Case Study, Problem-Based Learning and Simulation in Online Graduate Courses

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Overview

Using case study, problem-based learning (PBL) or simulation (such as a role play) strategies for actively engaging students in learning are well established in the on-site classroom where the students and instructor meet in person. These strategies are used in the preparation of adult educators for the professional practice of facilitating adult learning. Sometimes we share our ‘war stories’ or examples of how to do it (or not do it) to make a point or illustrate a concept or process. There is an element of story telling in creating an effective case or problem for these active learning strategies.

Case study is well established in teaching in business schools (Barnes, et al, 1994). There has been a great increase in using the case method in education in recent years (Lundeberg, et al, 1999; Sudzina, 1999; Wasserman, 1994). My purpose in this paper (and conference presentation) is to present some of the ways I use cases, describe a guide and techniques I’m developing to help me create these stories, and share some reflections on using these story-based strategies in online graduate courses.

One of my primary objectives as the facilitator of an online graduate course is to design learning events, based on a constructivist framework, which engage graduate students in more learning authentic by using real-world cases and problems. Some of the challenges of online courses, especially at the graduate level, which I find particularly stimulating and fun as an instructional designer are:
1. To engage the students with the course content via active learning strategies, especially since online courses tend to be heavily text-based;
2. To engage the students as active partners with shared responsibility for developing a collaborative learning experience;
3. To create the space for the “instructor of record” to be a facilitator and guide, in a constructivist learning experience, rather than purveyor of information (“talking/writing head”).

Definitions of Case study, PBL and Simulation Active Learning Events

Caffarella defines a case study as a process: “A small group analyzes and solves an event, incident, or situation presented orally, in written form, or through computer-based means.” (2002, p. 177). Piskurich adds a few elements in his definition: “A written, oral or video account of a situation given to trainees. Either individually of in groups, the trainees are asked to analyze the case study and present recommendations.” (2000, p. 158) The essence of the case study is that a story is presented, analysis is performed, and some of kind solution or recommendations are the output created as part of a learning process. The use of case study enhances reflective practice through cooperative activities and presents learners with a variety of viewpoints through sharing ideas. A good case has three essential elements: it is real or at least based on a real-life situation; it requires the learner to carefully research and study to understand the scenario; and it encourages users to develop multiple perspectives or viewpoints based on material in the case (Leeper, 1993).

Cases may be created from a wide variety of situations and range in length and complexity. A case may be as brief as a 20-minute discussion in which someone asks: What would you do in this situation? and then describes a ‘war story’ from that day at work. Or a case may be structured to last for several weeks...
or months and have several steps in the development process, new information may be added which must
be taken into account, etc.

Problem-Based Learning (PBL) has its origins in the early 1970’s at the McMaster University Faculty of
Health Sciences in Hamilton, Ontario, Canada (Rehm, 1998). This learning method of promoting student-
centered education for lifelong learning and success was soon implemented in medical schools all over
North America and Europe. Since then, it has been used in different forms in other higher education
situations (particularly professional schools), in elementary and secondary schools, and in business

Obviously, the main focus of PBL is the problem. One of the hallmarks of PBL is authentic and
contextualized learning, therefore problems must resemble real-life situations as much as possible. These
are common parameters used to describe PBL
• It is messy and ill-defined (as real-life problems are).
• It should be absolutely authentic or at least based in reality.
• It can change with the addition of new information.
• It does not necessarily have a "correct" answer.
• It requires inquiry, information-gathering, and reflection on the process, not just on the content.
• The problem comes first (not the concepts, vocabulary, etc.).
• The particular take on the problem or path to follow is chosen by the learners, not the instructor;
• Instructors are tutors and coaches for the learners.

(Savery and Duffy, 1992; White, 1996; http://www.imsa.edu/team/cpbl/intro/whatis/slide12.html,
accessed 5/28/03).

Examples From Online Graduate Courses in Adult Education

These are examples of cases developed by the author and by graduate students to promote authentic
learning using real-world cases and problems in online courses. I use case study and simulation learning
events in several online graduate courses. These courses are part of the curriculum for the M. S. in Adult
Education from Indiana University. In one course the content is program planning in adult education.
Another course, a professional development Certificate in Distance Education (with optional graduate
credit), is an introduction to planning and managing distance education.

Program Planning Course

In the program planning course, the students are divided into groups of three or four participants called
Discussion Planning (DP) Teams for one assignment. Each DP Team is responsible for creating one
learning event using a case study or problem-based strategy during the remainder of the semester. Three
of these learning events are asynchronous Discussion Forums and two are synchronous Chat sessions (90
minutes long). I present one case study for interaction using an asynchronous Discussion Forum to model
the strategy in the second module of the course. There is also a resource document available describing
case study and PBL learning events with additional print and web resources.

Three examples of course learning events are included below. The first is the premise of the case study
used to model the process. Space does not permit including the full case, including information on the
specific context of the problem. The assignment is included however.

Example Number 1: NTIL case study. Imagine you are the Director of Education for the national office
of a NFP (not-for-profit) organization with headquarters in Indianapolis. This organization, the National
Initiative for Technological Literacy (NITL), is 4 years old. The primary focus of NITL is to increase

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and The Annual Conference on Distance Teaching and Learning
http://www.uwex.edu/disted/conference/
awareness of and develop model education programs to promote technological literacy. The organization was established with a $10,000,000 endowment (by the Founder - an IT entrepreneur) so it is financially stable. There is a national Board of Directors with the long-term vision of having chapters in all 50 states by 2012.

The main goal for NITL's first five years, which has been achieved, is to have one active Chapter in the capitol cities of Indiana, Illinois, Michigan, Ohio, Wisconsin and Kentucky. The crux of the problem is that the Director of Education has been asked to provide information to the Founder/Chairman of the Board for planning strategies for the next phase of expansion. In this short assignment, students are asked to develop notes, not a fully-developed narrative Memo.

The NTIL Case Assignment: The assignment for Module Three is to draft your ideas about gathering necessary information and planning how to respond to the Founder's request. Your ideas can be outlined in bullet points and/or narrative, but must take into account the information included in the description of NITL case. I suggest Chapters 4 and 5 in Caffarella as well.

What key organizational factors might be at play here within NITL? What kind of information do you need? How will you get it? With whom should you meet? Are there critical issues at the national or state levels which might impact these plans?

Assignment: Part One - Please post your working notes on a plan (about 400-500 words) for developing a response to the Founder's request (NOT the memo to the Founder itself) in the NTIL Discussion Forum by 9:00 p.m., on Tuesday, Feb. 18. Part Two - Read at least 3 other postings and respond to one other D506 participant's working notes for a plan by Sunday, Feb. 23. In your response (about 150-200 words), identify what you think is good about the notes for a plan and suggest at least one item or issue for improvement.

Example Number 2: Student DP Team case for the Program Planning Course. Module 6 Case Study Submitted by DP Team 6: Sarah McFarlane, Emily Chambers, and Cindy Hutcherson, Spring 2003

You are a program director for the State of Indiana Children and Family Services. You have been assigned to implement the Welfare to Work program for single mothers. This program will include elements to help these mothers establish themselves successfully in a career which will enable them over a period of time to be self-supportive. You must consider all components essential for the success of the working mother. Due to the fact that this is a pilot program in your agency, an evaluation tool must be devised that will be most effective in deciding the success of the program or to discover areas of improvement.

Program Objectives: 1) To ensure the success of the working mother by developing skills in education, confidence, and parenting; 2) To give participants direction and assistance in securing employment; 3) To give participants assistance in continuing their education; 4) To assist participants in securing affordable childcare. As the program director you must devise a program evaluation to help gain support for this new program from the agency.

Learning Objectives:
1. Based upon the above description, develop a plan on how you would perform an evaluation on this program.
   • Would you choose a formative or summative evaluation?
   • Will the use of informal evaluations play a role in evaluating this program?
   • How will you evaluate that the program objectives are being met?
   • What program aspects will be the most important to evaluate?
• What approach/approaches would you use (based on Exhibit 11.2 in the text) to evaluate this program?
• How and when will you collect your evaluation data?
• How will you go about analyzing the data?

2. What components of the evaluation would you want to include in a report of the findings to the executive director? What aspects would you highlight as successes?

Assignment: Responses (250-350 words) should be posted by April 13.

Example Number Three: Case simulation in the Certificate for Distance Education. The students enrolled for graduate credit in the Certificate for Distance Education are invited to participate in what I call a case simulation exercise lasting for seven weeks during this eight-week course. The premise is that the Library Board of Directors has charged the library’s executive team to draft a proposal for a 21st Century Information Communication Technologies initiative for the library and the community it serves. They take on specific organizational roles (Executive Director, Budget & Finance Director, IT Director, Outreach & Marketing Director and Education Director, Subject Matter Expert) for a hypothetical public library. I take on the role of a member of the Board appointed to be a Project Liaison. This gives them an individual to contact to ask for clarification. It also allows me a role within the case simulation, rather than inserting myself as the instructor. It seems to add some additional realism when I couch my responses within the frame of the simulation.

Each week the team prepares a section of a draft proposal, from project vision and goals to an assessment plan. The section of the proposal drafted each week is directly tied to course topics. The students have a dedicated Chat room, Group Space, and email available for collaboration within the course management system, as well as telephone and fax for communication purposes. When the course is complete, they have another two weeks to edit and refine their proposal for final submission. This Table of Contents for a final proposal developed during a case simulation provides an overview of the course content and how it provides structure for the case simulation.

Guide to Designing a Case Study

This is a guide I’ve developed and am testing to help me efficiently create cases and to provide to students for their use. It is presented in outline format. It can be used as an electronic template, so you can type in notes under each section in a word processor.

1. Developing a Case:
What is the intended learning outcome? The WHY?

2. What kind of story (case) would help students explore that outcome?
• Using a familiar framework: WHO, WHAT, WHEN, WHERE, HOW
• Is it an individual or an organizational situation?
• What context or background story do you need to provide?
• Who are the characters?
• What information about character roles do you need to provide?
• Define the role(s) the learners are expected to play and use as framework for their participation.
• What are the students expected to do?
• What is the timeframe of the case?
• What is the timeline of the assignment within the course?
• Is this an in-class or online learning event?
• Using synchronous/asynchronous modes?

3. TRUST – the extra ingredient
• In the students (to figure it out) and play their role.
In yourself to share the responsibility for learning with the students.
• In the grounded experience process to promote authentic learning
• If in doubt, ask the students how it’s going!
• Don’t be afraid to make adjustments, even midway through the process.

The intent of this presentation is to demonstrate how active learning strategies can be used in online courses, as well as a traditional classroom, to engage students in developing collaborative learning with real-world cases, problems and simulations. These strategies have proven effective in corporate education and training and clinical settings as well as all levels of formal education.

References


Center for Problem-based Learning: [http://www.imsa.edu/team/cpbl/cpbl.html](http://www.imsa.edu/team/cpbl/cpbl.html)

Biographical Sketch

**Dr. Henry S. Merrill** is the Chairman, Indiana University Department of and Visiting Associate Professor of Adult Education. I have been teaching adult education courses for the last six years, using video-based and web-based formats. Previous phases of my career journey include administrative responsibilities in continuing education, student services and teaching college theater.