-learning is to offer improved learning opportunities, educators will have to rethink the models that underlie e-learning (Gunasekaran, McNeil, and Shaul, 2002; Schank & Kemi, 2000). Basing e-learning on traditional classroom-based models of instruction unnecessarily restricts e-learning. Progress will depend on embracing learner-centered models that place the student at the focal point, not the teacher and not the classroom (McCombs & Vakili, 2005; Mendenhall, 2007). While e-learning based on classroom-centered models is not necessarily poor instruction, it certainly fails to optimize what e-learning could be and fails to optimize the students' learning experiences.

With this in mind the authors spent several months conceptualizing, testing, and refining a new model for e-learning rooted in experiential education. This article explains and illustrates why this model can offer a highly appropriate and dynamic framework in which the inherent potentials of e-learning can flourish. This model can help explain some of the limitations of e-learning that have been noted and point to a more effective direction for future e-learning. This article introduces key concepts of experiential education, describes a taxonomy of experiential e-learning (ee-learning), presents an example of a course designed and implemented using an ee-learning model, and discusses challenges faced and lessons learned.

Concepts of Experiential Education

While any form of education involves student experience, “experiential education” refers to:

...education that makes conscious application of ... students’ experiences by integrating them into the curriculum. Experience ...may include any combination of senses (i.e., touch, smell, hearing, sight, taste), emotions (e.g., pleasure, excitement, anxiety, fear, hurt, empathy, attachment, hope), physical condition (e.g., temperature, strength, energy level) and cognition (e.g., constructing knowledge, establishing beliefs, solving problems) (Carver, 1996).

In his definition of experiential education, Cantor (1997) indicated that experiential education involves learning activities in which the student is directly engaged in the phenomena being studied. While there are classic forms of experiential education such as outdoor adventure or service-learning, the strongest programs usually integrate several forms of experiential education. While many equate the concept of experiential education with programs like Outward Bound, the concept is broader and recognizes the value of explicitly integrating students’ experiences into learning environments. Experience is always a critical element in learning. This also applies to e-learning: Quality is directly proportional to the degree that experience is involved. Even good e-learning courses will improve if experiential learning concepts are brought to the forefront.

The power of experiential education for e-learning is that it offers an explicit, highly articulated learner-centered instructional model based on student agency, belonging and competence (Carver, 1998a). Experiential learning provides an already-existing framework in which to develop a new model for e-learning, one that features the individual, alone or in creative interaction, as the mobile center-of-gravity of the learning environment. In an effective experiential education program, students and teachers become more effective change agents, develop a sense of belonging to a community, and master both skills and knowledge. In an experientially-infused e-learning course, students and teachers do much the same. In placing the emphasis on student experience, teachers design and cultivate environments in which direct instruction serves only to support student learning. Students engage in multiple forms of active learning in authentic settings, draw on their individual and/or collective experiences, and make connections between lessons covered and situations they expect to face in the future; they experience, share, process, generalize, and enact their learning. Teachers create opportunities for students to reflect on their experiences in order to assure assimilation but, again, learners themselves are at the very center of this model.

A final comparison Experiential educators usually exhibit the following characteristics: they are creative in their use of resources (including time, space and authority), conscious of how behavioral norms are established (by modeling and labeling), and consistent in making decisions that reflect a set of values including compassion, communication, critical thinking, creativity, community, and respect for individuals and the environment. As diverse as the examples of experiential education programs are, there is a remarkable consistency in the presence of the above characteristics (Carver, 1998b). The consistent presence of the above characteristics and/or criteria benefits e-learners and e-teachers as well. Experiential education provides the needed foundation on which to build e-learning courses optimized for robust, content-rich, learner-centered instruction.

Taxonomy of Experiential E-Learning

This section makes the critical role experience plays in e-learning apparent by describing a taxonomy that represents a continuum from simple content sharing and recall of prior experience at one end to direct experience/action learning at the other end. The degree to which the learning environment involves experiential learning increases as you move up this taxonomy.

Type 1 EE-Learning—Content Sharing The form of e-learning involving the least amount of experiential learning is represented by e-learning that essentially distributes content, whether print or mediated, to learners. The learners’ involvement consists of reading text, viewing videos or listening to podcasts. At this level, the experiential aspect is limited to learners’ recall of prior experience as a way to make

meaning from what they read/viewed.

Type 2 EE-Learning—Online Conversation In this form of online learning, students and instructors engage in an online conversation for the purpose of instruction. Often this online conversation takes the form of discussion forums in which students taking an e-learning course are required to respond to questions the instructor posts, post their own questions, and respond to the postings of other students. At this level, the experiential aspect is the shared experiences of the learners in conversational interactions prompted by the instructor.

Type 3 EE-Learning—Meaningful Online Conversation In a manner similar to Type 2 ee-learning described above, students and instructors in Type 3 ee-learning conduct online conversations using discussion forums, chat rooms, or other forms of communications mediated by technology. The difference is that in Type 3 ee-learning the online conversation emerges from the experiences and needs of the students rather than being contrived by requirements specified by the instructor. At this level, the experiential aspect is conversational interaction initiated by the students. In contrast to instructor prompted interactions, interactions at this level have heightened experiential value as they are based on students' own experiences.

Type 4 EE-Learning—Drawing On Student Experiences Another approach to online learning is to involve the student in identifying the course objectives, developing course content, and deciding on appropriate instructional methodology. In contrast to traditional teacher-centered approaches, this student-centered approach follows from adult learning theory (Knowles, 1990). This approach places the students' experiences at the forefront and has them actively engaged in planning and delivering instruction. At this level, the experiential aspect becomes even more apparent as students specify objectives as well as learning activities. When students specify objectives they draw on and highlight their own experiences to identify content and activities that would be meaningful to them.

Type 5 EE-Learning—Problem-Based/Service Learning In this type of e-learning the course is constructed around real problems that exist in an actual organization. However this is based on a constructed experience for the students, since they are not employees of the organization. Rather, they participate vicariously in this constructed experience for the purpose of learning content in a more situated fashion. Rather than being passive recipients of course content, or even creators of course content, students in this type ee-learning actively engage in experiences that take place outside the classroom. While the students have these direct experiences, these experiences are planned and initiated by the instructor.

Type 6 EE-Learning—Direct Experience/Action Learning Rather than focusing on a situation and set of problems derived from an organization, an ee-learning course can focus on the actual situation in which students find themselves. This is similar to action learning in which students bring problems from their work environment directly into the classroom and focus on these real problems. This approach to instruction fades out any distinction between work and learning as they focus on problems in the learners own workplace. In contrast to problem-based/service learning, the experiences in this form of ee-learning are planned and initiated by the students.

The role of experience is limited to recalled experiences at the lower levels of the taxonomy while direct experience is involved at the higher levels. In that sense, the lower levels of this taxonomy may be considered as "passive" ee-learning while the higher levels may be considered as "active" ee-learning. Regardless of specific level, though, learners always make sense of new information in light of their experiences whether recalled, as in the lower levels of the taxonomy, or directly as part of the current learning environment in the higher levels of the taxonomy. Yet when e-learning is designed to incorporate maximum levels of experiential learning, by intentionally orienting it towards the higher end of the above taxonomy, it can become more effective. When e-learning is designed to incorporate the three principles of experiential learning — agency, belonging and competence—the e-learning becomes deeper, richer, and more meaningful to the students. In an experimental study by Ives & Obenchain (2006) students in a semester-long course who learned through experiential education demonstrated more higher order thinking skills in pretest-posttest comparisons than students taught in the conventional manner. Students would be more likely to retain what they learn from online courses that use ee-learning

models from the higher end of the taxonomy since these models activate cognitive processes that influence retention and transfer (Mayer, 2002). Students would be more likely to apply what they have learned when taught by ee-learning courses using models at the higher end of the ee-learning taxonomy because that learning is contextualized, focuses on problems and has more active engagement (Bransford, Brown, and Cocking, 1999).

Central Concepts of Experiential E-Learning

Experiential e-learning has several fundamental concepts at its base. These basic concepts serve to form the concept of ee-learning. While each concept may stand alone, taken together they form a unified whole that likely adds more value than the sum of each taken alone.

Learner-centric Whereas traditional education is fundamentally classroom-centric or teacher-centric, ee-learning is learner-centric. The focus in ee-learning has to be on the learner, not the teacher or the classroom, which only exists virtually. In fact, many argue that all good education should be learner-centric (McCombs, 2004). This requires that the focus be on the individual learners—their backgrounds, experiences, interests, capacities, and needs – and instructional practices that are effective in promoting high levels of learning, motivation, and achievement.

Agency Traditional classrooms and e-learning that seeks to mimic traditional classrooms fail to provide for much student agency. Agency refers to the students' sense of being the actor who influences what happens to them. Rather in traditional classrooms, teachers seem to operate with the assumption that their teaching practices control the development of students and shape their behavior externally. This view is challenged by Larson (2006) who describes a movement from determinism to agency in the context of youth development in which youth become motivated to take on challenges when they perceive themselves as agents of their actions. He notes that internal motivation energizes development as students become engaged with challenging tasks. Boaler (2002) has described the relationships among knowledge, practice and identity and noted that students in traditional classrooms have little opportunity to develop agency. By its very nature experiential learning supports students' sense of agency by building experiences into their education that are authentic and afford an appropriate level of challenge to engage students.

Belongingness Traditional classrooms may provide a sense of belongingness to students as they share a common physical space on a daily basis over an academic year. For belongingness to occur members of the community both students and teachers must perceive themselves "...as members with rights and responsibilities, power and vulnerability, and learn to act responsibility, considering the best interests of themselves, other individuals, and the group as a whole" (Carver, 1997, 146). This concept of belongingness, which is vital to group functioning, may be difficult to establish in online communities (Shin & Chan, 2004) and thus may account for the higher levels of frustration and failure to compete online courses. Experiential education in its many forms includes students and teachers or mentors working on common tasks in teams. Thus, belongingness is established.

Competence Central to the concept of experiential education is that of developing competence – acquiring knowledge, mastering skills, and learning to apply what is learned to real-life situations. This is the focus of all education, whether in traditional classrooms or in online learning environments. Often the learning that takes place in traditional classrooms is isolated: isolated from what the students have previously learned; isolated from other things the students are learning; isolated from the environments in which the students live, work and play; and isolated from what students perceive as their futures. Experiential education seeks to place what is being learned in a context that is real, in the present, and shared among others. This promotes better integration of knowledge and skill, better retention, and better transfer to other tasks.

Center of gravity The center of gravity is a physical concept describing the point at which the mass of an object is concentrated. It is the point at which an object will balance. In military terms the center of gravity is seen as the source of strength of a military force. It is the element that allows them to achieve their objectives. In educational terms the center of gravity should be seen as the students, more specifically the knowledge, skill and motivation the students possess. This is the fundamental force acting in

educational settings. Experiential education recognizes this as the center of gravity and builds from it.

An Example of E-Learning

Concepts regarding the need for integration of experiential learning into e-learning can be illustrated by an example of a graduate-level course in instructional design that combined two courses that had been taught separately at different universities by two of the authors (King and Hannum). The resulting course was taught as a single, combined, online course in the context of service learning involving a community service organization, the Center for New North Carolinians (CNNC). Students were placed into inter-institutional virtual work teams that would accomplish their activities online. The students' assignments were to complete typical steps in an instructional design process beginning with needs assessment and continuing through task analysis, educational goals, audience analysis, training methods, and evaluation. This closely mimics the work at many consulting organizations that work on instructional design projects for different clients. The course instructors acted as supervisors, providing guidance and support when students encountered difficulties when carrying out steps in the instructional design process. The instructors provided overviews, selected readings, narrated PowerPoint presentations, templates for work products, examples and feedback. Some of the course materials were anticipated and produced in advanced. Other materials were developed as needed when students experienced problems. Through weekly chat sessions and ongoing discussion forums the instructors were able to detect when students were stumbling and would make adjustments to support students and their learning. For example, when students had difficulty completing a needs assessment the instructors created a template for needs assessment, provided examples of needs assessment and added more need assessment readings. All the course content was taught using a Type 5 ee-learning—problem-based/service learning model within the context of the CNNC. Our intention was for the students to learn typical instructional design content and skills in a manner that was realistic, situated in a practical context, and constructed by them through active experiences. The instructional design content the instructors wanted their students to acquire was not “pushed” at them as is often the case in e-learning courses but rather was “pulled” down from various online resources and constructed by the students as necessary when working as a virtual team on the problems of the service organization that formed the context for this course. Rather than having weekly assignments to direct student activity as is typical in courses, students in this course had weekly work orders more typical of a work environment.

Basing this course on the reality of an existing organization and its challenges provided learners with an actual framework in which to construct knowledge that is not a part of a typical course, even a typical e-learning course. The learning experience was more active and gave the students more control (agency) over their learning. The motivation levels were high because students were working together to solve real problems for a real organization that served real people (belonging). Students were not memorizing facts to pass a quiz but rather learning to solve instructional design problems (competence). The culminating experience of the course was a presentation by the work teams of their analyses and recommendations to the client organization followed by feedback from key staff members of the organization to our students.

Course Design The initial design for the course was guided by several concepts: problem-based learning, service learning, e-learning, and learner-centered instruction. When developing the course framework, topic outline and instructional materials, the course instructors recognized the importance of adapting the course to the specific students who were enrolled in the course rather than creating some generic course for imaginary generic students. Thus, the instructors conducted an initial assessment of their students' backgrounds and instructional design knowledge before the course started. The initial syllabus, which the instructors recognized would be a dynamic document, listed the course topics and suggested readings. From the beginning the instructors had planned to revisit the course design throughout the semester making adjustments as necessary based on students' experiences to insure student learning. The instructors recognized they would have to revisit the design, since they were experimenting with service-learning and problem-based learning in an online environment involving students and faculty at two different universities. In order to accomplish this, the instructors held weekly meetings along with another instructional design colleague to evaluate progress and make any needed revisions. The course instructors also maintained a blog in which they held running discussions

regarding issues of pedagogy related to the design of this course.

Challenges Faced Some students experienced difficulties likely resulting from their role in this course as compared to a student's role in a typical graduate course. Undoubtedly some students arrived the first day of this course expecting that they would listen to some lectures, read some articles or read a book, and write a final paper. Instead they became active participants in an environment that simulated a consulting company work team. In this role they had to deal with problems that involved uncertainty, outright confusion at times, time pressures, and the normal issues that arise when people have to work together in teams, especially virtual teams, to accomplish a common goal. As part of the evaluation of this course students were asked to respond anonymously to several open-ended prompts regarding their experience in the course. The following are direct quotes from students.

I am excited about the problem based learning, but I'm not sure about this all online approach. I wish I were working with an organization that I could really visit and touch (in addition to online contact). I am very skeptical about doing this whole thing online.

I am interested in the course content thus far, and like the notion of problem-based learning, but I'm just not sure it can be done as effectively over the internet with groups of people from two different universities. The collaboration and online aspect are visionary on the professors' part, I just think for many of us "old school" people we need a little more structure (in advance) so we can produce a product that is satisfactory for both ourselves and the professors.

These and other comments show the students' sense of frustration both from taking a course online and from working with others in a problem-based learning environment. These graduate students have successfully navigated years of traditional education to get into graduate school. Now they were being asked to assume a different role from the traditional graduate student who goes to class, listens to lectures, takes notes, studies the notes and passes quizzes on the content. Undoubtedly this change in role caused difficulties for some students as they had to engage in different activities than they were used to in a "traditional classroom." Likely they were not clear about how they would develop competence in this learning environment, nor were they clear about how to foster belongingness in an online community involving people from two universities and a service organization. They struggled as well to develop a sense of agency in an unfamiliar instructional setting.

Role of Design In terms of design context, e-learning and experiential education each pose their own version of a single, relatively new, and overarching design challenge; namely, how to provide unity or convergence in a distributed learning environment. One way to meet the challenge of unity or convergence is through elevating the role of design. Early researchers and observers of e-learning noted that, "Online teachers become designers of student learning experiences rather than just providers of content" (Berge & Collins, 1996). This early notice is echoed in a general and ongoing revitalization of interest in instructional design occasioned by the rise of e-learning. Experiential educators must also elevate the role of design to effectively deal with unity/convergence issues (i.e., how to connect field experiences with classroom experiences.) The elevation of instructor-as-designer in ee-learning environments is accompanied by an equally fundamental elevation of student-as-independent-learner. This illuminates the powerful synergy between e-learning and experiential learning: since experiential learning involves enhanced agency, belonging, and competence, these can serve as counterweights that balance the potential of e-learners to get lost in the hyper-distributed hallways of cyberspace. Concepts from experiential education can help solve the problem of convergence in e-learning environments by showing how to create portable, self-based sites of convergence. As such, the effectiveness of e-learning improves as concepts of experiential learning are incorporated and enacted at the higher end of the ee-learning taxonomy.

Lessons Learned This course presented a challenge because it was less than successful at establishing the needed centers of convergence – agency, belonging, and competence – in a distributed learning environment, where convergence is by nature portable and internal to the individual learner.

- First, although students worked in teams to assess and address the instructional needs of the Center for New North Carolinians (CNNC), the organization was not conveniently situated for easy, direct experiential access by students. One of the instructors had to serve as the liaison with the organization, resulting in a corresponding reduction in students' sense of personal agency. Students expressed feeling hamstrung in their work by the lack of direct contact. This mystified the instructors to some extent, since they provided ample information including organizational documents, transcripts of interviews, and even a photo essay to establish visual context. Perhaps what students were saying related more to lack of agency than lack of information. The approach of an instructor-as-liaison may have actually been part of the problem because it effectively denied agency to students. Having students select one or two of their own to serve as intermediaries may have been better. Lesson Learned #1: be willing to move to a Type 6 ee-learning format even if this might involve more work or inconvenience for students; the benefits of increased student agency possibly outweigh the inconvenience.
- Second, the two separate courses did not meet together face-to-face at the beginning of the semester—thus an initial opportunity to provide a sense of belonging was missed. An online directory complete with pictures, interests, contact information, and so forth was created as a way to deal with belongingness. Yet, again, lack of information did not turn out to be the issue; in retrospect the issue was more likely an incomplete sense of belonging. This initial deficit was later compounded. The design teams were formed as inter-institutional groups, although each instructor on occasion met his class separately to preserve institutional identity. Had an initial, all-inclusive face-to-face meeting been held and had whole-group (preferably synchronous) meetings been used at several points along the way, students may have experienced higher levels of belongingness. Lesson learned #2: arrange for some whole-group meetings, whether face-to-face or online; the benefits of a sense of belonging needs to accrue to the whole-group as well as small-groups.
- Third, although the students were intellectually talented they struggled to develop a sense of competence at times. Again this was a bit baffling, in part because the content of the course was amply scaffolded and supported with examples, rubrics, etc. When students struggled, additional content and guidance was provided. In hindsight, responses to students' struggles might have been more effective had they moved to a deeper level, to issues or needs related to agency, belonging, and competence rather than simply providing more instruction. Lesson learned #3: be willing to dig deeper; if you know the course is well-designed in instructional terms, look to the affective or affiliative levels of design.
- Fourth, had even one of the above three, such as putting students in direct contact with CNNC, been done this might have increased not only their sense of agency but also their sense of belonging and competence. Lifting up the sense of belongingness through an initial all-inclusive meeting or two and/or through whole-group synchronous online meetings may have in turn enhanced the development of agency and competency. Lesson Learned #4: collateral or synergistic benefit may result from addressing even one of the three identified variables.

Conclusions

The above are the lessons learned related to the elevation of the student role in distributed learning environments. In many ways this course was an enigma to the instructors precisely because it was so amply and well-designed in instructional terms. The instructors knew they were taking several significant design and pedagogical risks, but still the difficulty some students expressed surprised them. Taken together, the lessons learned reverberate with the ample attention given in the e-learning literature to the importance of establishing community (Dede, 1996; Harasim, 1993; Haythornthwaite et al, 2000; Wellman, 1999). The experience of teaching this course indicated that convergence, agency, belonging, and competence add significant nuance and specificity to the general insight that non-instructional elements are highly instructive in distributed learning environments. Typical e-learning environments

require students to abandon their familiar ways of achieving agency, belonging, and competence that had been comfortable and effective in traditional classrooms. When stripped of this in e-learning courses, students often flounder. The addition of concepts from experiential education can bolster e-learning environments because these concepts attend to some of those factors that cause students to struggle in e-learning courses.

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