

TECHNOLOGY-ENHANCED PROJECT-BASED LEARNING IN A LARGE
UNDERGRADUATE ANTHROPOLOGY LECTURE COURSE

by

ZIA AHMADI

M.A., National Academy for Theatrical and Film Arts
Sofia, Bulgaria, 1981

AN ABSTRACT OF A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

DOCTOR OF PHILOSOPHY

Department of Curriculum and Instruction
College of Education

KANSAS STATE UNIVERSITY
Manhattan, Kansas

2011

Abstract

The goal of this exploratory case study was to answer two questions: 1. How does an exemplary on-campus undergraduate large Introduction to Cultural Anthropology course encompass the PBL learning model characteristics, specifically focusing on the following: 1.1) Driving question, 1.2) Student construction of an artifact, 1.3) Teachers' role, and 1.4) Assessment? 2. How is technology used by the professor, teacher assistants, and students to support project-based learning?

To answer these questions, the researcher studied a large Introduction to Cultural Anthropology class, which consisted of the professor, ten teaching assistants (TAs), and 400 students. The students were divided into 20 recitation sections, with 20 students in each section. Each TA was assigned two recitation sections.

Observations were conducted on twice-weekly Professor's lectures and three once-weekly recitation sessions. Additionally, interviews and follow-up interviews were conducted of the professor, three teaching assistants (TA), and nine students. Finally, documents analyzed included the professor's course materials and course management documents.

With respect to Research Question 1, "How does an exemplary on-campus undergraduate large Introduction to Cultural Anthropology course encompass the PBL learning model characteristics, specifically focusing on the following: 1.1) Driving question, 1.2) Student construction of an artifact, 1.3) Teachers' role, and 1.4) Assessment?", research findings indicated that all four elements of the PBL model were present in this class and were executed well. Research Question 2, "How is technology used to support PBL," findings indicated that advanced technologies were used by the professor for course purposes. These technologies included Wetpaint (the wiki course management system) and Facebook. More conventional

technologies, such as e-mail, were also used for this purpose. Though students were hesitant to use course technology in the beginning. However, with the help of the professor and TA's, the students learned to use the course technology and grew to enjoy it.

Two additional themes emerged through open coding: Emotional Involvement and Non-Participation. First, the TA's and students developed emotional ties to the cultures that they created in their recitation sections. Second, some students did not participate in either the lecture or the recitation sessions. The TAs took non-participation seriously, both in terms of class participation, individually, and in terms of student responsibilities to the group recitation session in culture construction.

TECHNOLOGY-ENHANCED PROJECT-BASED LEARNING IN A LARGE
UNDERGRADUATE ANTHROPOLOGY LECTURE COURSE

by

ZIA AHMADI

M.A., National Academy for Theatrical and Film Arts
Sofia, Bulgaria, 1981

A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

DOCTOR OF PHILOSOPHY

Department of Curriculum and Instruction
College of Education

KANSAS STATE UNIVERSITY
Manhattan, Kansas

2011

Approved by:

Major Professor
Dr. Rosemary Talab

Copyright

ZIA AHMADI

2011

Abstract

The goal of this exploratory case study was to answer two questions: 1. How does an exemplary on-campus undergraduate large Introduction to Cultural Anthropology course encompass the PBL learning model characteristics, specifically focusing on the following: 1.1) Driving question, 1.2) Student construction of an artifact, 1.3) Teachers' role, and 1.4) Assessment? 2. How is technology used by the professor, teacher assistants, and students to support project-based learning?

To answer these questions, the researcher studied a large Introduction to Cultural Anthropology class, which consisted of the professor, ten teaching assistants (TAs), and 400 students. The students were divided into 20 recitation sections, with 20 students in each section. Each TA was assigned two recitation sections.

Observations were conducted on twice-weekly Professor's lectures and three once-weekly recitation sessions. Additionally, interviews and follow-up interviews were conducted of the professor, three teaching assistants (TA), and nine students. Finally, documents analyzed included the professor's course materials and course management documents.

With respect to Research Question 1, "How does an exemplary on-campus undergraduate large Introduction to Cultural Anthropology course encompass the PBL learning model characteristics, specifically focusing on the following: 1.1) Driving question, 1.2) Student construction of an artifact, 1.3) Teachers' role, and 1.4) Assessment?", research findings indicated that all four elements of the PBL model were present in this class and were executed well. Research Question 2, "How is technology used to support PBL," findings indicated that

advanced technologies were used by the professor for course purposes. These technologies included Wetpaint (the wiki course management system) and Facebook. More conventional technologies, such as e-mail, were also used for this purpose. Though students were hesitant to use course technology in the beginning. However, with the help of the professor and TA's, the students learned to use the course technology and grew to enjoy it.

Two additional themes emerged through open coding: Emotional Involvement and Non-Participation. First, the TA's and students developed emotional ties to the cultures that they created in their recitation sections. Second, some students did not participate in either the lecture or the recitation sessions. The TAs took non-participation seriously, both in terms of class participation, individually, and in terms of student responsibilities to the group recitation session in culture construction.

Table of Contents

List of Figures	xii
List of Tables	xiii
Acknowledgements	xiv
Dedication	xv
CHAPTER 1 - INTRODUCTION	1
American Higher Education Undergraduate Large Class Instruction	1
Active Learning in Undergraduate Education	2
Faculty Technology Use in Higher Education.....	3
Computer-Mediated Communication	4
Faculty Use of Social Media in Higher Education	6
Theoretical Framework: Constructivism	7
Project-Based Learning (PBL).....	8
Technology and Project-Based Learning.....	10
Statement of the Problem.....	11
Purpose of the Study	13
Significance of the Study	13
Research Questions.....	13
Methodology	14
Limitations of the Study	14
Delimitation of the Study.....	15
Definition of Terms	15
CHAPTER 2 - REVIEW OF THE LITERATURE.....	17
Chapter Overview	17
Seven Principles for Good Practice in Undergraduate Instruction	17
Constructivism	18
Project-based Learning	21
Project-Based Learning Characteristics	22
Social Simulations	27
Technology and Project-Based Learning.....	28

Current Uses of Technology in Higher Education.....	29
Computer-Mediated Communication (CMC).....	29
Social Media	32
Social Media in Higher Education.....	36
Conclusion	37
Chapter Summary	38
CHAPTER 3 - METHODOLOGY.....	40
Research Questions.....	41
Research Setting	41
Research Site.....	42
A Lecture Class.....	46
Recitation Sections.....	47
Participants.....	50
Professor	50
TAs.....	52
Students.....	53
Data Collection Methods	54
Interviews.....	56
Archival Records	57
Direct Observations	57
Construct Validity.....	59
Avoiding Bias	61
Ethical Considerations	62
CHAPTER 4 - DATA ANALYSIS	64
Chapter Overview.....	64
Research Question 1: Project-based Learning Characteristics: Driving Question	64
The Driving Question for Introduction to Cultural Anthropology	65
Research Question 1.1: Driving Question.....	67
Research Question 1.2: Student Construction of an Artifact.....	73
Research Question 1.2.1 Construction of the Culture Artifact for the World Simulation....	79
Research Question 1.3: Teacher’s Role - Professor.....	96

Research Question 1.4: Assessment – Professor	100
Research Question 2: How is Technology Used to Support PBL?.....	105
Lecture Technology	106
Recitation Technology	107
Web-Based Course Management Technology.....	107
Research Question 2: Technology in Project-Based Learning	109
Additional Themes.....	112
Emotional Involvement.....	112
Non-Participation	114
Summary Chapter 4	116
Research Question 1.1: Driving Question.....	116
Research Question 1.2: Student construction of an artifact	118
Research Question 1.2.1: Student Construction of an Artifact-World Simulation-TAs.....	119
Research Question 1.2.1: Student Construction of an Artifact-World Simulation-Students	120
Research Question 1.3: Teacher Role	120
Research Question 1.4: Assessment.....	121
Research Question 2: How Technology Is Used to Support PBL	122
Summary Additional Themes	124
CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS.....	126
Chapter Overview	126
Research Question 1.1 – The Driving Question (DQ).....	126
Research Question 1.2.1 – Student construction of an Artifact	128
Research Question 1.2.2 – Student construction of an Artifact – World Simulation	129
Research Question 1.2.2 – Student construction of an Artifact – World Simulation	130
Research Question 1.3 – Teacher’s Role	131
Research Question 1.4 – Assessment.....	132
Research Question 2 – How is Technology Used to Support Project-Based Learning?	134
Additional Themes.....	137
Emotional Involvement.....	137
Non-Participation	138

Summary	138
Overall Research Question 1--How does a large lecture course encompass PBL?.....	138
PBL Research Question 1:1. How does the Driving Question (DQ) support Project-based learning?.....	139
PBL Research Question 1:2. Student construction of an Artifact	139
PBL Research Question 1.2.1. Student construction of an Artifact – World Simulation...	140
PBL Research Question 1.3. Teacher’s Role.....	140
PBL Research Question 1.4. Assessment	141
Overall Research Question 2 – How is Technology Used to Support PBL?.....	141
Additional Themes.....	142
Recommendations for Higher Education Faculty.....	143
Recommendations for Future Studies.....	144
References.....	145
Appendix A - Syllabus.....	162
Appendix B - Course Goals and Assignments.....	169
Appendix C - Course Website Screenshots	172
Appendix D - World Simulation.....	175
Appendix E - World Simulation Rules	177
Appendix F - Professor’s Email about the Driving Question.....	184
Appendix G - Professor’s Vitae.....	185
Appendix H - Observation Protocol	197
Appendix I - Professor Interview Protocol	199
Appendix J - Student Interview Protocol.....	202
Appendix K - Student Follow up Questions	204
Appendix L - World Map	205
Appendix M - Table of themes	206

List of Figures

Figure 3.1 A scaled-down version of the world map (From Course Material).....	44
Figure 3.2 The barrel model.....	45
Figure 4.1 Course wiki on Wetpaint screen shot	77
Figure 4.2 Example screen shot of the Intro to Cultural Anthropology	108
Figure 4.3 A sample of TAs Facebook	109

List of Tables

Table 1.1 PBL Goals, from Krajcik, Blumenfeld, Marx, & Soloway (1994).....	9
Table 2.1 Constructivism Versus Traditional Learning Methods.....	20
Table 3.1 List of interviewed students.....	53
Table 3.2 Trustworthiness of the Research. Adapted from Yin (2003).....	60
Table 4.1 Driving Question Categories	69
Table 4.2 Student Construction of an Artifact – TAs	74
Table 4.3 Student Construction of an Artifact – Students	76
Table 4.4 World Simulation – TAs.....	82
Table 4.5 World Simulation – Authentic Learning – TAs.....	82
Table 4.6 Empathy	85
Table 4.7 Hegemony-TAs.....	86
Table 4.8 Culture Artifact Construction-World Simulation	88
Table 4.9 Hegemony	89
Table 4.10 Research Question 1.3: Teacher’s Role - Professor	98
Table 4.11 Teacher’s Role: TAs	99
Table 4.12 Teacher’s Role: Students	100
Table 4.13 Assessment – TAs.....	102
Table 4.14 Assessment – Students.....	104
Table 4.15 How Technology is Used to Support PBL – The professor	110
Table 4.16 How Technology Is Used to Support PBL – The TAs	111
Table 4.17 How Technology Is Used to Support PBL – The Students	112

Acknowledgements

During my time at Kansas State University, I have benefitted tremendously from my association with the faculty, staff, and my colleagues. I am enormously indebted to my dissertation committee: Dr. Rosemary Talab, Dr. Tim Frey, Dr. Tweed Ross, and Dr. Be Stoney. Their invaluable guidance has helped improve this dissertation.

I acknowledge a genuine debt of gratitude to my major professor Dr. Talab for her tireless guidance and motivation as I completed this dissertation.

Also, my sincere thanks to the following: Dr. Diane McGrath, Dr. Mary Evans Griffith, Dr. Bert Biles, Dr. Chandima Cumratunge, Dr. Fred Newton, Dr. Linda Thurston, Dr. John Staver, and all my other colleagues for their contributions to my education.

I owe special thanks to Dr. Michael Wesch, his teaching assistants, and his students who made this study possible.

Heartfelt thanks to my family: my son, Pathang Zia, for his support, Janet Davis for her patience and support during the process of completing this dissertation, and my sister and brothers.

Dedication

I dedicate this dissertation to my father Ahmadullah Ahmadullah for his guidance, to my mother Shahbubu Ahmadullah for her encouragement and support, and to my son Pathang Zia.

CHAPTER 1 - INTRODUCTION

American Higher Education Undergraduate Large Class Instruction

The typical undergraduate experience in higher education includes large lecture classes (Garrison, Anderson, & Walters, 2008, ECAR, 2010), and teaching excellence in these large lecture courses has long been a concern. The majority of faculty has used the college library website (73%), presentation software (PowerPoint, etc.) (75%), learning management systems (71%), and spreadsheets (52%). Twenty-three percent used e-books, and half that or less used collaborative editing software, blogs, plagiarism detection, clickers, games, simulations, and/or virtual worlds. This suggests that nationwide, many instructors continue to teach using lecture-based instruction. Nevertheless, fifty-one percent of students thought that their instructor's use of IT was good or very good, a finding that has been consistent over several years (ECAR: IT and the Academic Experience, 2010, Table 6.1).

In 1987, Chickering and Gamson produced what has been commonly referred to as the "Wingspread report" incorporating the *Seven principles for Good Practice in Undergraduate Education*:

1. Encourages contact between students and faculty
2. Develops reciprocity and cooperation among students.
3. Encourages active learning.
4. Gives prompt feedback.
5. Emphasizes time on task.
6. Communicates high expectations.

7. Respects diverse talents and ways of learning (1987, p. 1).

The report was in answer to calls going forward to provide for “transferable skills” for students in higher education, for more student-centered education, active learning, and the development of critical thinking skills. This report has influenced instruction in colleges and universities, both here and in the United Kingdom (Entwistle, Marton, & Hounsell, 1984). Colleges and universities came to acknowledge that “the knowledge-delivery view” did not accurately reflect how, where, and when [students] learn (Brown & Duguid, 1996).

People leave college knowing not just things, but knowing people, and knowing not just academic facts, but knowing social strategies for dealing with the world. Reliable friendships and complex social strategies can't be delivered and aren't picked up through lectures, but they give an education much of its value. (Brown & Duguid, 1995, p. 10)

The large undergraduate lecture class continues to be problematic, as the sheer numbers most often preclude “... more meaningful instruction and incorporation of new, innovative teaching styles...” (Mehmet, 2006; p. ii). Citing Chickering and Gamson in a recent article, Gay stated that the goal of faculty and administrators is much the same today--to provide new ways of engaging students in their own learning in large undergraduate lecture classes (2010).

Active Learning in Undergraduate Education

Active learning was one of the “Seven Principles for Good Practice in Undergraduate Education” proposed by Chickering and Gamson (1987). These principles synthesized decades of research on undergraduate education and were based on the principle that education is an active, cooperative, and demanding endeavor (Chickering & Gamson, 1991). Chickering and

Gamson (1987) found that students must do more than just listen: They must read, write, discuss, and or be engaged in solving problems.

Using these techniques in instruction has a powerful impact upon student learning. Moreover, studies have shown that students prefer strategies promoting active learning to traditional lectures (Meyers & Jones, 1993; Bonwell & Eison, 1999; Livingstone & Lynch, 2000). Other research studies have evaluated student achievement and demonstrated that many strategies promoting active learning are comparable to lectures in promoting the mastery of content but superior to lectures in promoting the development of students' skills in thinking and writing (Davidson & Worsham, 1992; Bonk & King, 1998; Bonk, Wisher, & Nigrelli, 2004).

Faculty Technology Use in Higher Education

Laurillard (2006) found that technology had become increasingly pervasive and has radically changed many peoples' daily lives. This is evidenced by the abundance of new technologies that have been rapidly adopted including personal computers, the World Wide Web, email, cell phones, instant messengers, digital video recorders, video games, fax machines, global positioning systems, video conferencing units, and online teaching and learning.

Technology has also been an important change agent in higher education. Shirley Ann Jackson (2004), President of Renssalaer Polytechnic Institute, stated in a recent article the challenges caused by technology that have profoundly impacted higher education:

In higher education, the pedagogical, research, and administrative changes necessitated by new technological capabilities and methodologies are profoundly affecting the work and methods of scientists, engineers, and administrators. Colleges and Universities *must* evolve to meet the new challenges. (Jackson, p. 11)

Even so, there has been continued limited acceptance of technology in instruction in higher education (Haas & Senjo, 2004). By definition, Educational Technology is “the study and ethical practice of facilitating learning and improving performance by creating, using, and managing appropriate technological processes and resources” (Januszewski & Molenda, 2008, p. 1). Roblyer (2006) stressed that the processes and tools in Educational Technology should be involved in addressing educational needs and problems with “an emphasis on applying the most current tools: computers and other electronic technologies” (p. 9).

Yet Garrison and Vaughn (2008) contended that the effective integration of technology into university classrooms has remained a major challenge for professors. This conclusion was reinforced by the CW Government study (2008):

Among the more significant barriers to improved technology use in colleges and universities are faculty members' [un]willingness and [in] ability to use the technologies available to them. (Nagel, 2008, p. 2)

Computer-Mediated Communication

Overall, the use of technology, particularly the internet, has become increasingly popular in higher education. Since the 1960s and 1970s, higher education institutions have been attracted to computer-mediated communication and more specifically to computer conferencing (both synchronous and asynchronous) as a versatile medium for the delivery of educational programs (Ponta, et al., 2003; Garrison, 2000).

The term “Computer-Mediated Communication” (CMC) was coined by Mason and Kaye in 1989. CMC refers to a variety of systems that “enables people to communicate with others separated in space and/or in time, via computers and networks (McPherson & Nuns, 2004, p. 84).

McIsaac & Gunawardena (1996) further defined CMC as a process by which people create, exchange, and perceive information using networked telecommunications systems (or non-networked computers) that facilitate encoding, transmitting, and decoding messages. Thus, CMC could be achieved by computers connected to a local network or to the Internet. In sum, the Internet facilitated communication among different parties that were separated from each other in space and in time (Jonassen, et al., 1995; Romiszowski & Mason, 2004).

Early on, the concept of the internet as a place where learners converged to collaborate and exchange knowledge as a community was expected to transform the field of education (Kozma & Schank 1998). Educators initially expected global networks to be formed in which learners could participate in collaborative learning tasks (Cummins & Sayer, 1995). This change in thinking resulted in technology-assisted collaborative PBL that utilized internet-based student collaboration technologies in a constructivist orientation (Kramer, et al., 2007).

Accordingly, CMC became increasingly used for instruction in university undergraduate education. In particular, computer conferencing (both synchronous and asynchronous) has proved to be a versatile medium by which to deliver educational programs (Ponta, et al., 2003; Garrison, 2000). Jacqueline Taylor (in Hazemi, 2002) reported on the benefits of CMC in undergraduate classes:

1. Enhanced student interaction for traditional learners and improved communication support for remote learners;
2. Critical reflection – leading to more informed contributions from students;
3. Enhanced team and communication skills; and
4. Access to new ideas, perspectives, and cultures (p. 125)

Faculty Use of Social Media in Higher Education

The concept of the internet as a place where learners converge to collaborate and exchange knowledge as a community was expected to transform education (Kozma & Schank 1998). This initial expectation generated the idea that global networks could be formed where learners could participate in collaborative learning tasks (Cummins & Sayer, 1995). These global networks then splintered into university learning management systems (LMS), cloud computing, and a host of other educationally dedicated networked technologies (Benkler, 2006; Surowiecki, 2005).

Also, teaching excellence using technology has become an even greater concern as universities strive to provide relevant experiences for “digital native” (Prensky, 2001) college undergraduates who use social networking, web 2.0, and other technology tools with ease outside the classroom (Hird, 2000; Rogers, 2000; Davis, 2010; Prensky, 2010). Accordingly, McCombs and Vakili (2005) reported that “updated learning and schooling models and the increased use of new and emerging electronic learning technologies” (p.1) were important. In a study in 2008 (Nagel), students stated on surveys that technology skill was “important” or “very important” in college application decisions and future academic success.

A full 63 percent of students reported that they use technology every day to prepare for class, while only 24 percent reported that they used it every day in class. Seventy-five percent use laptops; 60 percent use social networking sites, such as Facebook, MySpace, and Twitter; and 58 percent use iPods or MP3 players of some kind. (Nagel, 2008, p. 2)

However, Nagel (2008) also found that, 55% of professors did not know how to use the technology provided to them. Additionally, though colleges and universities saw campus technology as a “competitive advantage” in attracting and retaining high quality students, few

faculty members taught using the technology that students used every day outside of the classroom. Richards (2010) stated the situation well, emphasizing that apart from the use of blogs as a kind of reflective journal and some educational wikis (e.g., Anderson, 2007; Churchill, 2007), there was little applied use of a wider Web 2.0 concept of ‘online social networking’ in education.

Theoretical Framework: Constructivism

When students are engaged in groups working on projects, they exchange ideas with each other and learn from each other’s experience, both face-to-face and through social media, such as Facebook, Second Life, Twitter, Diigo, and Meebo Me. Such investigation creates a community of inquiry that includes students and teachers, and can involve other members of society as well, in constructing the project. When students engage in learning in this manner, they can be said to engage in constructivist learning.

Constructivism is a theory of learning based on the belief that learners construct their own knowledge and meaning from their past experience (Wilson, 1996; Phillips, 2000). Based on his (or her) social development theory (1978), Vygotsky asserted that learning was a social phenomenon; the learner first learns by observing and listening to others. With the help of others, the learner begins to internalize and apply the knowledge when he or she cannot do so without being aided. The knowledge then becomes fully internalized and can function alone. Jonassen (2003) also defined learning as “knowledge construction.” (pp. 104-108) He asserted that individuals make sense of the world that they come in contact with and construct their own “representations or models of their experiences.” Project-based learning employs this approach in the construction of the final artifact. Burns-Sardone (2008), in a study of undergraduates in a large computer fundamentals course, recommended that

College instructors consider using the following constructivist methods of instruction: student presentations, simulations and game play, peer feedback, development of online portfolios, reflective writing exercises, class discussions, group work, and problem solving activities (p 94).

Further recommendations included raising challenging questions, promoting discussion, using varied media effectively, and providing challenging assignments. When students engage in learning in a group and by constructing an artifact, then they can often be said to engage in project-based learning, which has its roots in the theory of constructivism (Bransford, et al., 2002; Barron, et al., 1998; Blumenfeld, et al., 1991; McGrath, 2002; Moursand, 2003; Sole & Schrader, 2007).

Project-Based Learning (PBL)

PBL, arising from the theory of constructivism, is a type of active learning that engages learners in “relatively long-term, problem-focused, and meaningful units of instruction that integrate concepts from a number of disciplines or fields of study” (Blumenfeld et al., 1991, p. 370). Ames (1992) found that extrinsic and competitive rewards led to learning and demonstrating the minimum required. Unlike traditional classroom practices, PBL’s rewards are intrinsic and non-competitive. “Students in PBL classrooms...exhibited a higher degree of motivation” (Sylvester, 2007, p. 3). PBL, for example, is a common theme in undergraduate Engineering, Business, and Nursing education. In support of this approach, Savage, Chen & Vansupa (2008) found that on-time completion of senior projects rose to one hundred percent with PBL, and student retention also rose fifteen percent in one year.

In PBL, students demonstrate their knowledge of specific content by designing and building artifacts. An artifact can be an object, a website, a poster, a multimedia presentation, a computer program, a film, a documentary, a culture, or a host of other student-designed constructions. Having constructed an artifact, students are then able “to share their product of learning with an audience that goes beyond the teacher” (Conway, J. 1998. p. 1). Table 1.1 identifies the two main goals of Project-Based Learning.

Table 1.1 PBL Goals, from Krajcik, Blumenfeld, Marx, & Soloway (1994).

- A “driving question,” which is authentic and engaging, and that organizes the scenario being studied.
- Student generated artifacts, or products, which address the driving question and are presented to an authentic audience.

PBL is distinguished from traditional teacher-centered instructional mode by its support of authentic learning and assessment. Judith Conway (1998) describes authentic learning as activities in which students are involved that solve a real-life problem, which can last for a day or extend over a long period. For example, engineering students developed a year-long project on the design of either a solar-based hot water heater or an emergency water purification system at Cal Poly University (Savage, Chen & Vanasupa, 2008). To complement such project-based learning, technology has been introduced and analyzed (Jonassen, 2003, Bransford; et al., 2002; Wingard, 2009).

Technology and Project-Based Learning

Effective use of technology enhances active, project-based learning. Blumenfeld et al. (1991) asserted that technology could play an important role in enhancing student and teacher motivation to do projects and assisting learners and teachers to carry out projects. Students enjoy participating in PBL with technology because project questions are perceived as challenging, realistic, valuable, promoting interaction, and culminating in authentic artifacts.

Technology can enhance challenge, variety, and choice by providing multiple levels of tasks to match student knowledge and proficiency, [give] access to numerous sources of information that allow breadth in project questions, and offer many possibilities for artifact production. Moreover, tasks may be perceived as more authentic by students because the computer can access real data, can expand interaction and collaboration with others via networks, and [can] emulate tool use by experts to produce artifacts. (Blumenfeld, et al., 1991, p. 384)

Eskrootchi (2001) found that in a technology supported project-based learning environment, student conceptual comprehension improved. Using computer technology as a cognitive tool in PBL also enables student to attain a deeper understanding of the process (Yang, 2007; Sylvester, 2007). For example, if a learner develops a computer model, the activity mirrors the learner's mental development and understanding. In fact, creating the artifact is an interactive process that "provides deep involvement in the topic and consequently deep understanding of the subject" (Eskrootchi, 2001, p. 133).

In particular, integration of technology into teaching with PBL enhances students' learning by encouraging collaboration. Internet-based synchronous channels, such as instant chat utilities, and asynchronous communication, such as discussion group, blogs, or news

groups, also can be utilized “to keep all learners of a learning group up to date” (Yang, 2007, p. 175).

Statement of the Problem

Large undergraduate classes are a reality in universities and colleges today as higher education institutions are pressured to be more cost-effective by enrolling more students. Palloff & Wulff (2005) found that large classes often reduced institutional costs although they also often created a negative reaction among students and teachers (MacGregor, 2000; McKeachie, 1994). Moreover, for students to learn, they need to be engaged in the learning process (Bligh, 2000). In 1995, Ernest Boyer, President of The Carnegie Foundation, remarked on the condition of higher education:

The American system of higher education has become less elite; students (and parents) have developed their own, often vigorously asserted, ideas about education and credentialing rather than accepting traditional modes without question; a much greater range of undergraduate professional degrees has become available; the freshman year has too often been reduced to remediation or repetition of high school curriculum, rather than [being] an introduction to a new and broader arena for learning. (Boyer Commission 1998, p. 1)

Eight years later, in 2006, the commission reported that no radical changes had taken place in higher education in the United States.

Even so, for the most part fundamental change has been shunned; universities have opted for cosmetic surgery, taking a nip here and a tuck there, when radical reconstruction is called for (Boyer Commission 2007).

Institutions of every stripe are grappling with responses to these issues by adapting their strategies and activities (National Research Council, 2002). Typically, in large classes, instruction is often teacher-centered, and the students' role is passive, which results in "apathy, absenteeism, and poor performance" (Michaelson, 1983, p. 13). However, John Seely Brown, the eminent former Chief Xerox Scientist, and Paul Duguid, author of the *Social life of information*, noted that

...as an acquaintance suggested to George Landow, hypertext champion and author of *Hypertext: The Convergence of Contemporary Critical Theory and Technology*, it's just a matter of lag: "It took only 25 years for the overhead projector to make it from the bowling alley to the classroom. I'm optimistic about academic computing; I've begun to see computers in bowling alleys" (Brown & Duguid, 1996, p. 10).

Technology-assisted project-based learning has been found to enhance active learning in a small undergraduate course (Yang, 2007). Additionally, project-based learning has been found to increase both students' perceptions of course satisfaction and academic rigor in a large undergraduate lecture course (Burns-Sardone, 2008). However, little is known about how to successfully incorporate project-based learning through technology into large undergraduate courses (Yang, 2007). To date, no dissertations have been conducted on technology-enhanced project-based learning in a large undergraduate university class. Yet research is needed to create a model to provide a more active, authentic, and technology-enhanced undergraduate experience that employs the *Seven principles for good practice in undergraduate education*.

Purpose of the Study

The purpose of this research was to study an exemplary undergraduate Introduction to Cultural Anthropology large lecture course that used project-based learning and technology in order to learn more about how these were incorporated into teaching and learning.

Significance of the Study

While the higher education community recognizes the need for research on active learning in large undergraduate lecture classes (Garrison & Vaughn, 2008), there is a lack of empirical data and analysis of technology-assisted project-based learning in undergraduate large class instruction. Of the four dissertations found on project-based learning in higher education (Milner-Botlotin, 2001; Powell, 2002; Thomas, 2002; Yang, 2007), none studied a large lecture class. Of the six dissertations on large lecture classes (Blair, 2003; Burns-Sardone, 2008; Karakas, 2006; Lewis, 2006; Meldrum, 1990; Reid-MacNevin, 1994), none studied project-based learning. Ideally, research findings from this study can facilitate discussion on improving undergraduate large class instruction and contribute to the research on the effectiveness of project-based learning using new technologies. Accordingly, the research focuses on answering the following two targeted questions.

Research Questions

1. How does an exemplary on-campus undergraduate large Introduction to Cultural Anthropology course encompass the PBL learning model characteristics, specifically focusing on the following: 1.1) Driving question, 1.2) Student construction of an artifact, 1.3) Teachers' role, and 1.4) Assessment?

2. How is technology used by the professor, teacher assistants, and students to support project-based learning?

Methodology

This was a naturalistic, exploratory case study (Yin, 2003); its relevant research literature provided a theoretical foundation and a framework for this study. The intention of this current study was not to make an across-the-board generalization, but to explore a deeper conceptual understanding of technology-assisted project-based teaching in a large undergraduate university lecture course. In support of this approach, Stake (1995) asserted that an exploratory case study offered the opportunity to maximize what could be learned, knowing that time is limited.

Limitations of the Study

Case study narratives, if not written carefully, can oversimplify or exaggerate phenomena and lead the reader to erroneous conclusions. To be successful, such narratives depend on the sensitivity and integrity of the researcher (Merriam, 1988, p. 33). Moreover, single case studies do not lend themselves to generalization or transfer to other situations. Still, Stake countered that naturalistic generalizations were possible, generalizations made by the reader while reading the write-up. While a multiple case study would address these issues, there was only one Introduction to Cultural Anthropology large lecture course per semester taught by this professor. Additionally, while the World Simulation stayed the same, the social media and other technologies used varied enormously from semester to semester, thus making generalizations about the technologies used in assisting project-based learning impossible to study, except in the aggregate.

Finally, this study had two specific limitations: First, it would have been better informed if all discussions, recitation sections, and lectures could have been observed and analyzed. Second, student use of technologies for personal communications for completing assignments for this class, such as Facebook, e-mail, the class wiki, and other means, were not available for analysis.

Delimitation of the Study

The recitation cultures resident on the Wetpaint Wiki were too large (approximately 6 gigabytes each of video, images and sound files) to be archived and analyzed or to undergo qualitative data analysis using existing qualitative research programs (AQUAD, HperRESEARCH, NVivo, Nudist, QUALPRO, etc.).

Definition of Terms

Asynchronous Communication: Communication in which interaction between parties does not take place simultaneously (Simonson, 2000).

Computer-mediated communication (CMC): “The use of the computer as a device for mediating communication between teacher and students and among students, often over distances” (Newby, 2000, p. 292).

Instructional design: The entire process of analysis of learning needs and goals learning needs and goals and the development of a delivery system to meet the needs; includes development of instructional materials and activities, and tryout and revision of all instruction and learner assessment activities (Briggs, 1979).

Listserv: An automatic mailing list server application developed by Eric Thomas for BITNET in 1986. When e-mail is addressed to a listserv mailing list, it is automatically broadcast to everyone on the list.

Social media “a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of user-generated content” (Kaplan & Haenlein, 2010, p.).

Synchronous Communication: Communication in which interaction between parties takes place simultaneously (Simonson, 2000).

Wiki: “[G]roup communication software that allows users to create and edit webpages very quickly using any browser” (Mason, 2006, p. 130). This class used the Wetpaint wiki.

CHAPTER 2 - REVIEW OF THE LITERATURE

Chapter Overview

This chapter reviews the literature related to this study, specifically information in books, dissertations, online resources, journal articles, reports, online resources, ProQuest Database searches, ERIC documents, and other publications. The literature review addressed the following major areas: “Seven Principles for Good Practice in Undergraduate Instruction,” constructivism, project-based learning, technology and project-based learning, computer-mediated communication, selected social media, and social media in higher education.

Seven Principles for Good Practice in Undergraduate Instruction

In 1987, Chickering and Gamson published the “Seven Principles for Good Practice in Undergraduate Instruction.” Based on 50 years of research in higher education, these principles have become a popular framework for evaluating teaching and learning in traditional, face-to-face undergraduate university courses (Graham, et al., 2001).

The “Seven Principles for Good Practice in Undergraduate Instruction” embody guidelines for effective teaching and learning. These principles assert that “good practice does the following:

1. Encourages contact between students and faculty
2. Develops reciprocity and cooperation among students.
3. Encourages active learning.
4. Gives prompt feedback.
5. Emphasizes time on task.

6. Communicates high expectations.
7. Respects diverse talents and ways of learning.” (Chickering, et al., 1987, p. 1)

Findings from research suggest that students must not only listen but also be “actively involved.” They ought to readily, discuss, write, or engage in problem-solving (Bonwell, et al. 1991, p. 1). This finding conforms to the constructivist theory of learning.

Constructivism

The term constructivism describes student-centered, process-driven, and highly interactive instructional practices (Prawat, 1996; von Glasersfeld, 1995). According to constructivism, learning is characterized as a process of active knowledge construction not passive knowledge reception. Philips (2000) asserted that:

Constructivism refers to a set of views about how individuals learn (and how those who help them to learn ought to teach)...That learners actively construct their own (“internal,” some would say) sets of meanings or understandings; knowledge is not a mere copy of the external world, nor is knowledge acquired by passive absorption or by simple transference from one person (a teacher) to another (a learner or knower). In sum, knowledge is *made*, not *acquired*. (p. 7)

Students absorb such new information into pre-existing mental structures. Based on their prior experience, they modify their personal interpretation in light of new information and experience (Jonassen et al., 1995).

Constructivism has become increasingly popular as a theory and teaching methodology in recent years (Philips, 2000). While there are varied interpretations and applications of constructivism, constructivist classrooms and constructivist instruction are identified as authentic

and as student-centered (Jonassen et al., 1995). Constructivist teachers create relevant environments in which learning is functional (Honebein, 1996). The teacher is perceived as a facilitator rather than as a transmitter of knowledge. The role of the teacher is not to give knowledge but to provide the learners with opportunities to construct meaning (von Glasersfeld, 1996).

The belief that learning is a social process is based on the work of the psychologists Piaget and Vygotsky. Piaget proposed “social-constructivism,” which argued that learning is an individual process yet is influenced by participation in social activities. Vygotsky proposed the socio-cultural approach, which argued that learning is socially situated and is considered as a social process (Kock, Slegers, & Voeten 2004). Essentially, Vygotsky (1987) proposed that learning is a social phenomenon. According to Vygotsky, a learner first learns by listening and observing others and with the help of others, then begins to internalize and apply the knowledge where he or she cannot do so without being helped. Hence, the knowledge becomes fully internalized, and the learner can function by herself or himself. In this fashion, learning takes place when instruction is designed to assist the learner to enter and progress across the zone of proximal development (ZPD) (Newman, Griffin, & Cole, 1989). According to Vygotsky, the ZPD is the range of activities beyond the capabilities of the learner alone but that can be accomplished in collaboration with more capable individuals.

Learners depend on different sources of information with different perspectives on the topic (Hird, 2000). In particular, interaction and talk with others provokes cognitive dissonance, which Piaget (1972) believed was crucial to inspire learners to consider others’ ideas and probably change their own ideas.

Jonassen (1999) compared the traditional learning methods to the constructivist methods (see Table 2.1).

Table 2.1 Constructivism Versus Traditional Learning Methods

	Constructivist	Traditional
Knowledge	Constructed, emergent, situated in action or experience, distributed	Transmitted, external to knower, objective, stable, fixed, decontextualized
Reality	Product of mind	External to the knower
Meaning	Reflects perceptions and understanding of experiences	Reflects external world
Symbols	Tools for constructing reality	Represents world
Learning	Knowledge construction, interpreting world, constructing meaning, ill-structured, authentic-experiential, articulation-reflection	Knowledge transmission, reflecting what teacher knows, well-structured, abstract-symbolic, encoding-retention-retrieval, product-oriented
Instruction	Reflecting multiple perspectives, increasing complexity, diversity, bottom-up, inductive, apprenticeship, modeling, coaching, exploration, learner-generated	Simplify knowledge, abstract rules, basics first, top-down, deductive, application of symbols (rules, principles), lecturing, tutoring, instructor derived and controlled, individual, competitive

The core characteristics of project-based learning promote communication between teachers and students, student collaboration, teacher feedback, task completion, production of a

quality artifact, and an interdisciplinary nature. Hence, the “Seven Principles for Good Practice in Undergraduate Instruction” and project-based learning complement each other.

Project-based Learning

Project-based learning (PBL) is an instructional method that combines complex tasks based on challenging questions or problems that involve the students' problem solving, decision making, investigative skills, and reflection in “real-world” situations (Barron, et al., 1998; Blumenfeld, et al., 1991; Moursand, 2003). Sole and Schrader described PBL as a pedagogical approach that “prepares students for the real world through active process that teaches critical thinking, problem solving, teamwork, negotiation skills, consensus-building, technology, and responsibility for one’s own learning” (Sole & Schrader, 2007, p. 1).

PBL promotes active engagement of the student in deeper levels of thinking, understanding, and interpretation (Harada et al., 2008). It uses teacher facilitation, but not teacher direction, and students work together to achieve goals. For example, students may be asked to develop a way to save endangered species in their area, such as Bald Eagles in Wyoming. David Moursand developed the concept of “project-based learning” for use in education (McGrath, 2002). Its predecessor, problem-based learning, is used in the medical and business fields (Moursand, 2003).

Project-based learning is a broader instructional method than problem-based learning. “While a project may address a specific problem, it can also focus on areas that are not problems” (Moursand, 2003, p. 9). A fundamental characteristic of project-based learning is that it does not focus on learning about something. Rather, it focuses on creating and carrying out a project to provide a solution and to produce an artifact. Learners are asked to build a model of a

mini-golf course or to build a desk. In the process of creating these projects, students are researching, planning, designing, collecting materials, constructing artifacts, evaluating the artifact, and troubleshooting. After the completion of the project, the students are then asked to make a presentation about their artifact and what they have learned (Blumenfeld, et al., 1991).

Project-Based Learning Characteristics

Bob Pearlman, Director of Strategic Planning for the New Technology Foundation in Napa, California, and long associated with school reform, credits the Autodesk Foundation for publications in the 1990s that brought Project-Based Learning to the attention of educators. He asserted that PBL changed education in the 1990's by "establishing real-world context, adult connections, student exhibitions, and world-wide publications via the WWW, and authentic assessment" (Pearlman, 2008, p.).

The most common characteristics of PBL are the following:

1. A Driving Question
2. Student Construction of an Artifact - Learning by Design
3. Teacher's role
4. Assessment

Driving Question

In PBL, Blumenfeld, et al. (1991) stated that a project has two essential components, the question and the artifact(s):

....a driving question or problem... serves to organize and drive activities; and these activities result in a series of artifacts, or products, that culminate in a final product that addresses the driving question. (Blumenfeld et al., 1991, p. 4)

Driving questions address the big ideas of the curriculum and guide student investigation and thought in learning about a subject. Moreover, driving questions ensure that students encounter and struggle with complex concepts and principles (Blumenfeld et al., 1991; McGrath 2005). A driving question is central to the discipline; it is doable, important to the learner, challenging, and it determines the scene for the project (McGrath, 2003). In short, the driving question clarifies what the participants will accomplish by embedding the content to be studied (Grant, 2002).

A driving question may arise from a variety of sources:

- The teacher may pose a question.
- A learner may choose a question of personal interest.
- The teacher and learner may negotiate a question of mutual interest.
- Student groups can negotiate a mutual interest.

PBL rests on the identification of genuine rather than prescribed or simulated questions (Blumenfeld, et al., 1991; Brown & Duguid, 1989).

Student Construction of an Artifact

In the traditional classroom setting, students demonstrate their knowledge by taking tests or writing papers (Postman, 1971; McGrath, 2003). In PBL classrooms, students are asked to work individually or in groups on projects. A project culminates in the construction of a product, which is widely referred to as an artifact. Blumenfeld, et al. (1991), clarified the term “artifact” as a sharable and “critiquable” externalization of students’ cognitive work in classroom. The term “artifact” is used as a synonym for the term “product”.

Perkins (1986) proposed that teachers look at the knowledge itself as a design.

According to Perkins (1986) when a product is designed, it must answer the following:

1. What is the design purpose?
2. What is its structure?
3. What are the model cases of it?
4. What are arguments that explain and evaluate it? (p. 5)

Blumenfeld et al., (1991) stated that it is critical for the driving questions' outcome not to be predetermined, which may limit the opportunity for the students to develop their own approaches to answering the question. Students must have the autonomy to “generate artifacts,” because in this way, students construct their knowledge through the design and development of the artifact. Additionally, artifacts are concrete and explicit, for example, a webpage, a computer program, a video, a physical model, a multimedia project, a robot, a YouTube video, and others. Ultimately, artifacts are to be shared and critiqued.

Clearly, projects must be doable and manageable; therefore, they must be allotted enough resources and time for completion (Good & Brophy, 1991; Blumenfeld, 1991). During the construction process of the artifact, teachers have the opportunity to offer formative evaluation and feedback (McGrath, 2003).

One of the most important aspects of construction of the artifact is the design of the project. PBL is a good representation of learning by design. Viewing knowledge as design helps teachers to understand a student's knowledge, rather than looking at knowledge merely as information. Knowledge as design also helps teachers distinguish between the students' ability to produce and create knowledge as opposed to receiving knowledge from an authority. Students are not passively absorbing wisdom from others; instead, they are “using complex and highly

personal processes of analysis and synthesis, replete with trial and error, as they work to create a project” (Balestri, Ehrmann, & Ferguson, 1992, p. 2). In this scenario, learners are given the opportunity of attending to intricate issues such as the expectations of their intended audience. They experience a feeling of “responsibility and closure,” and as such, they pose challenging questions, such as “What is my goal?”, “Are my ideas and materials the most efficient for the task?”, “Is my creation beautiful?”, and “Does it work?” Balestri, et al. (1992) characterized designing as *constructive*, in that learners produce an artifact according to specifications, and *creative*, in that it requires a novel response. Han and Bhattacharya (2001) depicted learning by design as an essential feature of PBL, which empowers the teachers to become active designers of curriculum and facilitators of learning.

Teacher’s Role

In a traditional classroom, students mostly do what the teacher directs them to do. Regardless of the subject, whether it is science, language, math, or anything else, students are asked to provide the “right answer” (Postman & Weingartner, 1971). They argued that the content of such courses is rarely remembered beyond the last quiz. The learning that takes place in the classrooms is also infused by the physical arrangement of the classroom itself, where student chairs are arranged in neat rows, and the teacher is in front of the classroom (Postman, et al., p. 20, 1971). Goodlad (1984) reported that teachers in traditional instructional frameworks dominated class discussion 95 to 99 percent of the time.

In contrast, in PBL environments the role of the teacher gradually diminishes from that of an authoritarian to that of a facilitator (Means & Olson, 1995; Moursand, 2003). Thus, the teacher is no longer the center of attention as the dispenser of information. In PBL environments, students work on their projects individually or in groups, where student-student

interaction is high. Indeed, students talk with each other. The “new role” of the teacher is to visit student groups to scaffold their efforts (McGrath, 2003). Such scaffolding provides abundant assistance early on and gradually evolves to where students take on more and more responsibilities. Perkins (1986) asserted that the teacher varies the degree to which coaching, modeling, reminders, suggestions, examples, and problem dissections take place. The teacher’s objective is to engage the students so they can gain ownership of their learning and increase their confidence in their capabilities. The role of the teacher becomes that of a facilitator who sets the project goals, provides resources, and, through continuous, formative assessment, provides guidance to individual students or to groups of students.

Assessment

Often, the terms “assessment” and “evaluation” are used as synonyms, yet there are significant differences between “assessment” and “evaluation”. For instance, Zvacek stated:

Assessment refers specifically to the measurement of learning gains, whereas evaluation implies a judgment that may be made based on assessment information. Data from assessments [are] not good, bad, or ugly but are evidence to support an evaluative statement of significance or quality (Zvacek, 1999, p. 39).

The function of assessment is not to collect data and produce results. Instead, assessment “is a process that starts with the questions of decision-makers, that involves them in the gathering and interpreting of data, and that informs and helps guide improvement” (Knight, 2002, p. 15). McDowell (1995) reported that assessment methods such as non-conventional exams, oral presentations, group projects, and peer assessment are more and more being used in higher education to advance more realistic and meaningful assignments and provide richer and more decisive indicators of students' accomplishments.

Learning through PBL is different from traditional learning. It also poses a challenge for teachers to evaluate, since much of the assessment, other than the final artifact, lies in the process. In contrast to traditional teaching, where the focus is on one problem or seeking an answer to a question, PBL teaching is an active process that encourages student-directed learning. The challenge of assessment in PBL lies in the construction of artifacts that represent students' learning. It is also important for the teacher to provide feedback that is constructive and authentic to the objectives of the project.

Additionally, in project-based learning courses, students are presented with challenges and opportunities that students in traditional settings may not encounter (Murphy & Gazi, 2001). Collaborative learning is considered the chief element of constructivism, and it is fostered in project-based and simulation game activities (Romiszoski, 1997).

Social Simulations

The term "simulation" is described as a model of reality, either a simplified model or a highly complex model (Colin, 1981). Simulations are frequently used in PBL. Williams and Pope (1976) asserted that a "simulation activity" as a reproduction of reality in which learners participate as elements or members of the simulated reality. The type of simulation may involve a single individual or a group of individuals.... It is an operating model that displays processes over time and may develop dynamically, as opposed to having predetermined behaviors and outcomes (p. 3).

The use of games and simulations in the study of social processes has increased considerably. Colin (1982) states that "social simulations tend to mirror the processes that occur in society, such as social class behavior, work patterns, and problems concerned with race,

prejudice, and discrimination...” (p. 2). PBL’s use of social simulations adds not only authenticity and relevance to teaching and learning, but also encourages students to construct their learning using constructivism theory and practice.

Simulations are used in undergraduate education in a variety of disciplines, such as Business, Engineering, Chemistry, and Physics, and there are several dissertations on this topic (DeJoy, 1998; Lunce, 2007; O’Brien, 2008; Rockstraw, 2007). The findings of these studies attest to the benefits of simulations in promoting transfer, engagement, motivation, and increasing self-efficacy. Additionally, games and simulations have proven successful, because they encourage students to think in terms of “models and abstractions, thus improving their ability to theorize” (Kovalik & Kovalik, 2002, p. 3).

Technology and Project-Based Learning

Twenty-first century learning should involve technology use (ECAR, 2010; Roblyer, 2006). When properly used, technology can increase student achievement (Berman, 1997) and positively affects achievement across all learning domains and ages (Protheroe, 2005). When properly developed, project based technology can enhance a constructivist approach to teaching and learning (Means & Olson, 1995). Further, Sheingold and Hadley (1990) asserted that learning can be most successfully achieved when active learning and well-integrated uses of computer technology are utilized together. Hannifin and Land (1997) reported that numerous PBL technology-enhanced learning “environments have been developed, ranging from situational, problem-based approaches (e.g., Jasper Woodbury Series, Voyage of the Mimi), to micro worlds (e.g., Logo, Project Builder), to specialized manipulation tools (e.g., Geometer’s Sketch Pad)” (p. 168).” Technology-rich environments are well-suited to project-based learning approaches in undergraduate instruction.

Current Uses of Technology in Higher Education

The advances in technology over the past decades have influenced the evolution of computers and their related technologies into powerful information systems with high-speed connectivity to world-wide communications networks. These networks enable data, graphics, video, and other forms of information to be readily available to users across the globe (Duderstadt, 2002). Despite the fact that technology use in higher education has been slow to be adopted, Computer-Mediated Communication and Learning Management Systems (LMS) are used by the majority of professors and instructors in university teaching (ECAR, 2010; Ponta, et al., 2003; Duderstadt, 2002; Garrison, 2000).

Computer-Mediated Communication (CMC)

Computer-Mediated-Communication (CMC) is a process by which people gather, create, exchange, and perceive information through networked telecommunication systems that aid in encoding, transmitting, and decoding messages (Romiszhowski & Mason, 2004; Lewis, et al, 1995). According to Gunawardena (2004), CMC affords three types of internet-based services: electronic mail (email), computer conferencing, and online databases. These services are useful to educators in building learning communities around course content. Until recently, e-mail between teachers and students and among students has been the basic form of online communication. Moreover, online databases allow students to retrieve information, construct their own knowledge bases, and contribute to the community. Computer conferencing is a collaborative environment which facilitates learning through discussion and exchange of ideas.

(Gunawardena, 2004). Ultimately, CMC grants users unlimited potential for exposure to new or different beliefs or cultural values (Lewis, et al, 1995), and it occurs in two domains: synchronous and asynchronous.

Synchronous Communication

Synchronous (real-time, same-time) communication happens between people in face-to-face discussion, telephone conversation, live television or radio conferencing, instant messaging, or live chat rooms (Romiszowski, 2004). Synchronous conferencing occurs when two or more computers are connected to each other, enabling users to communicate with each other at the same time. Users can share text, audio video, and other electronically created files. The common synchronous computer conferencing systems are Internet Relay Chat (Instant Messaging), Desktop Conferencing, and Whiteboards.

1. Internet Relay Chat (IRC): facilitates interaction through typed messages among groups of users. The two main extensions of IRC are instant messengers (IMs) and chat rooms.
2. Chat Room: Most online course management programs afford some sort of synchronous (real-time) communication, one of them being chat rooms. The channel or environment in which two or more users communicate at the same time is called chat room.
3. Instant Message: Abbreviated IM is a type of communications service that enables a user to create a private chat room with another individual to communicate in real time over the Internet. This is analogous to a telephone conversation but uses text-based, not voice-based, communication. Typically, the instant messaging system alerts you somebody on your private list is online. You can then initiate a chat session with that individual.

Synchronous communication is a time-dependent delivery format. In a university setting, the instructor and students all meet in a live chat room at the same to discuss class matters. In

sum, synchronous communication provides the opportunity for rapid feedback and simultaneous exchange of ideas (Lehmann, 2007; Newman, 2007; Botti-Salitsky, 2005).

Asynchronous Communication

Asynchronous (not at the same time, delayed) communication occurs without users having to be simultaneously at a particular place or time (Lewis, 1995; Jonassen, 2000). Telephone answering machines, fax machines, and postal correspondence are forms of asynchronous communication, and most forms of Computer-Mediated-Communications are asynchronous. “Users leave notes, papers, pictures, or any other type of communication for each other that is encoded into digital form, transmitted, and later decoded” (Jonassen, 2000, pp. 245-268).

Electronic Mail (one-to-one, and one-to-many)

Electronic mail (email), a service provided through computer networking, enables people to use email whether they are on a Local Area Network (LAN) or connected to an Internet Service provider (ISP). Email is the most common form of CMC. An email message can include characters and numbers, can be about any subject or topic, and can be sent to the recipient. Most email programs allow users to attach formatted text documents, digital pictures, digital video clips, and other electronic documents (Jonassen, 2000).

Email among students and between student and instructor presently forms the fundamental online form of communication (Gunawardena, 2004). It can facilitate a number of learning techniques, such as basic communication, syllabi, student agreements, mentorship and apprenticeship, and correspondence study. Teachers can directly contact students to set goals, schedules, timelines, and learning objectives with students. Conversely, students can send

questions to the teacher and ask for help via email instead of finding common time to meet face-to-face or play phone tag for days or weeks. Obviously, the delivery of course materials is much faster by email rather than by traditional postal services (Cady 1995; Jonassen, 2000; Moore, Winograd, & Lange, 2001).

Threaded Discussions

Threaded discussions are a form of asynchronous communication that provide public forum or communication space to which learners can subscribe. In this way, teachers and learners can contribute ideas to the group. These text-based conversations help learners organize and follow conversations without getting lost in numerous postings. Group members may start with a specific topic, which can be opened up for argumentation, discussion, interpretation, explanation, or further questions by other members of the group (Jonassen, 2000; Wolsey, 2004).

Learners who subscribe to the discussion group may be at a great distance from each other and nonetheless be able to share ideas at any time of the day or night. “In fact, the teacher who monitors an electronic classroom discussion has much better access to how each of the students is thinking about the topics than in a face-to-face class.” (Jonassen, 2000, p. 250) Haigh & Roehfeld (1995) added that teaching through such discussion rests on foundations of collaborative learning and egalitarian relationships because all students have the same communication tools to communicate their ideas.

Social Media

Blogs

Palloff and Pratt (2005) described the term blog as a simplified version of the phrase “web log”. A blog is a personal site that is frequently updated with new information,

commentary, and links to other web resources. New entries appear on the top of the page while the older items below the new entries. Whereas blogs originated in journalism, they are a relatively new addition to online education and “can be used as course journals or personal diaries: they can focus on one narrow subject or range across a number of topics.” (Palloff & Pratt, 2005, p. 81)

Creating a blog does not require special technical skill (Palloff, 2005; Grabe & Grabe, 2007); also, blogs are not meant to be elegant web sites. Grabe & Grabe (2007) explain that blogs are for those who want to provide comments regularly. The ease of creating blogs allows the authors to concentrate on the content and makes them suitable for educational applications. Blogs are relatively new. A ProQuest search yielded only three dissertations on blogs. Two of the dissertations were about Marketing and Business Communications (Asselin, 2008 & Menzie, 2006), and the third pertained to Construction of a Blog Space for Use as Recruiting Tool (Washburn, 2006).

Internet-based social networks allow individuals to create profiles about themselves, create their own social networks, or join already existing networks, and commence or maintain connections with other people (Boyd & Ellison, 2007). Erik Qualman's (2009) video, Social Media Revolution demonstrates the huge number of people who are using these tools in their daily lives. The following facts speak to the enormity of social networks, culturally.

- If Facebook were a country, it would be the world's 4th largest, falling between the United States and Indonesia
- The #2 largest search engine in the world is YouTube
- There are over 200,000,000 Blogs
- Fifty-four percent of bloggers post content or “tweet “daily

The top internet tools for 2009 were Slideshare, Wordpress, Google Docs, YouTube, Google Reader and Delicious, with Twitter ranking at the top of the list (Hart, Greenfield, MacLaughlin, & Geier, 2010).

Facebook

Social networks sites such as MySpace, Amie Street, Broadcaster.com, CafeMom, Friendster, and DeviantART enable individuals to present themselves, share their social networks, and keep in touch with others. These sites are generally oriented towards academic or work-related contexts (for example StudyVZ and LinkedIn), romantic relations (Friendster, or Adult FriendFinder), or general interest (MySpace). One of the most common social network sites for college students is Facebook, which was created in 2004 by Mark Zuckerberg, and is privately owned by Facebook, Inc. The name “Facebook” refers to the facebook papers that some of the U.S. universities give to new students, teachers, or staff to introduce them to the campus community (Boyd & Ellison 2007).

Boyd & Ellison (2007) reported that Facebook had more than 21 million registered members generating 1.6 billion page views each day. The typical user spends about 20 minutes each day on the site, and two-thirds of users log in at least once a day.

After its popularity and success among college students, Facebook launched a high school version in early September 2005. In 2006, the company introduced communities for commercial organizations; as of November 2006, almost 22,000 organizations had Facebook directories (Smith, 2006). In 2006, Facebook was used at over 2,000 colleges in the United States and was the seventh most popular site on the World Wide Web with respect to total page views (Cassidy, 2006).

Netvibes

Netvibes is a personalized portal page much like Pageflakes, My Yahoo!, iGoogle, and Microsoft Live. It is organized into tabs, with each tab containing user-defined modules. Built-in Netvibes modules include an RSS/Atom feed reader, local weather forecasts, a calendar supporting iCal, bookmarks, notes, to-do lists, multiple searches, support for POP3 and IMAP4 email as well as several webmail providers including Gmail, Yahoo Mail, Hotmail, and AOL Mail, Box.net web storage, del.icio.us, MeeboMe, Flickr photos, podcast support with a built-in audio player, and many others. Netvibe pages can be personalized through existing themes or by creating a new theme, and by customized tabs, feeds, and modules that can be shared with others individually or via the Netvibes Ecosystem. For privacy reasons, only modules with publicly available content can be shared (<http://en.wikipedia.org/wiki/Netvibes>).

Wetpaint

Wetpaint is a free wiki service founded in October 2005. It allows users to create websites that mix many of the features of wikis, blogs, forums and other social networks into a rich, user-generated community based around the interests of the user (Wetpaint, 2008).

Meebo Me

Meebo Me is an internet-based instant messenger application that can be embedded on a webpage or a blog. Visitors to a webpage or a blog can chat instantly with the author or with each other (Meebo Me, 2008).

Google News

Google News is based on a computer program that aggregates headlines from over 4,500 English language news sources from around the World. It groups similar stories together and

displays them according to a reader's interests. Google News can be embedded in an educational website, which would provide the latest news about the topic or subject of the course's interest.

Until recently, the World Wide Web was used as a tool for disseminating information. Today, however, it is used much differently. The new online tools enable users to investigate, communicate, participate in discussions, and collaborate with each other (Frydenberg, 2008). By nature, people work collaboratively in "learning and knowledge-building communities. They explore each others' skills and knowledge and [thereby] enrich their own knowledge" (Jonassen, Howland, Moore, Marra, & Crismond, 2008). Thus, new online and Web 2.0 technologies offer ways of building upon each others' learning to form learning communities.

Social Media in Higher Education

Kaplan & Haenlein (2010) defined social media as "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0 and that allow the creation and exchange of user-generated content." (p. 61) Clearly, social networking has promise in higher education (Jonassen & Land, 2000; Simoes & Gouveia, 2008). However, apart from the use of *blogs* as a kind of reflective journal and some educational *wikis* (Anderson, 2007), there is presently little applied use of a wider Web 2.0 concept of 'online social networking' in education" (Richards, Rasli, Ahmad, & Churchill, 2010, p. 1364). Social media, such as blogs, wikis, etc., has come into very limited use in undergraduate education in the last few years, though its use has grown elsewhere (ECAR 2010). For example, the Educause Learning Initiatives (2006) considered Facebook the leading social networking site in higher education, and as of January 2008, there were 420 universities taking advantage of Facebook (Cheater 2008).

The most common characteristics of social media are explained by Anthony Mayfield (2008):

Participation - social media encourages contributions and feedback from everyone who is interested. It blurs the line between medium and audience.

Openness - most social media services are open to feedback and participation. They encourage voting, comments, and the sharing of information. There are rarely any barriers to accessing and making use of content; in fact, password-protected content is frowned on.

Conversation - whereas traditional media is about “broadcast” (content transmitted or distributed to an audience), social media is more accurately a two-way conversation.

Community - social media allows communities to form quickly and communicate effectively, and such communities share common interests, such as a love of photography, a political issue, or a favorite TV show.

Connectedness - Most kinds of social media thrive on their connectedness, making use of links to other sites, resources, and people.

A study by Bemby and Anderson (2010) found that using a LMS allowed a more individual approach to assessment and learning than traditional face-to-face learning and also allowed students more frequent access to information than does traditional teaching environment. To date, this was the only study on social networking tools in higher education. No dissertations were found.

Conclusion

Knowledge is not passive reception of information in constructivist technology-enhanced problem-based learning. Instead, knowledge is constructed by learners when they are actively engaged in the process of learning. Project-based learning offers the opportunity to learners to

work individually or collaboratively on projects that depict real-world situations. Technology can be used to do complex calculations, create graphics or videos, store information in databases, and most importantly, to support active learning through learning communities. Jonassen (2003) noted that we do not learn from technology. We learn from thinking! However, technology can provide us the means to think visually, spatially, independently of time and space, to forge new pathways to engaged learning activities for students.

Chapter Summary

The literature review addressed the following major areas: the *Seven Principles for Good Practice in Undergraduate Instruction*, constructivism, project-based learning (PBL), technology and project-based learning, computer-mediated communication, social media, and social media in higher education. The *Seven Principles for Good Practice in Undergraduate Instruction* have become a framework for evaluating teaching and learning in traditional, face-to-face undergraduate university courses to create a more student-centered, active learning experience. Findings from current research suggest that students must be “actively involved.” This belief conforms to the Constructivist theory of learning, according to which, learning is characterized as a process of active knowledge construction, not passive knowledge reception. Learning is also a social process that is based on the work of the psychologists Piaget and Vygotsky. Piaget (1972) proposed that learning is an individual process that is influenced by participation in social activities. Vygotsky (1987) proposed the socio-cultural approach, which supported the notion that learning is socially situated and is a social process. In support of these approaches to learning, recent research shows that while working collaboratively on projects, students learn from each others’ experiences (Jonassen, 2008).

Project-based learning (PBL) is an instructional method that combines complex tasks based on challenging questions or problems that involve the students' problem-solving, decision making, investigative skills, and reflection on “real-world” situations. It uses teacher facilitation, not teacher direction, and students work together to achieve goals. Simulations are frequently used in PBL to expose the learners to real-life situations. A “simulation activity” reproduces reality such that learners participate as elements or members of the simulated reality. Most simulations in higher education are computer-based. On the other hand, social simulations are mainly based on interaction among the participants. With the advent of technology, social simulations could be facilitated through Computer-Mediated Communication, which is a process by which people gather, create, exchange, and perceive information through networked telecommunication systems that aid in encoding, transmitting, and decoding messages. Finally, social media, such as blogs, Facebook, Netvibes, Wetpaint, Meebo Me, and Google News have unique characteristics that lend them to PBL: Participation, openness, conversation, community, and connectedness, because of their links to other sites, resources, and people.

CHAPTER 3 - METHODOLOGY

Case Study Rationale

The purpose of this study was to explore and document the use of technology-assisted project-based learning in a large undergraduate Introduction to Cultural Anthropology lecture course. A case study design was chosen because it permits the researcher to study specific issues in-depth without being limited by pre-determined categories (Patton, 1990). Case study design also offers a means for a researcher to examine an event as it unfolds, without manipulation of any of the relevant behaviors (Yin, 2003). Creswell defined case study as a qualitative research method “in which the researcher explores in depth a program, an event, an activity, a process, or one or more individuals (Creswell, 2003, p. 15).

A case study design is dependent on the research questions being formulated to answer “what” and “how” questions (Yin, 2003). Investigating what the characteristics of project-based learning are and how students experience project-based learning requires a design that addresses the entire experience rather than a single event within the experience. Therefore, research goals in this study were best addressed through naturalistic inquiry.

Yin (2003) asserted that if the research questions focused predominantly on “what” questions, then it was very likely that the “what” questions would need to be exploratory. An example of this type of question is “What can be learned from a study of an effective school?” (Yin, 2003, p. 6) These types of questions confirm the rationale for conducting an exploratory study whose goal is to develop the applicable hypotheses and proposition for further research.

Research Questions

1. How does an exemplary on-campus undergraduate large Introduction to Cultural Anthropology course encompass the PBL learning model characteristics, specifically focusing on the following: 1.1) Driving question, 1.2) Student construction of an artifact, 1.3) Teachers' role, and 1.4) Assessment?

2. How is technology used by the professor, teacher assistants, and students to support project-based learning?

Research Setting

The study took place in a large mid-western land grant university with 22,000 students. Alongside traditional on-campus courses, the university offered distance education opportunities to students, most of which used internet-based technologies to deliver course materials and to facilitate communication among students and teachers. The university also offered large undergraduate classes held in numerous lecture classrooms that accommodated over 400 students. In most of the classrooms, instructors had access to the latest technology tools: High-resolution video projectors were in most large classrooms, and instructors' podiums were equipped with microphones, computers, internet access, visual presenters, and other equipment.

This study took place in 2008, and almost the entire campus had wireless internet access. The Princeton Review and PC Magazine published a list of "America's top wired colleges", and this university was ranked second (Griffith, 2008). While not all the classrooms were equipped with technology tools, most colleges had mobile labs – carts that could be pushed by one person. These mobile labs were equipped with up to 24 laptop computers, video projector, visual presenter, cassette and DVD players, and speakers. The "Introduction to Cultural Anthropology"

class was scheduled in one of the large classrooms on campus which begs the question: what tech resources did the classroom have?).

Research Site

Tellis (1997) wrote that in exploratory case studies, fieldwork and data collection may be conducted prior to determining the research question and hypotheses. In the study being addressed, the researcher has known the professor since 2004, and had observed a considerable number of his lectures and recitation sessions during this period. For example, since the beginning of the fall semester 2008, the researcher had been consistently observing the twice weekly lectures by the professor, three of the twenty weekly sessions taught by three Teacher Assistants, and selective Teacher Assistants' meetings, which were held once a week. Also, the researcher had regular conversations with the professor every week as he returned to his office after the class session. Additionally, the researcher had nearly a dozen in-person and e-mail conversations with the professor during this time period. At the request of the professor, the researcher proctored a test while the professor delivered a speech abroad.

During the Teacher's Assistant meeting observation, the professor would regularly ask content-oriented questions about the researcher's knowledge of different regions of the world, due to the researcher's experience living in various places in the Middle East and Europe, as well as the United States, and having traveled around the world. These observations provided a rich context for this researcher and professor, which helped the researcher during the data collection and analysis phases.

Introduction to Cultural Anthropology was a required course for students who were majoring in Anthropology, Sociology, Social Work, Criminology, and in other disciplines. The Syllabus makes the following statement:

Introduction to Cultural Anthropology explores different cultures in all of their manifestations -- from how people make a living to what people live *for*. In an increasingly interconnected world, cultural differences lie at the root of many of our most pressing challenges, throughout the world and in our own personal lives. There has never been a time when Cultural Anthropology has been more important than it is right now (Appendix A).

This large lecture course had 400 students and was taught by a professor and 10 Teacher Assistants (TAs). The students were divided into groups of 20 students per section, with 20 sections. Each Teacher Assistant was assigned two sections of students.

During the fall semester of 2008 on every Monday and Wednesday, the entire class of 400 students met for a lecture session by the professor in a large lecture hall. The 50-minute lecture started at 8:30 am. The professor usually arrived at about 8:10 am. He turned on the technology equipment and checked the microphone. Long before the class began, he displayed a picture or graphics depicting different cultures related to that day's topic. During this time, he also played music from those cultures. At 8:30 am, he welcomed the students and started the lecture. The last five minutes were set aside for each student to write on a 3 x 5 inch index card their name and a brief summary of the day's lecture. All 10 Teacher Assistants were always present during the lectures. At the end of the lecture, students in each section handed in their summaries to their respective TAs.

On each Monday, from 3:30 p.m. to 5 p.m. and often until 6 p.m., the professor would meet with the Teacher Assistants (TAs). During these meetings, the TAs updated the professor

on their section's progress. The professor required that each TA report on challenges they had in their sections and how they solved those challenges. He always confirmed what each TA did and provided advice. These were organizational meetings so that the professor could keep track of all 10 TAs in terms of content addressed in the recitation sessions.

Each section met once a week for recitation where students discussed class topics. In the later part of the semester, students in each section worked on their projects, each section representing one group. Each student group was asked to create a culture.

The project: In a TA meeting, the world map was divided by territory into each section.

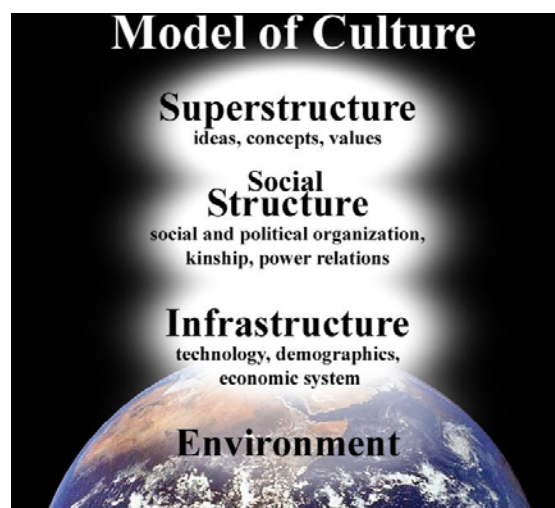
Figure 3.1 A scaled-down version of the world map (From Course Material)



In this map, the continents were rotated and moved around. Each culture's territory, identified on the map, would reflect a realistic structure based on the "barrel model," which is based on Infrastructure, Social Structure, and Superstructure. Haviland et. al (2008, p. 33) described the elements of the barrel model: **Infrastructure** is the economic foundation of a society that encompasses subsistence practices involving usage and consumption of available

resources to fulfill a society's basic needs; **Social structure** is the rule-governed relationships that include rights and obligations that hold the members of the society together; **Superstructure** is the society's shared sense of identity and worldview: "The collective body of ideas, beliefs, and values by which a group of people makes sense of the world – its shape, challenges, and opportunities – and their place in it. This includes religion and national ideology" (Haviland, et al., 2008, p. 33).

Figure 3.2 The barrel model



Each student group discussed various aspects of their culture based on each group member having researched different cultures and come up with ideas to share with their group. After the cultures were created, each was described in writing and illustrated with graphics. After the cultures were created, the project culminated in the World Simulation, in which all cultures converged on the grounds of the university campus. In previous years, the World Simulation was held in the University ballroom, the largest room on campus. In 2008, the Ballroom was not available and for the first time, the simulation was set to be held outdoors. However, the weather might have been cold or rainy, which would present a real-life challenge to the "cultures", and add another dimension to the project. Nevertheless, given the challenge,

when the university rodeo arena became available, the professor and the TAs decided to hold the World Simulation there.

The researcher observed two weekly general lectures throughout the duration of the project and the following: three weekly recitation sessions of 20-student sections wherein students worked in groups on their projects, the groups' electronic discussions archives and blogs, the World Simulation (See Appendix B), the post-production video production process, and the concluding day of the semester, in which the concluding project-the World Simulation, was shared as a class on December 12, 2008.

A Lecture Class

In the fall of 2008, the faculty member taught the Introduction to Anthropology. It was scheduled in a big traditional lecture hall holding 420 where the professor addressed all 400+ students twice per week. This was an old classroom which was retrofitted new classroom technology. The student seats were bolted to the concrete floor. One walking aisle separated the two columns of student seats, and the front of the hall had a stage and a huge white screen. The teacher's lectern was located on the left (facing the front of the lecture hall) between the first row and the stage. The lectern was equipped with a computer, a visual presenter widely known by its manufacturer's name, "Elmo", an audio/video selector, audio amplifier, one podium microphone, one cordless lapel microphone, cordless mouse, a laser pointer, and a computer monitor. The computer was also connected to the video projector that is installed in the ceiling and projects the video from the computer onto the big screen on the stage. Students would enter the lecture hall from a set of six doors located at the back of the hall, and after the lecture they would exit from the front door to the right of the stage.

The lectures for Introduction to Cultural Anthropology during the fall semester 2008 were scheduled on Mondays and Wednesday from 8:30 am to 9:20 am. The professor would arrive at the lecture hall between 8:10 and 8:15 am, go directly to the lectern, and prepare all the electronics for the lecture--video projector, computer, visual presenter, and other equipment. As soon as the equipment was ready, the professor would play music, each time from a different part of the world, while students would arrive and take their seats. At 8:30 am, the professor would dim the lights and start the lecture by asking questions. Throughout the lecture, he would show diagrams, maps, pictures, and play sounds of different languages, music, and videos of different cultures. He would frequently ask questions, which would keep the students engaged.

When the professor exited the classroom, an average of about 15 to 20 students would surround him and ask questions. He would slowly walk out of the lecture hall and move the group to the outside of the class so that the next scheduled class' students could use the room. Student questions were mainly about other cultures; fewer questions were about grades and housekeeping issues.

Recitation Sections

In 2008, the Introduction to Cultural Anthropology class was divided into 20 recitation groups. Each group contained 20 students, led by one TA. The recitation groups met separately once per week. To choose three recitation groups for observation, the professor suggested to the researcher to choose groups with experienced TAs. The selection of the TAs is discussed under Participants.

The second criterion affecting selection of the TAs was the restrictive nature of their schedules during the week. Some TAs' recitation sessions were scheduled at the same time in

different parts of the University campus. The researcher observed the recitation session of TAs Dan on Wednesdays at 3:30 pm, Mitch on Thursdays at 12:30 pm, and Gina on Fridays at 8:30 am.

Recitation Session One

Recitation session one was held on Wednesdays at 3:30 pm, in one of the small classrooms. The chairs were arranged so that all faced the chalkboard and the teacher. On the first day, the TA asked the 20 students to push all the chairs to the back and sides of the classroom and to arrange their chairs to form a circle, in which the TA was included. The researcher sat to the side to have best possible view of the students and the TA.

On the first day, the TA asked the students to introduce themselves to each other. All students repeated each others' names several times. Also on the first day, the TA asked the students to come with a name for their culture and also come up with a special gesture to signify greeting. This group of students chose "Baheera" as the name of their culture.

Recitation Session Two

This recitation session was held on Thursdays at 12:30 pm in a classroom where the student desks faced the teacher podium. All the desks were bolted to the concrete floor and did not permit being moved to form a circle. Thus, to interact with each other and have eye contact, some students remained sitting, and some stood on one side of the classroom. The TA and students were frustrated with the inflexibility of the classroom; however, they managed to mingle with each other and have face-to-face group discussions. The TA asked the students to introduce themselves and repeat each others' names. This group chose the name of Halibutt for their culture, and all agreed upon their way of greeting.

Recitation Session Three

This recitation session was held on Fridays at 8:30 am. After arranging their chairs in a circle, the TA and the students introduced each other and repeated each others' names several times. This recitation session chose the name of Shish –Kabob for their culture and also came up with a unique way of greeting each other.

The TAs for each of the three recitation groups showed each their culture's location on the World map (See Appendix K) and then allowed students to pursue the purpose of the recitation sessions--to work on their group project: to create a culture, and to ask questions about the subject.

Each culture had to reflect eight components:

1. Environment
2. Language & Gender
3. Subsistence & Exchange
4. Sex, Love, & Marriage
5. Family and Household
6. Kinship/Social Organization
7. Political Organization
8. Religion

Two other components were added by the professor:

9. Poster & Video (or other presentation)
10. Videographer and Historian

Usually, two students were assigned to each component, and each would research his/her topics outside of the classroom and share findings with the others. These findings would promote discussion in the group enabling each student to adjust her/his part to contribute to a cohesive culture.

Participants

The participants in this study were the professor, ten teaching assistants (TAs), and 400 students. This was one of the required course options, and students had academic standing from freshmen to seniors in all disciplines. The students were divided into groups of 20 students per section, with 20 sections, and each TA was assigned two sections of students.

Professor

In March of 2005, the researcher attended one of the Instructional Design and Technology (IDT) roundtables designed for technology-savvy faculty to share their experience with other faculty members at the university. One of the presenters was the Introduction to Cultural Anthropology professor who shared about the technology he used. He also talked about engaging students through active learning. This sparked the researcher's interest to find out how the professor implemented project-based learning, how the main features of the project-based learning were addressed, and how he used technology to support PBL.

The professor, a media ecologist and an Assistant Professor of Anthropology, taught with such innovative methods using the World Simulation that he designed that he gained international acclaim. He was a guest speaker at many universities in the United States and abroad. Examples of the many presentations made during this study, from 2008 to 2010, included the several keynote speeches for Educause, the Library of Congress in June, and the

Personal Democracy Forum at Lincoln Center in New York City. He presented “The Machine is (Changing) Us: Youtube and Politics of Authenticity”. The Personal Democracy Forum brings scholars together with some of the most important people in politics and government. The professor’s presentation was preceded by remarks by Alec Ross, Chief of Innovation for Secretary of State Hillary Clinton, and Vivek Kundra, Federal Chief Information Officer for President Barak Obama. The professor also presented “Mediated Culture: Lessons from New Guinea for New Media” at the following conferences: Media Education Summit in Liverpool, England; Association for Learning Technology Conference, Manchester, England; La Ciencia y Web 2.0, Universidad del Sagrado Corazon, Puerto Rico; and the Learning Conference, Bergen, Norway (see Appendix G)

The professor was the 2007 *Wired Magazine’s* Rave award winner. He has launched the Digital Ethnography Working Group, a team of undergraduates exploring human uses of digital technology. Coinciding with the launch of this group, he created a short video, *Web 2.0, The Machine is Us/ing Us* and released it on *YouTube* on January 31, 2007. This video quickly became the most popular video in the blogosphere. It has been viewed more than 10-million times and is frequently featured at international film festivals and major academic conferences worldwide.

The professor was a multiple award winner for his development of innovative teaching techniques. At the time of this study, he was the coordinator for the Peer Review of Teaching Project at this university, which was part of a broader nationwide consortium of universities pursuing new ways to improve and evaluate student learning. He also worked with the Educause Center for Applied Research on The Tower and the Cloud project, which examined higher education institutions (The Tower) interoperating with the emerging network-based

business and social paradigm (The Cloud League for Innovation's Conference website, 2008).

The professor's vitae and list of outside lectures for 2009 is in Appendix G.

Note: To preserve the TAs' and students' privacy, the researcher chose fictitious names for them.

TAs

To choose three recitation groups for observation, the professor suggested the researcher choose groups with experienced TAs. Since seven out of ten TAs had been Anthropology TAs more than once, the researcher randomly picked three TAs for observation and for an interview at the end of the semester. When one of the TAs could not participate, the researcher asked another.

The selection of the one female and two male TAs was done by the professor because he believed that a novice TA might not have been able to comfortably interact with the students in the presence of an outsider, such as the researcher. Each TA was given a code.

TA Gina, a female, had been a TA for another professor the previous semester and had taken Introduction to Cultural Anthropology in the summer of 2008. Gina had completed three bachelors of science degrees in dietetics, human nutrition, and kinesiology. She also had a secondary major in International Studies and a minor in anthropology.

TA Dan, a male, was a senior who majored in anthropology and had been a TA to the professor once the previous semester.

Mitch, a male, was also a senior anthropology major. This was the first time he had been a TA for this professor. However, he had been a TA for another professor in the past.

The interviews with the two TAs – Dan and Mitch, were conducted separately in a meeting room at the university Student Union building. The interview with Gina took place in a small lounge at the university’s International Student Center.

Students

There were sixty students in all three combined recitation sections, and sections consisted of twenty students. Since interviewing all sixty students was beyond the scope of this study, the researcher decided to interview three students, selected randomly, from each recitation session under observation. Four of the nine students agreed to be interviewed. Four of the five students who did not want to be interviewed were residents of other cities and had to leave campus immediately after finals, while the fifth one did not feel comfortable being interviewed. Due to the limitation of time, the researcher requested volunteers to be interviewed. In each recitation section, more students volunteered than were needed. Again, to reduce bias, the researcher randomly selected several students during the last recitation.

The demographics of the students are reflected in the following table

Table 3.1 List of interviewed students

Number	Pseudonym	Gender	Major	Year	How chosen for interviews
1	Robert	Male	Political Science	Sophomore	Randomly selected
2	Bill	Male	Secondary Education	Sophomore	Volunteer
3	Carol	Female	Math	Sophomore	Volunteer
4	David	Male	Finance	Senior	Randomly selected
5	Patricia	Female	Communication Sciences and Disorder	Junior	Randomly selected
6	Linda	Female	Undecided	Freshman	Volunteer
7	Barbara	Female	Chemical Engineering	Senior	Randomly

Number	Pseudonym	Gender	Major	Year	How chosen for interviews
					selected
8	George	Male	Secondary Education (B.A. Hotel & Restaurant Management 2007)	Freshman	Volunteer
9	Sandra	Female	Secondary Education	Freshman	Volunteer

The interviews with the students were conducted in two locations due to the availability of the rooms and student schedules. Location 1 was the faculty/staff meeting room in an engineering building. Location 2 was another staff meeting room in the same engineering building. The building was centrally located on the campus and was convenient for the student.

Data Collection Methods

There is no specific starting moment for the gathering of data. It begins when the researcher first comes in contact with the case and develops an interest in the research (Stake, 1995). Stake asserted that a major part of the data is impressionistic and is gathered informally when the researcher first becomes familiar with the case.

Yin (2009) stressed the importance of multiple sources of evidence in case studies, listing six types as being necessary to proper case study research: documentation, archival records, interviews, direct observations, participant-observation, and physical artifacts. These sources have comparative strengths and weaknesses, and “no single source has a complete advantage over all the others” (p. 101).

The data to answer the two research questions were gathered from multiple sources, primarily field notes from direct observations of the professor's bi-weekly lectures and three weekly recitation sections. Interviews were conducted as well of the professor and three out of

ten Teacher Assistants (TAs). These TAs were proposed by the professor because they had been his TAs for over two semesters and were more likely than new TAs to be comfortable with the researcher in the recitation session classroom. Interviews totaled one professor interview, one professor follow-up e-mail interview, three TA interviews, and nine student interviews, one follow-up e-mail and three replies. Documentation included the Syllabus, the World Simulation Setup, World Simulation Rules, Culture Description, Assignments, and Course Goals, adding up to five documents. Other documentation included the professor's vitae (see Appendix G) The study was conducted from August 25th, 2008 to December 12th, 2008. Direct observations were conducted of two weekly lectures of the professor and 400 students and three weekly recitation sessions of 20 students.

For data analysis, Miles & Huberman's approach to coding and re-coding the pre-structured case (Miles & Huberman, 1994, p. 85) was used. Data analysis included noting units, categories, and then patterns and themes, seeing plausibility, clustering, making contrasts and comparisons, noting relationships between variables, and establishing a logical chain of evidence. Triangulation of these sources was accomplished using multiple sources of evidence, member checks with the professor, TAs, and students, when needed, to double-check interviews, responses, and documents, as well as using extreme cases for verifying and confirming conclusions.

Open coding, also called "Grounded Theory" (Strauss & Corbin, 1990), was used to further interpret data from students, TAs, and the professors. Open coding involves "breaking down, examining, comparing, conceptualizing, and categorizing data" (Strauss & Corbin, 1990, p. 61), often, in terms of properties and dimensions. The open coding process, while procedurally guided, is fundamentally interpretive in nature, and grounded theory researchers

"must include the perspectives and voices of the people" whom they study (Strauss & Corbin, 1994, p. 274). The constant comparative method was used such that each piece of data was constantly compared with codes and notes already identified for the three groups: the professor, TAs and students. Comparisons helped to identify distinct characteristics and ordinal position on any relevant scale. Theoretical saturation was achieved when no further new codes or categories were identified whereupon further analysis was conducted to test and support the identified theory.

Interviews

Merriam (1998), stated that interviewing is one of the most common forms of data collection in qualitative inquiries in education. According to Yin (2003), interviews are "guided conversations rather than structured queries" (p. 89). Interviews are essential when the researcher cannot observe feelings, behavior, or how the world is interpreted by others. Creswell (2009) encouraged researchers to identify the purposefully selected individuals and sites for the purpose of their research, as well as interviews, documents, participants or audio/visual materials that would enable the researcher to understand the problem and research questions (Creswell, 2009).

A protocol for semi-structured interviews (Yin, p. 79) was developed individually for the professor, TAs, and students (see appendix I and J for these protocols). Interviews lasted approximately one hour for all nine students and the three TAs, and over one hour for the professor. The researcher also conducted three follow-up interviews with the professor, three TAs, and the three students from each of the three sections to clarify questions and responses. Final follow-up e-mails with additional questions for clarification were sent to all nine students, and three replied, two in one section and one in another (see Appendix K). The transcription of

the interview with the professor amounted to 14 pages of text. The transcription of TA interviews amounted to 68 pages. The students' interview transcription totaled 99 pages. A member-check was then conducted to ascertain the degree to which the data analyzed coincided with the professor's course intentions (see Appendix F). Finally, the interviews were recorded on a digital audio recorder and later transcribed in text format.

Course Materials Documentation

Course materials included the Syllabus, the World Simulation Setup, World Simulation Rules, Culture Description, Assignments, and Course Goals, five documents in total (see Appendices A-E). These materials were used to determine the Driving Question themes and to learn more about the purposes of the course.

Archival Records

Students communicated via the Wetpaint wiki for course purposes, to which the researcher had access. Students also chose to use e-mail, texting, and Facebook to communicate with each other in informal ways. However, the researcher had no access to this information.

Direct Observations

The researcher was a direct observer of general lectures conducted in a large classroom, wherein all 400 students gathered each Monday and Wednesday throughout the semester. The researcher observed three of the 20 recitation groups that met once a week throughout the semester. The researcher also observed the final project, the "World Simulation" events at the end of the semester (See Appendix D – World Simulation). The researcher recorded this event through field notes and a video of the World Simulation.

Artifacts

Merriam-Webster defines an artifact as being among other things “something characteristic of or resulting from a particular human institution, period, trend, or individual self-consciousness” (Merriam-Webster Online Dictionary, 2010). During this course, students were asked to create a culture that mimicked the real world, rendering each culture a conceptual artifact created by each of the 20 recitation sections. Each student section, representing a “culture”, created a poster to describe their culture for the final World Simulation. During the Simulation, the students also used props to represent commodities (Fruit loops, etc.). These props varied with each year and recitation section.

Trustworthiness of the Research

Merriam (1988) asserted that the primary goal of research was to produce valid and reliable knowledge in an ethical manner. To be able to trust the research result is crucial to the “professionals in applied fields, such as education, in which practitioners intervene in people’s lives” (p. 198). The goal of trustworthiness in qualitative research is to support the argument that the inquiry’s findings are “worth paying attention to” (Lincoln & Guba, 1985, p. 290). As such, trustworthiness of the research relies on accountability for its validity and reliability. To guarantee validity and reliability in qualitative research, the investigation must be conducted in an ethical manner (Yin, 2009).

Reliability

In this study, the research took several steps to address the issue of internal validity. The extent of observations and their constancy over the entire duration of the project, attendance at the two weekly lectures and the weekly meetings of three units made it possible for the

researcher to have repeated observations. The constancy in the observations provided a means of checking with the individuals on the accuracy of the data that was collected. Triangulation of the data sources – observations, interviews, archived communication and documents, and artifacts--proved to be an efficient approach and strengthened possible weaknesses associated with one collection method.

Internal Validity

Qualitative researchers cannot assume that repetition will assure reliability. Because the entire group experiences a phenomenon does not necessarily mean that the group will experience it again or anyone else will experience it. Therefore, reliability of this study rests with its internal validity and rigor.

External Validity

As does reliability, external validity requires rigor and special considerations. Moreover, external validity's existence suggests generalization. In keeping with this approach, the exploratory case study focused on the students' project-based learning experience in the Introduction to Cultural Anthropology in the fall of 2008. Stake (1995) asserted that a case study seeks to understand one phenomenon in-depth, rather than a general thing applicable across an array of domains.

Construct Validity

Construct validity is enhanced through protocols and a targeted case study database partly because protocols force the researcher to anticipate several problems including the writing of the report itself (Yin, 2009). Accordingly, observation protocols (see Appendix H) and an interview protocol with the professor (see Appendix I), were developed to enhance rigor, truthfulness, and

ethics (see Appendix J). Finally, all interviews, observations, artifacts, and course documents were placed into an Excel database for interpretation and record-keeping purposes.

Table 3.2 Trustworthiness of the Research. Adapted from Yin (2003)

Tests	Case Study Tactics	Phase of research in which tactic occurs
Reliability	Use multiple sources of evidence	<ul style="list-style-type: none"> • Data collection: <ul style="list-style-type: none"> ○ Observations of the two weekly lectures, weekly recitation sessions of three sections. ○ Interviews with the professor, three Teacher assistants, and nine students, ○ Examination of archived communications and documents, and artifacts
Internal Validity	<ul style="list-style-type: none"> • Do pattern-matching • Do explanation-building 	<ul style="list-style-type: none"> • Data analysis: <ul style="list-style-type: none"> ○ Observations two weekly lectures, ○ Observations of weekly recitation sessions of three sections. ○ Interviews with the professor, three Teacher assistants, and nine students. ○ Archived communications and documents, and artifacts. • Triangulation – multiple sources of data: <ul style="list-style-type: none"> ○ Field notes ○ Communication ○ Interviews ○ Archived course documents ○ Artifacts
External Validity	<ul style="list-style-type: none"> • Use theory in single-case studies 	<ul style="list-style-type: none"> • Consistency and constancy in data collection • Triangulation– multiple sources of data: field notes, interviews, archived communication, course documents, and artifacts. • Peer debriefing, which is a process to reduce bias and enhance the credibility or validity of qualitative research (Creswell, 1998)
Construct Validity	<ul style="list-style-type: none"> • Use case study protocol • Develop case study database 	<ul style="list-style-type: none"> • Rigor, professionalism, ethics, truthfulness, and use of observation and interview protocols.

Avoiding Bias

Miles and Huberman (1994) noted that “outsiders” to a group and “insiders” influence each other’s behaviors. These behaviors can lead the researcher into biased observation and inferences which “confounds” the “natural” aspects “of the setting with the artificial effects of the researcher-native relationship.” (Miles & Huberman, p. 265, 1994) Un-confounding them could be very challenging. Further, Miles and Huberman identified two possible sources of bias:

1. The effects of the researcher on the case.
2. The effects of the case on the researcher.

To avoid biases stemming from the effects of the researcher on the case, the researcher adhered to Miles and Huberman’s suggestions:

- Spent maximum amount of time on the site. The researcher observed: two weekly lectures, one weekly session of each of the three recitation sessions, one weekly profess-TA meetings throughout the semester.
- Used unobtrusive measures by being a non-participant observer.
- Clearly communicated his intentions: the purpose of the research and how he intended to collect data.
- Conducted interviews in informal setting to insure a congenial environment.

To avoid bias stemming from the effects of the case on the researcher, the researcher:

- Avoided the “elite” bias by random selection of the students who were interviewed.

- Spread out site visits and observed two weekly lectures, one weekly session of each of the three recitation sessions, one weekly professor-TA meeting throughout the semester.
- Triangulated with several data collection methods: interviews, course materials (Syllabus, the World Simulation Setup, World Simulation Rules, Culture Description, Assignments, and Course Goals), archival records (course website), direct observations, and artifacts. (For details, please see Data Collection Methods in Chapter 3.)
- Always kept the research questions firmly in mind to stay focused and not wander far from them.

Researchers who are discreet, knowledgeable of the environment under observation, and “conceptually ecumenical” are very likely to gain access to the setting in few days, avoiding “both types of researcher bias and coming away with good-quality data” (Miles & Huberman, 1994, p. 266).

Ethical Considerations

Merriam and Associates (2002) advised novice researchers to maintain humility and to be ethically responsible to the research. To maintain humility, the researchers should not take themselves or their research so seriously that they disregard the fact that those whom they study have other, more important considerations in their lives. Certainly, researchers should not interfere in their subject’s lives. To be ethically responsible to the research is to bear in mind that “ethics begins with the conception of the research project and ends with how we represent and share with others what we have learned” (Merriam & Associates, 2002, p. 313).

Bogdan and Biklen (1992) alerted researchers to the dominant issues and guidelines of ethics in research: “informed consent and the protection of subjects from harm” (p. 49). These guidelines are considered to ensure the following:

1. Subjects participate in the research projects voluntarily and understand the nature of the research and the risks and obligations that are involved.
2. Subjects are kept from exposure to risks “that are greater than gains they might derive” (Bogdan & Biklen, 1992, p. 53).

In this study the researcher abided by the rules and guidelines of the Institutional Review Board (IRB) and University. Additionally, the researcher had completed the required IRB training for personnel proposing to conduct research involving human subjects.

CHAPTER 4 - DATA ANALYSIS

Chapter Overview

The goal of this study was to explore a constructivist approach to technology-enhanced project-based learning as a model for undergraduate instruction. The exploratory case study utilized a linear-analytic structure, which is consistent with a single case design since it “is a standard approach for composing research reports” (Yin, 2009, p. 176). The initial guiding research question was how does an exemplary on-campus undergraduate large Introduction to Cultural Anthropology course encompass the PBL learning model characteristics, specifically focusing on the following: 1.1) Driving question, 1.2) Student construction of an artifact, 1.3) Teachers’ role, and 1.4) Assessment? The second question was how is technology used by the professor, teacher assistants, and students to support project-based learning? The chapter begins with a review of the problem, continues with a discussion of all facets of the two guiding research questions, and finishes with a robust analysis of the retrieved data.

Research Question 1: Project-based Learning Characteristics: Driving Question

Blumenfeld et al. (1991) and McGrath and Sands (2004) described the driving question as encompassing the main idea(s) of the curriculum and facilitating student investigation and thought in learning about the project. Further, McGrath (2003) noted that the driving question should be “doable” (students should be able to answer the question in some manner), worthwhile (the content should relate to the real world), contextualized (it should be as faithful to the real-world as possible), and meaningful (it should be interesting and exciting to students).

The Driving Question for Introduction to Cultural Anthropology

To understand the nature of the driving question for the Anthropology class requires a brief discussion of the term “anthropology,” which is derived from the Greek “anthropos” (human) and “logia” (study); thus, anthropology is the study of humanity. This discipline is so vast that it is divided into four major fields: biological or physical anthropology, cultural anthropology, archaeology, and linguistic anthropology. The subject of the present study was a large undergraduate university lecture class studying Introduction to Cultural Anthropology, which addressed the internal logic of other societies.

It helps outsiders make sense of behaviors that, like face painting or scarification, may seem bizarre or senseless. Through the comparative method, an anthropologist learns to avoid ‘ethnocentrism’, the tendency to interpret strange customs on the basis of preconceptions derived from one's own cultural background. (Boston University website, 2010, para. 15)

Typically, the term “driving question” is not understood as such by most students. To ascertain the extent to which students in the course understood this question, the researcher asked other questions to arrive at the notion of the driving question for this class, which was to determine whether students would be able to relate the aspects of this class to the “real world,” to wit, their experiences with culture and society both in the United States and in the cultures that they studied to be able to create their own cultures. The professor felt that by asking students to create a unique culture, they would be forced to ask questions about the elements of the barrel model, which would then translate to a better understanding of the components of a culture and how a society works, particularly within itself and in relation to other societies.

For students to answer this question within the context of the class, each recitation section was formed into a student group, which created a culture during the semester. All aspects of this culture were to be new and unique; therefore, no culture was to model any other culture currently in existence. The creation of a unique culture by each recitation section was required to ensure that student groups would have a chance to learn about cultures using the “barrel model,” which stated that culture is determined by these elements: environment, infrastructure, subsistence, social structure, and superstructure. For students to be able to create a unique culture, they had to study other cultures with a similar environment. In creating such a culture, the students were to realize the following goals for the class according to the syllabus:

1. Learn the basic tools, concepts, and methods of cultural anthropology and be able to apply these to their own lives regardless of what career path they may choose.
2. Identify ways in which different aspects of culture – economic, social, political, and religious practices and institutions – relate to one another and are integrated in a cultural system.
3. Draw comparisons among different cultures, recognizing that such comparisons require a holistic understanding of each of the cultures involved in the comparison.
4. Describe the processes of globalization and the ways they shape, and are shaped by, different aspects of culture in human communities throughout the world.
5. Improve their abilities to “think outside the box” by recognizing their own cultural biases and questioning the assumptions, beliefs, concepts, and ideas they had previously taken for granted.

Research Question 1.1: Driving Question

The professor did have a Driving Question (DQ) and companion question, as well as an overall course goal from which the driving question arose. These were both stated by the professor and found within the course documents and Professor Interviews. The course was constructed around this driving question: “How does the world work?” Understanding this DQ was stated by the professor as being the purpose of the course, its activities, and final project and simulation, the World Simulation.

The professor described the DQ thusly: *“I think for the World Simulation the big question is how does the world work.”* The stated purpose of this DQ had to do with enlightenment the professor wished students to gain as a result of answering the DQ. He stated a response to this question as *“I suppose...you might say, a sister observation [is that]...the world doesn't work as well as it could. That's the question we are trying to get into focus.”* The term “Driving Question” was not explained to the students; however, the researcher asked questions that strongly suggested that the students had gained knowledge to answer these questions. They exhibited understanding of the mechanisms by which cultures interact with each other, for example, Hard Power and Soft Power.

Hard Power and Soft Power

Prins et al., (2008) explained that globalization is a complex and dynamically structured process through which individuals, business corporations, and political institutions are actively repositioning and altering “the social field of force to their own competitive advantage, competing for more and more scarce natural resources, cheap labor, new commercial markets, and ever-larger profits in a huge political arena spanning the entire globe.” (p. 382)

Accomplishing this goal requires power. Prins (2008) [author of the course textbook] argued

“power is the capability of individuals, groups, or countries to impose their will upon others and make them do things even against their own wants or wishes” (p. 382). Further, Prins distinguished between hard power and soft power. **Hard Power** utilizes military and economic force; it is coercive while **Soft Power** is co-optive, “pressing others through attraction and persuasion to change their ideas, beliefs, values, and behaviors” (p. 382). Hard and Soft Power were mentioned in several course documents and were integral components of the DQ and its corollary, and were viewed by the researcher as important to the development of the DQ categories.

Driving Question Categories for Introduction to Cultural Anthropology

Since "how the world works" and "it doesn't work so well" were identified by the professor as the DQ and its corollary, the DQ had to be operationalized through a determination of categories. These categories were then used to determine an expression in the course goals and assignments, as well as determine the degree to which TAs and students understood the DQ. A total of 50 units were found that determined the inherent categories of the professor's DQ around which student learning was organized: Six interview units on the driving question for Introduction to Cultural Anthropology, four units from the “Course Description”, four units from “World Simulation Introduction,” 21 units from the “World Simulation Rules--Hard Power & The Rules of War,” and one unit from the “Anthropology Syllabus.” From these units, eight DQ categories were developed: (1) 21 units on World Power and Control, (2) eight units on Cultural Roles, (3) five units on Social and Cultural Differences, (4) four units on Social and Cultural Elements, (5) four units on learning the Interconnectedness of all Humanity, (6) four units Addressing Important World Questions as co-creators of our world, (7) three units on ways

that world cultures work within this system (The Role of Cultures in the World System), and (8) one unit on Holistic Understanding of Cultures.

The researcher then conducted a member check on the categories of the Driving Question that were extracted from the Course Syllabus, World Simulation Rules, Course Goals, and one recorded interview, which was a result of sending the professor an e-mail on August 30th, 2010 asking him if he perceived the "way the world works," the Driving Question, to be consonant with the categories determined through qualitative analysis, as displayed in Table 3. The professor answered in the affirmative, and research continued (see Appendix F).

Table 4.1 Driving Question Categories

Categories	Units
World Power and Control	21
Cultural Roles	8
Social and Cultural Differences	5
Addressing Important World Questions	4
Social and Cultural Elements	4
Interconnectedness of all Humanity	4
The Role Of Cultures In The World System	3
Holistic Understanding of Cultures	1
Total	50

A final and higher goal of the professor for this course was:

....the biggest insight the students get, I hope, and the one that I am most proud of, is that they realize that their actions were actually part of a broader system that they totally disagree with. I think then they can actually see in their own lives that sometimes their own individual actions, while individually are not unethical, or bad, but when taken as part of a larger system that they are a part of, that can be seen in context to maybe not be the right thing to do. These are all big and complicated questions.

The ultimate goal, then, of the driving question was for the student to become "world-centric." This is what the professor called the "reflexive stage," which is the result of learning to think on a deeper level, with a view of the world that was based on larger considerations of cultures within the world. The professor believed that "this generation" could "make it work better in the future."

Since the professor's DQ depended upon the TAs' recitation section cultures, their understanding of an emphasis on the DQ themes had important implications for student DQ and course understanding. Therefore, since each TA's job was to execute course goals and objectives, the DQ categories had to be developed in each recitation section as closely as possible to the categories of the professor's DQ.

Research Question 1.1: Driving Question: The TAs

Overall, the TAs seemed to understand the major themes of the DQ. Of 16 total units, six of the eight themes were present, generally in accordance with the descending order of importance of the categories as given by the professor. There were some differences between what the TAs perceived as being the categories of the DQ and those that the professor formulated, due to two missing categories -Societal Differences and Elements of Culture. Since only three of the 10 TAs were observed, it is likely that full TA understanding of the DQ would likely show some variation in TA interpretation of the DQ.

As to why the World Simulation was chosen based on an altered world map in which the continents were moved around, instead of just giving a test, TA Mitch explained:

If we would have shown the real world, students would have taken less ownership over it.

If we would have made one culture China and one culture the U. S. and one culture

Britain, then students would have spent a lot more time researching the culture but they wouldn't have been involved in the act of creating a culture, and the act of researching is very different from the act of creating.

However, the two missing units, Societal Differences and Elements of Culture, which were of some importance in understanding the DQ (in particular Societal differences) caused a discrepancy between what the professor saw as the main DQ themes and what the TAs saw. However, the larger course concepts seemed largely intact in the TA course understandings.

Research Question 1.1: Driving Question: The Students

A total of 22 units were found on the DQ, with six units on World Power and Control, four units on Cultural roles, four units on Addressing Important World Questions, five units on Interconnectedness, three units on the Holistic Understanding of Cultures, and four units on Role of Culture. No units were found on Societal Differences, Elements of Culture, Interconnectedness of all Humanity, and The Role of Cultures in the World System.

There were four units on Role of cultures. In particular, students found that they identified with the culture they had created and learned that they would do unethical things to save their culture from harm. Student David confided:

Us being a little sneaky like that was because we trying to defend our own culture and what we believed in. A lot of what we were trying to do you can see in real world stuff... sneak around and do stuff behind their comrade's backs and that's exactly what we were doing, but we weren't intentionally doing that, we were, like Man, they just took us over and we were hurt by it and we want to overthrow them but we need to prepare ourselves....

Another student, Barbara, put it this way: “We created a culture that we decided was going to be an isolated culture. We wanted to be more self-sufficient.”

No units were found on Societal Differences from the student interviews.

There were four detectable units on Addressing Important World Questions wherein students also learned that culture can be a determinant of one’s attitudes and needs.

Accordingly, they learned to view a culture from the culture’s point of view. Student Robert spoke of the plight of Aborigines:

We had a speaker come in who was talking about Australia, and he kind of skimmed over the Aboriginal people in Australia, and almost in an insulting fashion kind of based past what had happened, and the kids from [the professor’s] anthropology class are the ones that raised their hands at the end of the lecture and started calling him on it, and say no, this is what happened. You need to explain it. You can talk about this. You do know what happened.

There were five units on Interconnectedness, indicating that students felt connected to the professor and to each other through their culture. Student Patricia had this to say about being linked to others in the class:

When he made us look at each other, it made me feel like I wasn't alone, that all these students that are in there, they are living the same things I am, they are [at]the same point in their lives I am, they have probably gone through a lot of the same things that I have....

Another student, David, saw the interconnectedness on a larger scale in terms of social justice:

.... How you can't distance yourself from what's happening. You always have to participate. It's what are you going to do while you are participating. Are you going to [be] part of the problem or are you going to work to change the problem?

There were three units on the Holistic Understanding of Cultures showing that once students had created their culture and began to identify with it, they began to understand how cultures are interrelated in the world and also the need for greater understanding of other cultures and how our actions, wittingly or unwittingly, affected them. Patricia explained:

I learned how I am part of the system, I guess, and how even though I don't want a lot of bad things happening in the world, in a way I am participating in it by buying name brands, thing like that, but it made me definitely more aware of what is going on and what I can do, I guess, to maybe change it a little bit.

Research Question 1.2: Student Construction of an Artifact

In the traditional classroom setting, students demonstrate their knowledge by taking tests or writing papers (McGrath, 2003; Postman, 1971). In PBL, learners pose challenging questions, such as “What is my goal,” “Are my ideas and materials the most efficient for the task,” “Is my creation beautiful,” and “Does it work?” Balestri et al. (1992) characterized designing as *constructive*, in that learners produce an artifact according to specifications, and *creative*, in that it requires a novel response.

Research Question 1.2: Student Construction of an Artifact – Professor

In PBL classrooms, students are asked to work individually or in groups on projects, which culminate in the construction of a product, widely referred to as an “artifact” (Blumenfeld, et al., 1991). Students must have the autonomy to generate such artifacts, which can be a

physical object, such as a video, a multimedia project. However, the artifact can also be abstract, such as the construction of a culture, as in the Anthropology class.

The professor had this to say about why he chose to require the construction of an artifact (a culture) for this class:

Mostly I was frustrated with the kind of multiple choice wording that was going on with the multiple choice exams... and I needed some way to get them to ask questions rather than just looking for the right answer from me. So...if, instead, we framed a project around "How does the world work?" then that frames the big question and then students in order to build up this simulation would have to ask a whole bunch of questions ... and suddenly they realize that all the stuff they thought they were just memorizing for an exam actually plays a role in our understanding of how the world works, so that was the bigger goal of the project.

Research Question 1.2: Student Construction of an Artifact - TAs

There were six units on the construction of an artifact for this question. Since there were so few units, it was difficult to do more than create categories. Three units were on Critical Thinking--"getting out of their own mindset," two units were on Creativity, and one unit was on Interconnectedness.

Table 4.2 Student Construction of an Artifact – TAs

Theme	Unit
Critical Thinking	3
Creativity	2
Interconnectedness	1
Total	6

Critical thinking was an important aspect of culture creation, since it required students to construct the culture and to make sure that all parts of the culture adhered as a whole. On critical thinking, TA Dan had this to say:

I think the problem with group projects is in high school they have a group project and they divide it. Say they have a report on George Washington. One guy will say okay, I'll take it from his birth up to twenty years old. Another person says okay, I'll take it from twenty to forty....They split it up and each do their parts separately.

TA Dan went on to say that the difference between this segmented, sequential approach, and a more holistic response was in the critical thinking that must be displayed:

Oh, so you have them in polygamy, so that means in social structure women are less important than men.... Wait, we have a female goddess? I don't think that will work because if women are less important for them it wouldn't make sense to have a female goddess.... they had to do all of that together to make it work.

An example of focus on the two units on creativity could be the following:

The creativity that some of them put out was actually pretty interesting.

TA Gina observed the degree of creativity inherent in culture creation:

The students are able to be completely creative....Once these cultures are created and we have all the aspects covered.

The last unit was on Interconnectedness. The TAs, as a group, saw the need for creating a feeling of connectedness among the students in their culture and for establishing a connection to “real life” cultures that the students may not have had before. TA Dan commented on Interconnectedness as the final goal of the class:

Then we got into the bigger thinking stuff like love and religion, art, these things that drastically change from culture to culture and they reflect their values. The last part was integration, showing how all of it reflects each other. How does their method of exchanging reflect on politics? If they are equal traders, is there any possibility of having a Big Chief? No, because if everyone has everything how do you determine who is the richest and who becomes the leader? Having them make those connections.

The three categories of critical thinking, creativity, and interconnectedness indicated the TAs’ understanding of the artifact, which was the culture, and that each individual culture was a creative act that was part of an interconnected whole. While the TAs knew about the Power and Control aspects of the course, they were not part of the final World Simulation, in which the professor made Power and Control rules. Specifically, TAs were responsible for the creation of the artifact, the culture, and their role was reflected in these categories.

Research Question 1.2: Student Construction of an Artifact – Students

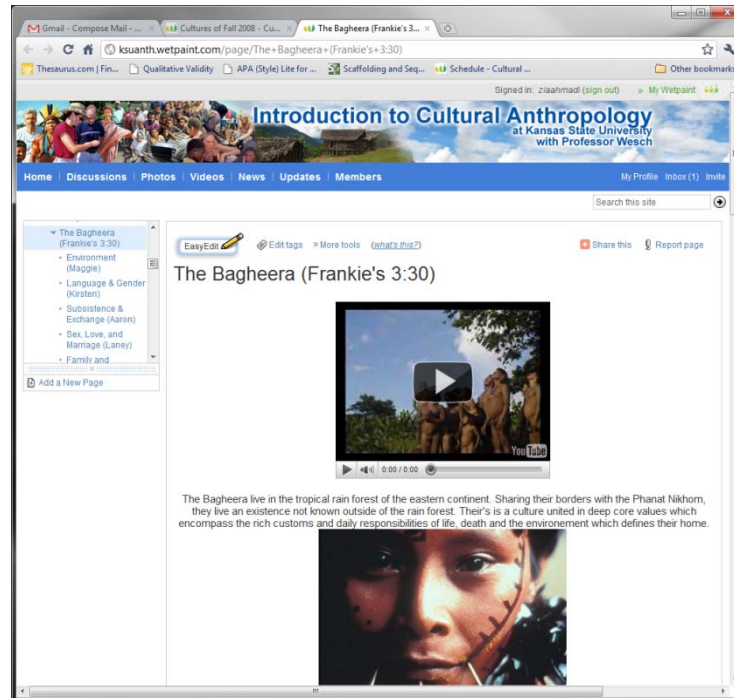
There were 24 units on this section, with four themes: nine units on Researching and Creating Cultures, six units on Group Communication, five units on Cultural Self-Determination, and four units on Working in a Group. These were categories in which students spent a lot of time researching their cultures and making them work together as a whole. This required group communication, a group determination of the culture and its elements, and the need to learn to work together as a group, all necessary components in culture construction.

Table 4.3 Student Construction of an Artifact – Students

Theme	Unit
Researching and Creating Cultures	9
Group Communication	6
Cultural Self-Determination	5
Working in a Group	4
Total	24

The students in each recitation session created their culture and uploaded it to the course Wiki. See Fig. 4.1.

Figure 4.1 Course wiki on Wetpaint screen shot



On Researching and Creating Cultures, Sandra had this observation on the decision-making and critical thinking that was involved:

Our job was to create a culture, and they gave us a little background information....but ultimately we got to decide what kind of crops we grew, how we got our food, what the roles of women and men were....

Another student, Bill, reflected on culture creation in terms of the various elements involved, how to find them, and how to account for so many elements that were inherent in a culture:

The challenge, initially, was Where do I find this stuff? The other aspect... was that there were so many parts of the culture that had to be accounted for. There was religion, art, environment, subsistence, family relationships, that kind of thing.

Next, there were six units on group communication, with students finding good intra-group communications necessary in developing their cultures. While class discussions were helpful, the nature of developing cohesive cultures required that students discuss all aspects of their culture so that it was consistent and had integrity. This required a great deal of group communication. Student Carol recounted:

We would come back as a group and discuss the ideas and kind of hash it out, and then we would separate again and write about it....It was a lot of individual work interspersed with group discussion....

Another student, Sandra found the group communication to be:

...kind of like constructive criticism. If you came up with an idea and someone didn't agree with it, they just didn't like [it]... [and they thought] that [it] was stupid....It kind of made you think more.

Next were 5 units on Cultural Self-Determination where Patricia observed that:

We go[t] to discuss what we were going to do with this culture.

Student Robert commented on this freedom to create a culture and stated that:

...you had a lot of freedom in how you went about creating this culture, and that really made you feel involved....[that it was] something that mattered, creating this culture.

Another student remarked that "it was fun because we made our own culture that is not like anything else.

The final four units were on “working in a group”, which “*was a little bit of a challenge,*” student David said. Student George stated that working in a group “*was a big challenge to figure out these details.*” Student Sandra observed that “*we were able to disagree and back up our own opinions and points, sometimes, but we never really got mad....*”

The greatest learning in constructing the artifact took place in the group Research and Creation of the cultures. Next, Group Communication was both necessary and challenging, most of the time, based on multiple perspectives, lack of student input (in a few cases), and multiple inputs such as the wiki, personal e-mails, and class discussions. These input channels significantly affected weekly recitation direction, particularly if an element was missing because a student was ill or missed class for another reason. Third, Cultural Self-Determination provided many creative options and enhanced student motivation. Finally, Working in a Group involved student exchange of ideas to build upon each other’s concepts of the culture. In this respect, students, as a whole, benefitted from the interaction.

Research Question 1.2.1 Construction of the Culture Artifact for the World Simulation

The Introduction to Cultural Anthropology class in fall 2008 had two major components: (1) the lecture, and (2) the recitation sessions. All 400 students were required to attend the two weekly lectures. For the required weekly recitation sessions, the class was divided into 20 groups of 20 students. During the semester, each recitation group created a culture. At the end of each semester, the Anthropology class culminated in the gathering of all cultures in the World Simulation (WS). In fall 2008, this gathering was slated to take place in an on-campus rodeo arena.

The WS takes about 100 minutes and moves through 650 metaphorical years, from 1450 to 2100. All cultures interact with each other “with props for currencies, natural resources, and other elements which created the world system.” (For a full description of the WS please see Appendix D)

The ultimate goal of the World Simulation is to enable the students to experience how the system worked and to explore some of the important questions facing humanity within that context, which included “global inequality, globalization, culture loss, environmental degradation, and worst scenario, genocide” (Appendix D). The rules of the WS were determined solely by the professor, and they varied slightly each time. The TAs also knew the rules; however, the professor did not wish to reveal the rules beforehand to the students “because the simulation relies heavily on an element of surprise and some students may find their way to read this” (Wesch, 2006, p. 2, see Appendix E).

There were 78 units for the goal of the simulation, which was to survive. The World simulation was designed by the professor as a way to operationalize the DQ and its corollary to place students in ethically and morally challenging situations with which to gain insight into Hard and Soft Power and the human condition. The professor’s ultimate goal for the WS was for it to reiterate the DQ and its corollary. He commented:

....the biggest insight the students get, I hope, and the one that I am most proud of, is that they realize in the heat of the simulation that they are doing one thing, and then they reflect [on their actions] and realize thatsometimes their individual actions, while individually are not unethical, or bad, when taken as part of a larger system that they are a part of, ... can be seen to maybe not be the right thing to do. These are all big and complicated questions....

The professor designed the simulation to be made up of four or five interaction rounds (see Appendix E for a more complete description). Each interaction round ran for about 12 minutes followed by a three minute intermission that allowed students to take account of what had occurred and to see if each culture had sufficient food to "feed themselves." The main rule of the simulation was very simple: to survive at the end of each round, each student had to have a piece of food (cereal) to eat. This required either land (represented by a cereal box from which the student can get food), or money to buy food from others.

At the beginning of the simulation, each group had at least three items: a box of cereal representing their "land," envelopes to be opened at the beginning of each round (providing various challenges or instructions), and a collection of colored note cards representing various resources or goods that they could trade with others (these represented many things, depending on their ethnography, but some examples are white = salt, green = plant materials, orange = obsidian, and pink = shells). The professor remarked:

The most important props are boxes of cereal. There are three types of cereal in the simulation, each one of them profoundly symbolic. Fruit Loops represent a rich, varied, and nutritious diet. I'm aware of the irony of this, but the multiple colors are what set them apart. Cocoa Puffs represent luxury consumption goods such as cocoa, coffee, sugar, and tobacco. Cheerios represent large-scale monocrop cultivation.as the simulation begins all of the cereals begin to take on different meanings for different people, which is exactly how it should be (Wesch, 2006, p. 3).

Further, the professor made this point about the interweaving of culture and power:

After the intermission, there is a 3-minute "news update" which I use to draw connections to real world events that are currently being simulated. The news is an audio-visual

extravaganza complete with commercials advertising some of the new products being created by emerging imperialists (Wesch, 2006, p. 2).

If a student did not have food to eat at the end of the interaction, this death was marked as a "famine" by the "cultural historian," and the death decreased the total population of the culture by 5%. The student who 'starved to death' then had to go to a nearby land as a refugee and hope for decent treatment by that culture. In some simulations, the professor said that whole cultures starved to death or died due to illness.

Research Question 1.2.1: Culture Artifact Construction for World Simulation –TAs

There were 55 units on the World Simulation by TAs, from which three themes emerged: Authentic Learning with 24 units, Empathy with 18 units, and Hegemony with 13 units.

Table 4.4 World Simulation – TAs

Themes	Units
Authentic Learning	24
Empathy	18
Hegemony	13
Total	55

Authentic Learning

The 24 units on Authentic Learning comprised Vicarious Experience with eight units, Contextualization with six units, Role Play with six units, and Working in a Group with four units.

Table 4.5 World Simulation – Authentic Learning – TAs

Themes	Units
Vicarious Experience	8
Contextualization	6
Role Play	6
Working in a Group	4
Total	24

By experiencing anthropological concepts through role play, the World Simulation students were able to experience Hard Power and Soft Power issues within the context of their cultures. This vicarious experience allowed the students to learn in an authentic manner, which is one of the cornerstones of PBL. TA Dan recounted:

Their reactions were genuine. They were there. They actually felt angry when they were conquered, sad when they were genocided. There was a real connection there with the situation. It wasn't just them playing around. It was like "Oh my gosh! I'm dead and I have to leave my group of recitation friends and live with this other group of kids that I don't even know. This is so weird and awkward and I am so depressed." When I see that happen, then it worked. When they actually start caring about their culture, which you would think some of them won't care, they'll be like "oh well, whatever, I'll just stay here for the rest of the class and then go home" but they actually care. When the colonizers came along and said "You are all dead" they were like "What! Why?" They actually cared. That was the connection they made.

TA Dan further explained the effects of contextualization on cultural survival and on individual and group behavior:

At the very beginning they were just as a group trying to trade to survive, so they are building alliances with neighboring cultures. That would happen in real life. And then, when they got colonized, they were the Indians that the Spanish came and put into slave work. And then by the end, if they hadn't been genocided, they would have been the type of people that you see on those "save these children" channels where they live in the slums of the cities and they wear hand-me-down clothes from the 80s sent by Americans who feel so sorry, but they still buy the oil from the companies that push them there.

That's from free to slave to slave in an economic sense because the company took their food away

TA Dan commented on students experiencing these problems in real time, so they began to understand world systems from the perspective of the various cultures, thus learning through experience.

First thing is the creativity of this class - the way it is not just read this chapter and answer these quiz questions. Read this chapter and answer these quiz questions. Read this chapter – test! Usually it is the last half of the class....It is usually unanimous that all students like the World Simulation. Even if it turns out that their culture got enslaved and had to work for fruit loops or whatever, they all invariably like it and they learn from it. They know when [the professor] talks about the world systems, they saw it play out, and so it is not just some graph on the board that they had to memorize so if it is on the test they know it. It is like "Hey, this happened to me. I got stuck into this system, so now I understand why people make this stuff up."

TA Gina stressed the importance of student physical and mental participation, through which students feel more accountable:

At first they feel like it's going to be something weird but it gives a whole new dynamic than writing a paper or taking a quiz. Having something to work towards at the end of the semester that they physically and mentally participate in I think gives the class more value, and it also holds the students more accountable for their work and for knowing what's going on. They don't want to show up at the World Simulation and not know what is going on. I think they make more of an effort to make sure they know, sometimes they

wait until the end. It's definitely a tangible goal, and it's different, and they seem to like that.

Empathy

There were 18 units on Empathy whose main theme comprised three categories: Genocide seven units, Cultural Loss six units, and Starvation five units.

Table 4.6 Empathy

Theme	Units
Genocide	7
Cultural Loss	6
Starvation	5
Total	18

Empathy was achieved through vicarious experience within the context of role-playing in an invented culture in the World Simulation. These cultures experienced genocide, whole cultures being colonized, and starvation during which students learned to care about their cultures, and finally, to care about other cultures around the world. According to the TAs, it was the goal of the class. However, this goal was achieved through particular factors, the main one being authentic learning. TA Dan had this to say:

I think they learned more on how it happened. When they go shopping and they see made in Indonesia, made in Uganda, made in Afghanistan, or what have you, they look at that and they are like, oh, and they move on. Then they see on the news, war in Africa, war in Afghanistan, war in Iraq. Why does that happen? Those people just don't care, I guess. Well, then they brush it off. Now they know why these people are in the situations they are.... I just want them to know exactly why that situation, why that's happening, and why they should care, even though it is an ocean and a continent away, and you may

never see these people ever in your entire life. Right now, as they sit in their chair, in class, in air conditioning, drinking their Dr. Pepper, three people have been beheaded in Africa because they are Muslim and not Christian, or vice versa.

TA Dan elaborated on real-world experience and how the World Simulation made the connection:

Why are these people so violent? They are infamous for killing missionaries, stuff like that. What's in the cultural values? Why do we think that of them? Why do we think we need to change that of them? And also what's happening to them today. So the last thing in the World Simulation, they were genocided, and that is happening in South America today. Oil companies are going in and destroying land and killing the natives because no one wants to defend them, and they don't have guns, and they (oil companies) do. Why is this happening? And maybe, hopefully, at least one of those students will actually care enough to maybe research more, or join an organization, or donate money, or do something so that they recognize they are trying to help the world as opposed to accepting the system as it is and shrugging their shoulders.

Hegemony - TAs

There were 13 units in this theme of Hegemony consisting of three categories: Economy five units, Agriculture four units, and Industry four units.

Table 4.7 Hegemony-TAs

Theme	Unit
Economy	5
Agriculture	4
Industry	4
Total	13

Students were able to understand the meaning of Hard Power and Soft Power in the World Simulation by experiencing economic devastation, food production problems, and other problems based on the industrial production of each culture. Moreover, power influenced the outcome of a given culture. Hard Power is the ability of one nation to be able to coerce another nation to do that nation's bidding. If a culture has a strong economy and strong military then it has a better chance to colonize other cultures. Logically, agricultural, pastoral, and light industrial cultures were prone to being colonized, which happened in the World Simulation. Through planned hegemony on the part of the professor, students learned vicariously about suffering; thereby they learned to empathize with other cultures. TA Dan explained:

I think they realized why certain cultures act the way they do, so they begin to understand why the British, the French, the Germans, and the Spanish were able to conquer the Americas and Africa so easily and how they were able to keep a group of people enslaved for so long. They also learned why those people today are poor, why they struggle with poverty, corrupt government, violence...., and that it is not just pictures on CNN, its people, [it's] them. It's them somewhere else. So when you see reports of genocide in Rwanda it is not just a pile of bodies, but you realize "that could have been me if I had been born there."..... a lot of students wonder why the world is as bad as it is, what happened that we had a man in Germany feel like he needed to kill six million people?Now they know why.

As a result of these experiences, TAs wanted students to look beyond the comfort of their own lives and reflect on the lives of others who were less fortunate. TA Dan elaborated:

At the very beginning, they were just... a group trying to trade to survive, so they are building alliances with neighboring cultures. That would happen in real life. And then,

when they got colonized it became to colonize.(?) They were the Indians that the Spanish came and put into slave work. And then by the end, if they hadn't been genocided, they would have been the type of people that you see on those "save these children" channels where they live in the slums of the cities and they wore hand-me-down clothes from the 80s sent by Americans who feel so sorry but they still buy the oil from the companies that push(put?) them there. That's from free to slave (to slave) in an economic sense because they have no way because the company took their food away so now they have none.

TA Mitch’s response expressed the attitudes of the others, about the need to create a deeper understanding of the world’s problems through constant reflection.

The questions....I want all of them to get it, that questions are more important than answers, and that the best questions are just going to lead you to more questions, and that creates a much deeper knowledge of a subject than if you just look up an answer and think that you know it

Research Question 1.2.1: Culture Artifact Construction for World Simulation -Students

There were 56 units in the World Simulation presented to students and three themes emerged: Hegemony with 27 units, Survival with 17 units, and Authentic Learning with eight units.

Table 4.8 Culture Artifact Construction-World Simulation

Themes	Number
Hegemony	27
Survival	17
Authentic Learning	12
Total	56

Hegemony

There were 27 units in this category of Hegemony, which consisted of three categories: Colonization 21 units, Genocide three units, and Survival three units. The students were able to understand the role of Soft Power and Hard Power quite well, and the World Simulation demonstrated cultures colonized either by propaganda or coercion.

Table 4.9 Hegemony

Category	Number
Colonization	21
Genocide	3
Survival	3
Total	27

In some cases, a whole or part of a culture was wiped out by genocide by a colonizer that needed the natural resources. Some cultures negotiated survival by submitting to the colonizers with work for food. A political thread throughout World Simulation (and the real world), hegemony was exemplified in the social, cultural, ideological, or economic influences exerted by dominant cultures in the World Simulation. The professor gave the colonizer a different map than the non-colonizers. *"Each of the non-colonizing cultures were to be used for a certain aspect, like production....and then they would put them to work."* This made the colonized group dependent on the colonizers. Student George reflected:

I thought the phenomenon of our culture['s people] essentially becoming indentured servants to our colonizer after a couple of rounds...[was] pretty reflective of a real world situation.

Student Sandra had this to say:

We ended up getting colonized by soft power [co-optive rather than coercive, e.g.-- economy and politics][in] the first round, which we didn't realize we were allowed to do, but I think that kind of illustrates how a lot of cultures.... didn't realize that the colonizer was edging in on them and was going to take them over. It was fun.

Students learned that colonization could put them into bondage as a culture, reduce their food, or kill them. George explained:

Our culture got colonized almost immediately by a nearby colonizer. We co-existed very well. I think the colonizer from the beginning was not a threatening presence and we almost didn't know if we were officially colonized, Through the better part of the first three or four rounds we were in that same situation. We were just a colony of this nearby culture. We did have to do some work in order to keep that situation where they would take care of us or whatever you might describe it as. Eventually, right towards the end, we gained our independence I think.

Students also learned the need for diplomacy in cultural relations through trade to reduce the effects of colonization. George elaborated:

At one point we had some sort of natural resource restraint and we had to send a few people away as a result of our land not being able to support our original amount of people. We thought it would be a good relations thing. We sent them over to our colonizer and then eventually they came back. As I said we gained our independence and I think toward the end we had established new relations with another colonizer, I think, and we looked to be in good standing.

Students learned the need to band together with other cultures to reduce the negative effects of colonization. David commented:

We went through two rounds without being colonized, at the very end of the second round we got colonized, but we had fed ourselves and then we came across some things and eventually were able to free ourselves again somewhat. We were still working for our culture to get food because we had lost our fruit loops and stuff like that. We were free, and we just had to give them a few things for food, and then we created an island state where the whole islands got together and one would protect the other if someone would come in and try to colonize again or something like that.

Genocide

During the World Simulation, some colonizers committed genocide against other cultures. Students were able to put a meaning to the word “genocide” (deliberate and systematic destruction, in whole or in part, of an ethnic, racial, religious, or national group) through having the vicarious experience themselves. Student Robert explained.

It is four hundred students working together to act out various cultures around the planet, and to, hopefully, end up working together. --not what happened this year--but to act out these cultures and to get a feeling of what it is like to belong to them. It was interesting. I'm not sure what the final goal was intended to be, but the final goal that I saw was that we had people in the group that did a good job on the wiki but you could tell that they didn't quite understand what it was like to belong to a culture which was egalitarian, and when they were enslaved, when they were genocided, you could really see it dawn on them that, wow, some terrible things have happened in this planet's history, and wow, we really shouldn't let these happen again.

Bill learned about cultural exploitation and its effect on the citizens, including rebellion and death.

My culture forged an alliance early on with a few of the surrounding groups who had a similar way of life as ours. Trading went very well for the first few rounds and we were even capable of taking in a few other people into our culture. However, all good things must come to an end and we found ourselves conquered by the Peekaboo culture. They exploited us for labor and robbed us of our resources. I began traveling around and by the next round had convinced several different cultures to stage uprisings. Our culture and several others succeeded and were freed. Sadly, Peekaboo managed to put together what had happened and responded by committing genocide against our once proud culture.

Robert was also able to place the culture into a future context, based on its cultural elements. This ability to project created a better understanding of the hardships that certain cultures endure due to Hard and Soft Power. He said:

I'm not sure what we as a culture could have done differently. Due in large part to us not having access to the kind of food production that naturally lends itself to industrialization, my culture was forced to "make do" in the international environment. I suppose we could have attempted to forge stronger alliances with other superpowers but I fear that would have just perpetuated a cycle of exploitation. As for what would have happened had the Simulation gone on longer...well our culture was kind of ended due to the genocide, but the game mechanics would have allowed us to continue as refugees. So, I imagine a hard life of wandering from culture to culture hoping for handouts in exchange for slave labor would have ensued.

Survival

Survival was a theme that students learned about early, since survival was due in part to the luck of the draw and to the elements of that culture. The need to survive produced certain behaviors in which they normally would not engage. David remembered:

We were supposed to give over all of our cards but we didn't because they never asked for it, so we kept it, and then for cocoa puffs we would make a few and stuff a few in our pocket so that if we ever did get to free ourselves we would have some stuff to trade with so that we could maybe survive an extra round. Us being a little sneaky....that was because we were trying to defend our own culture and what we believed in.

Students did understand the point of the game, and this student was on his way to developing a “worldcentric” view, due to these experiences with survival. Patricia explained the goal of her culture:

We all had our own cultures. We got to interact with other cultures. Basically our goal was to survive. That was our goal because we were kind of an indigenous population. I'm sure the goals of bigger nations were more materialistic. Everyone had a goal.

Since food is an important commodity in the WS, students learned about the starvation of the people and the lack of need for goods that were not sustainable, that were superfluous, or that were luxury items. Bill explained such commodities:

The cheerios were just kind of a low nutrition food but you could live off it and then cocoa puffs were just extra commodities like coffee and stuff like that just more extras you can't survive on them, just more luxury goods.

Existence

Every culture's goal was to establish and strengthen itself and to continue being a prosperous and independent entity. One of the goals of the World Simulation was that every culture must try to continue to exist, and to do so, they had to use every advantage at their disposal when dealing with other cultures. They also developed a sense of community, of group existence as a culture. Sandra was amazed by the behavior of her culture's colonizers:

It was really weird because our colonizers were really nice to us at the beginning. They didn't colonize us right away. They helped us. Until you are colonized you have to trade playing cards to get certain combinations in order to be able to feed yourselves, so they helped us trade playing cards so we could feed ourselves. When we lost two of our members to starvation, they took our refugees in, and they were really nice to us. So when they colonized us they were still really nice to us.

Students began to get a "bigger picture" of the problem of cultural existence, beyond their own culture in the World Simulation. Barbara pointed out:

There's a bigger picture than just that. And there's a bigger picture than just there are people starving in other countries. There are people starving in this country. How can we go help children in Africa who are starving when there are people down the road starving in the street? If we can't end starvation within the United States' border, we have no hope of ending it in another country. I think points like that need to be made.

Authentic Learning

Because students simulated cultures and interacted with each other through trade, diplomacy, war, and food exchanges, they were placed in situations that mimicked real life.

Sandra believed that learning through World Simulation was enjoyable:

I think the World Simulation, the whole idea of that, is what made the class so interesting. You weren't just sitting back and listening to your teacher lecture; you actually got to participate, and I think you learn more if you participate than if you are just sitting there staring at a screen (and) taking notes.

Because of this real-time interaction, students became aware of the larger implications of this experience for their own lives. Robert explained:

The correlations I think are rather vivid here. It made me and my group, experience what it is like to be a part of a group who due to no fault of their own (poor geographical location, lack of food sources, plague, famine, and etc.) find themselves disadvantaged and at the mercy of a capital based system. [the professor] could have spent hours explaining it in a lecture hall but actually being out there and "living" it really drove the point home. It pointed out that while a capital based system is fine and dandy on paper there is something key about ensuring human rights that cannot be lost in this search for profit.

One student remarked about the unintended consequences of her actions and how upsetting it was to learn that she could descend into behavior that was illegal due to the need to protect the culture or to rise above enslavement. David elaborated:

A lot of what we were trying to do you can see in real world stuff, and how cultures would go around and sneak around and do stuff behind their comrades' backs and that's exactly what we were doing, but we weren't intentionally doing that, we were, like, man, they just took us over, and we were hurt by it, and we want to overthrow them but we need to prepare ourselves before we do that, so we were trying to prepare ourselves before we do that, so we were trying to prepare ourselves. I created a large identity with us having my part at least of the wiki project.

The bigger questions were answered during the World Simulation, and the follow-up interview with the three students revealed that the results of World Simulation (answers to deeper questions) were not understood on the day of the Simulation. Such questions were answered after several days of reflection – another cornerstone of PBL.

Research Question 1.3: Teacher's Role - Professor

Postman and Weingartner (1991) stated that in the traditional classroom, students do what the teacher instructs them to do to provide the “right answer.” They also asserted that the learning that occurred in the traditional classroom was influenced by the physical arrangement of the classroom itself in which student chairs are arranged in neat rows, and the teacher is in front of the classroom. This teacher-oriented structure also influences classroom communication. Goodland (1984) reported that in the traditional classroom, teachers dominate the class discussions.

In the PBL environment, teachers move away from their directive leadership role, which is replaced by that of a facilitator or academic coach (rather than that of the total authoritarian) (Gordon, 2009; Means & Olson, 1995; Moursand, 2003). “A successful class prepares students with the critical thinking skills to become their own systematizers, organizers, and cultural

analysts. The teachers are not doing things for the students or to the students, but rather are launching a process with them” (Shor, 1996, p. 100).

In PBL environments, the role of the teacher gradually diminishes from that of an authoritarian to that of a facilitator. PBL facilitates a collaborative work environment to enable students to receive feedback from their peers and the teacher as facilitator. Thus, the teacher’s role involves the shaping of the learner’s real experience from the environment (Han 2008).

McGrath (2003) stated that in his or her “new role,” the teacher was to supply “scaffolding.” At the beginning, the teacher was to provide a basic definition or understanding of a concept for students. Then, as students progress in understanding of the concept, it was to be explained more fully. Scaffolding, therefore, is the act of providing basic support for a new concept structure by providing extensive assistance early on. Then, as student understanding increases, students reach a point wherein they can gradually take on more responsibility for their learning. McKenzie (2000) equated the concept of scaffolding in the construction industry to scaffolding in education:

Scaffolding in education is a temporary support mechanism. Students receive assistance early on to complete tasks, then as their proficiency increases, that support is gradually removed. In this fashion students take on more and more responsibility for their own learning. (p. 157)

There were only five units from the professor on the Role of the Teacher category, so these categories were used. Specifically, three units were on Teacher as Facilitator, and two units were on Inspiring Students (through his lectures).

Table 4.10 Research Question 1.3: Teacher’s Role - Professor

Category	Unit
Teacher as Facilitator	3
Inspiring Students	2
Total	5

The professor saw himself as both a lecturer in the large lecture class and a facilitator of student learning through the 10 recitation sessions, the interpretation of the course through the TA assignments, and the World Simulation.

On inspiring students in his lectures, the professor had this to say:

I try to make sure that no matter what I am lecturing about, that I connect with students. I actually have a marker in my own mind that if I don't connect with them once every three minutes then it is a bad day. I try to have some sort of at least little piece that I think will stick with them for the rest of their lives once every ten minutes or so.

The three units on the Teacher as Facilitator indicated that the professor engaged with students in the learning process as a facilitator.

...we still have to continually inspire them toward the goals that we are seeking, and we do that in many different ways. It's the one we have to be right there with them, step by step, helping them through the process.

The professor saw himself as a facilitator of the TAs, as well.

I suppose there are a lot of things going on. One aspect of it is just I study my students pretty carefully. I talk to them all the time. I have these ten TAs who also.... I have a very good relationship with them.... it's not very locked down, it is not very authoritarian.

Research Question 1.3: Teacher’s Role: TAs

Here, 11 units clearly encapsulated two resulting themes; six units for Collaboration Facilitation and five units for TA Class Ownership.

Table 4.11 Teacher’s Role: TAs

Theme	Units
Collaboration	6
TA Class Ownership	5
Total	11

Inspired by the professor, the TAs fostered and encouraged collaboration among students during the creation of their cultures. TA Dan remembered the collaboration between two students:

....they both worked together to create this one. It was really nice. So Elaine didn't have to do all the work. She did the research, and wrote the page, and then Andy came along, found these pictures on the Internet, and put them up.

The second theme in this category was TA Class Ownership of the class. The TAs guided students through their projects during the recitation sessions and engaged those students who did not have a distinct role in the group project. Those students were encouraged to contribute to the project in certain ways. TA Dan explained:

You are not responsible for that section and you don't have to write it for them, but you add, because that person might miss something, or you might want to contribute something that you like and that is very unique and interesting, and they might have missed it.

Research Question 1.3: Teacher’s Role: Students

There were 26 units in this category comprising five major themes: Real-world connection with 12 units, Connections to Student’s Personal Life with seven units, Sense of Ownership of the Class/Project – Learning with three units, Interdependence with two units, and Compassion with two units.

Table 4.12 Teacher’s Role: Students

Themes	Units
Real-world connection	12
Connections to Student’s Personal Life	7
Sense of Ownership of the Class/Project – Learning	3
Interdependence	2
Compassion	2
Total	26

The major themes were Connectedness (combined 19 units) and Motivation to Learn (3 units) along with the categories of Interdependence (two units) and Compassion (two units). From these themes, it appears that students had an emotional connection to this class gained through expression of the themes above.

Research Question 1.4: Assessment – Professor

Constructivist researchers such as Holt and Willard-Holt (2000) emphasized the concept of dynamic assessment, which differs from conventional tests. Rather than viewing assessment as a process carried out by one person, such as an instructor, it is seen as an active two-way process involving interaction between both instructor and learner. The assessor enters into dialogue with students being assessed to ascertain their current level of performance and ways in which performance might be improved on a subsequent occasion. Assessment and learning are therefore seen as inextricably linked processes (Holt & Willard-Holt ,2000).

There were three units from the professor on assessment that were Constructivist in nature, stressing Assessment Internalization, which is best internalized through active engagement. His desire was that students move from “receptive” learners (taking in information and knowledge) to “procedural” learners (learning how to learn), in which the professor hoped that they would internalize the knowledge in such a way as to be able to “apply it in all aspects of their lives and [allow] it [to] become integrated into their lives.” He described the assessment process, ideally, as being internalized by the students:

There is receptive learning, which is where you think there is an objective truth and the teacher has it. From there students generally move into a subjective phase where they question everything, including the teacher...and there is no truth anywhere. From there they transition into a procedural phase where they have a procedure for finding truth and it is usually discipline-based. Usually, your best learners are procedural learners, you might say.

Research Question 1.4: Assessment – TAs

Little was gleaned from the TAs on assessment, though they administered 75% of the students’ grades. For all grading, they used the professor’s rubric, so assessment, as a concept, was not within their purview. However, to gain further information, the researcher conducted both an interview and a follow-up interview with one TA. Unfortunately, the two other TAs could not be reached for an interview. As a result, there is little data on assessment except for the nine units on Assessment from the three TAs from which two themes emerged: Engagement (4), and Class Ownership (5). It would appear that the main assessment concerns of TAs were student participation and engagement.

Table 4.13 Assessment – TAs

Themes	Unit
Engagement	4
Class Ownership	5
Total	9

Assessment was more than assigning a recitation grade (see “Syllabus” in Appendix A). Assessment also involved TA’s observations of student behavior and class culture contributions to artifact construction. Indeed, assignment of recitation grades was not specifically discussed by the TAs. Even so, assessment, and its many elements and specific instances, such as coming to class, participating, taking responsibility for one’s culture element, taking responsibility for one’s actions, and so forth, was addressed in broad terms by all TAs..

Engagement

On Engagement, TA Dan had this statement to share about the need to conduct continuous, formative assessment:

Like me and Maria, when we TA together for (another Professor)...It is a status report. Let’s do a quiz. Any problems? OK, how do we fix it? And then we move on....(This Professor) is really big on how can we change how the students feel....”

Class Ownership

On Class Ownership, one TA had this to say about the need for students to become sufficiently engaged that they take ownership of the class and the culture in the World Simulation.

....this is a conversation between us and you guys, andyou guys are taking ownership of the assignment....

TA Mitch observed that involvement with each other was essential for students taking ownership of their learning:

But then they can also offer advice to each other and say it would be really great if you incorporated this, and so then the pressure comes off of myself to give a whole bunch of comments on how to make things better because they are able to look at it and they are able to take more ownership.

Ultimately, their work was to organize and make each recitation function as a contribution to the culture for the final World Simulation and to grade quizzes. Quizzes were heavily focused on the students' ability to engage in the class and in the recitation in meaningful ways, or on the students' ability to participate in and take ownership of the recitation section's culture creation or artifact. This artifact accounted for 100 points of the 1,000 total points. Another 100 points were awarded for "Participation," and each member of the group was to be graded by their "fellow group members" (Appendix A).

Assessment was achieved through a combination of quantifiable points on exams and quizzes and also by a more holistic, group-centered approach. "Presence," "not just attendance," as stated in the Syllabus, meant that the students would be given points by the TAs for offering "thoughtful" comments and suggestions.

Research Question 1.4: Assessment – Students

All students who were interviewed reported that they had learned, likely as a result of this category's themes. The researcher found three major themes in this category of nine units: Connectedness (four units), Interdependence (two units), and Engagement (three units).

Table 4.14 Assessment – Students

Theme	Unit
Connectedness	4
Interdependence	2
Engagement	3
Total	9

David reported that he learned best by examples that connected new information to his past experience:

I am a visual learner. I like seeing visual examples. Just thinking about my accounting class that I got out of a little while ago, where I learned best in that class from seeing the professor do it and then doing it myself and then seeing it worked again, and then going back through and labeling the different processes and how that works. In more arts and sciences classes I learn by example, so like an example I can relate to, tied to whatever we are talking about.

TA Dan added that he learned more about himself in this class:

Actually, I think I learned a lot. I learned a lot more about myself, and it reminded me to realize that a lot of the stuff that I think is wrong with our world today, well, it all stems from how we were back there.

Patricia explained what she had learned in this way in terms of connections:

I learned that whether you want to be or not, you are most likely connected to some other nation, whether it is for getting food, or for labor, or material goods. There are probably not too many cultures still out there that are totally independent, that don't look to the rest of the world for anything. That was a little eye-opening!

Barbara expressed this thought about what she learned, which was decidedly different from what all other students interviewed had learned.

A lot of it that he taught was stuff that I had already learned on my own, so I didn't feel like I really learned a lot. I did learn that there seems to be a large communication gap between the general public and the technological world. Like what's really going on in the engineering society and the science society versus the general public. I didn't really realize that until I took this class, so it really surprised me. The things that I had heard presentations on and kind of take for general knowledge now, the general public has almost no clue about. That was the big thing that I learned from that class.

This student's response could be considered that of an "outlier," in that the response was substantially different in tone and meaning from those of the other students. However, even though the "learning" was different, there was a learning, and it is interesting to note that the student made distinctions between the "technological" and "general public" worlds. This student was an Engineering major.

Research Question 2: How is Technology Used to Support PBL?

The Introduction to Cultural Anthropology course had two major components: Two weekly lectures and one weekly recitation session. Various technologies were chosen for these two course components. In addition, the students and TAs used various technologies formally and informally for class assignments in the recitation sections.

To decide what technology tools to use to manage the class and for the students to manage their project, the professor questioned them about what tools they were familiar with. As a result, Wetpaint was chosen and made readily available to them for accessing course

components (course syllabus, course schedule, handouts, lecture notes, etc.), uploading assignments, communicating, and collaborating. While Wetpaint was the wiki for course management, Meebo Me, Netvibes, Twitter, Google News, and Diigo were not used by enough students to warrant inclusion in this analysis. Meanwhile, one of the three student groups observed by the researcher used Facebook as did individual students for informal course communication purposes.

Lecture Technology

The professor used a technology station, consisting of a computer, audio amplifier, wireless microphone, wireless mouse, laser pointer, and video projector, and he used Dreamweaver to construct his presentations. Also in his presentations, he showed videos from YouTube and other sources (hard drive, etc.), and pictures. He played music from around the world before the lecture began, which was applicable to the days' lecture. David shared his interest in learning through songs:

What is interesting to me about the lectures is, one, I always enjoyed coming into class because I always wanted to see what music the professor was going to be playing, and a lot of times I would try to go...I have a part on my phone where I can hold it up to music and it will tell me what the song title is, so I would go download a lot of the professor's songs and I have those on my iTunes library because I thought they would be good to study to, so I always wanted to see what music he was playing.

Linda had this observation:

I love music. If I can make associations with things that I am learning I can better remember it.

Recitation Technology

Technology used by TAs in the recitation was limited usually to either the chalkboard or the dry-erase board. However, one TA played music on her laptop. Most recitation classes used little technology, since the purpose of those sections was discussion and collaboration.

Web-Based Course Management Technology

There were two sections of the course for which technology was used: the class itself, and the final project, the World Simulation. Based on his past experience about student use of technology in general, the professor decided to use the Wetpaint wiki for course management.

Formal Technology

Formal technology refers to technology adopted by the professor for required course use and management. The technology formally used for the Introduction to Cultural Anthropology class was the wiki Wetpaint. Below is an example of its use:

Figure 4.2 Example screen shot of the Intro to Cultural Anthropology



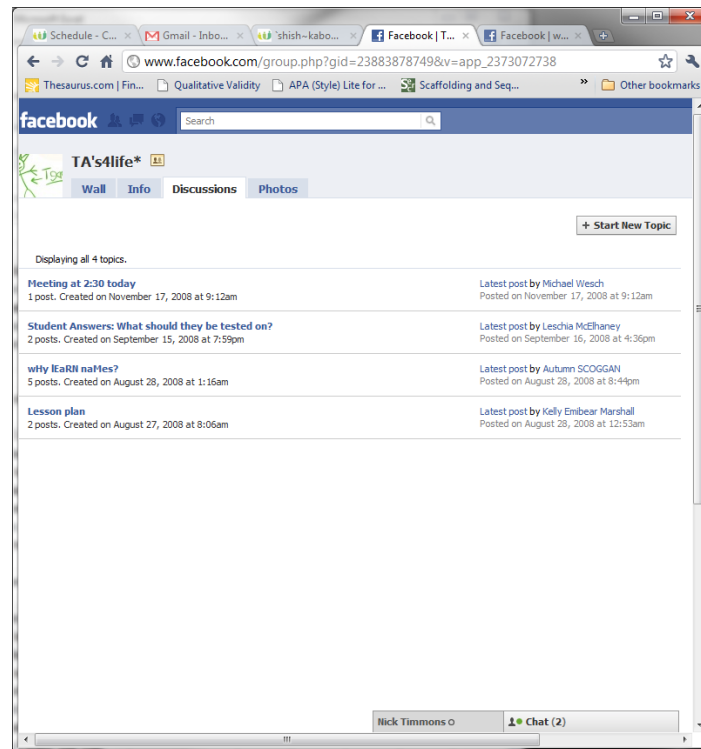
Wetpaint was also used as the formal platform for student discussions, culture-building, and assignments. However, students did not use it often. (see Appendix C for a website example of one culture done on Wetpaint.) Wetpaint is a flexible web tool that can be used in multiple ways. It permits the development of a detailed hyperlinked navigation system for course elements and operates as a “wiki,” which allows for multiple input and editing. In Wetpaint, students could contribute to and edit the content, as well as discuss and collaborate.

Informal Technology

An “informal” technology is one that either the professor suggested for use or that the students elected to use on their own for student/student and student/TA communications. Other technologies suggested by the professor were social networks, such as Facebook, Netvibes, Diigo, Meebo Me, and Google News. However, only Facebook was used as a communication option and only by some individuals and groups in a limited way. While Google News was suggested by the professor, and may have been used by the students, no one reported using it in

interviews. The professor attempted to use Twitter at the beginning of the class, but it did not catch on. Finally, the TAs and some of the students used Facebook for course communications in one recitation class.

Figure 4.3 A sample of TAs Facebook



Research Question 2: Technology in Project-Based Learning

Sheingold and Hadley (1990) reported that learning can be increased when active learning and well-integrated computer technology are utilized together. When a project is properly developed, technology can be used to enhance a constructivist approach to teaching and learning (Means & Olson, 1995). The latest advances in technology have influenced the evolution of computers and their related technologies into powerful information systems with high-speed connectivity to world-wide communication networks (Duderstadt, 2002). Regardless of the fact that adoption of technology has been slow in higher education, increasing numbers of

professors and instructors are utilizing Computer-Mediated Communications and Learning Management Systems (Duderstadt, 2002; ECAR, 2010; Garrison, 2000; Ponta, et al., 2003;).

Research Question 2: How Technology Is Used to Support PBL – The professor

In the fall semester of 2008, various technologies were used by the professor, TAs, and students in the Introduction to Cultural Anthropology course. The professor used technology in his lectures, and to manage and organize the course components (course syllabus, course schedule, handouts, lecture notes, etc.) while the students used various technology tools to communicate and collaborate with each other.

During the two weekly lectures, the professor used technology to make presentations. For instance, in the lecture hall, he had access to a video projection system, an audio system, and a computer. He substituted PowerPoint with a webpage that contained a hyperlinked menu and a main content area. This gave the professor the flexibility to quickly and easily move from topic to topic. The professor also played songs and videos from different parts of the world, and he created the course site on Wetpaint (the wiki). This site contained the course materials (syllabus, course schedule, handouts, lecture notes, links to other Anthropology and related subject websites, sound clips, video clips, etc.) and student project (culture) sites.

There were 13 units in the professor’s Use of Technology, from which two themes emerged: Advanced Technology Use for Student Interest (eight units) and Technology Exploration (five units). The professor’s use of emerging technologies to enhance student interest likely reflected his constant exploration of new technologies.

Table 4.15 How Technology is Used to Support PBL – The professor

Theme	Units
Advanced Technology Use	8

Technology Exploration	5
Total	13

Research Question 2: How Technology Is Used to Support PBL – The TAs

There were 34 units on technology from which two themes emerged: Student Course Technology Skills Acquisition, with 26 units, and Professor Course Advanced Technologies Use with seven units.

Table 4.16 How Technology Is Used to Support PBL – The TAs

Theme	Unit
Student Course Technology Acquisition	26
Professor Course Advanced Technologies Use	7
Total	34

TAs used the class management website (the wiki) for culture construction, which necessitated adaptation on the part of the students, since most had never used this type of technology for assignments before. As a result, the formal use of the wiki did not lend itself to informal communication. However, after the TAs showed them how to use it, the students felt at ease with the wiki. All the students who were interviewed reported that they ultimately liked the wiki because they were able to comment on and edit each other’s work. While the wiki was the “formal technology,” a technology required by the professor for student use, the student groups were give the freedom to choose “any technology they wished to communicate with each other.” Some student groups chose to use Facebook for individual and group communication while some used text messaging.

Research Question 2: How Technology Is Used to Support PBL – The Students

The students were fascinated with the professor’s use of advanced technologies. They found it interesting, useful, and very often, meaningful. There were 61 units on technology topics from which emerged two themes: the professor Lecture Technology theme with 33 units and Advanced Course Technology Use with 32 units.

Table 4.17 How Technology Is Used to Support PBL – The Students

Theme	Unit
Professor Lecture Technology	32
Advanced Course Technology Use	29
Total	61

Students admired the professor’s use of technology during the lecture to show text, pictures, videos, and play sound.

Additional Themes

Researchers use open coding to interpret raw data into credible conclusions through reduction and interpretation (Miles & Huberman, 1994), and they use the constant comparative method to identify additional themes. Then, when no further codes, categories, or themes emerge, theoretical saturation is achieved. With this strategy, the following additional themes emerged from the research: Emotional Involvement and Participation.

Emotional Involvement

A statement made by the professor and endorsed by the TAs and students was the need to be involved, to feel empathy, to learn to feel a kinship with those who suffer throughout the world and finally to feel an emotional attachment to others through common humanity. Represented by a total of nine units, the professor, TAs, and students commented on being emotionally involved in the course.

Emotional Involvement - The professor

On Emotional Involvement there were two units from the professor. For example, on his inspirational moments, he had this to say:

I sometimes cry when I do that one, too, and I actually, if I feel like I might cry, then I end up skipping over some of the statistics because I can't say it without breaking down.

One of the goals of the professor is for the students to be responsible citizens, and he accomplishes this by telling inspirational stories.

Emotional Involvement - The TAs

There was one unit in this category for the TAs. TA Mitch explained:

In order to get students fully invested in what would happen in the World Simulation--for example when an animal is torn in two, one of the stuffed animals, so they can get natural resources, in order to create that full emotional impact, that animal has to represent something that the students have a stake in, and they develop that stake in the culture by talking about what the culture's core values are going to be and sort of taking that into themselves.

Emotional Involvement - The Students

On the theme of Emotional Involvement there were six units. Carol observed sincerity in the professor:

...but the way he is not afraid to show his emotions and show how it affects him I think helps make it more real for the rest of us. It is nice not having someone just dispassionately lecturing at us.

In answering the questions, “How do you feel you were engaged in learning, and what made him so interesting, besides being humble” Linda replied:

The things he said. I think he is very intelligent and he knows what he is talking (about). I never felt like he was lying to me or anything. I believed what he said, because he showed us pictures of where he was, and he cried sometimes, which was really captivating.

On the last day of the semester, the professor ended with an emotional story about how a little bird saved the world. The story brought tears to the eyes of most students. Robert recounted:

I woke up at 8:19. Class was at 8:30 and I live a mile and a half away. I got dressed in about two minutes and ran a mile and a half to get into that classroom on time, and got in and sat down, and by the end of the lecture, we all stood up and applauded Dr. Wesch, which I've never seen, I've never heard of. I got choked up and started to tear up a little bit. The professor himself was tearing up. I was looking around me. I saw people crying. I'm like "Wow! Something really amazing happened here this semester that we all got to be a part of, and I'm not a super emotional person, so the fact that that got to me, it was a life-changing class.

Non-Participation

The theme of Non-Participation was drawn from the responses of the professor and the TAs (four units) all of whom had students who did not wish to participate or who fell asleep. From these units, the theme of Non-Participation arose.

Non-Participation - The professor

There were two units in this category. The professor clarified his understanding about students who look down at their papers during the lecture:

Definitely, in general there are usually a few people who you begin to count on for engagement. There are a lot of different types of people in the room, in the way they learn. Some people actually learn better by looking down at their paper, whether they are note-taking or whatever they are doing. I actually learn better that way. I listen to the lecture. I'm listening intently, but I am looking down, so for the lecturer I am not a very good audience member, but I really am listening. So I recognize that when students are looking down they are not necessarily tuned out.

About the students who fell asleep during the lecture, he noted that, usually, his classes were early in the morning, and it was difficult for some students to stay awake:

One thing that I have learned is that I actually have to black out or just overlook and ignore students who doze off. It doesn't happen very often in my classes but every once in a while one or two students will doze off, and I've learned over time that it is often for good reasons. They just have a hard life right at that moment, they won't get a lot of sleep, and I have an early class. My classes are very early in the morning. I have found out enough times that it is nothing personal and it's nothing about my lectures. I can tune it out. It used to really bother me. It would derail me completely.

Non-Participation - The TAs

There were two units on Non-Participation by the students according to the TAs. On student non-participation and lack of responsibility, one TA said:

....students thought the recitation was optional, which it is not. Some of their grades will reflect it as such, because I warned them, I told them, you need to show up, and if they don't believe me then when I give them their grade at the end of this week, their participation and attendance, if they bring it up with me, then I will bring out my attendance sheet and be like "These are all the days you missed, and these are all the days you didn't participate. If you are so worried about your grade, you should have realized this from the very beginning. I'm sorry, but I'm not fixing this for you."

Non-Participation - The Students

No units were found in this category for the students. None of the students who were interviewed self-reported non-participation.

Summary Chapter 4

Research Question 1.1: Driving Question

This section addresses the success of the course in answering the DQ from the perspectives of the professor, TAs, and students.

Professor

The professor organized the class on the basis of the DQ. He formulated the DQ as “How does the world work?” It was accompanied by a corollary: “How does the world not work?” These questions drove the course. Additionally, Hard and Soft Power were defined in the textbook used in the course, *Introduction to Cultural Anthropology*, as well as in various course documents. These concepts were integral components of the DQ and its corollary, and were viewed by the researcher as important to DQ development. To answer the DQ, the

professor, in addition to the weekly lectures, required the student groups to create cultures (the project or artifact), and at the end of the semester, the cultures had to interact with each other – to simulate the real world.

Through the DQ, the professor's overarching goal for the students was that they moved to the "reflexive stage," thus becoming more responsible citizens of world. The total of 50 units for the categories of the DQ generated eight categories on the DQ: World Power and Control with 21 units, Cultural Roles with eight units, Social and Cultural Differences with five units, Addressing Important World Questions with four units, Social and Cultural Elements with four units, Interconnectedness of all Humanity with four units, The Role Of Cultures In The World System with three units, and Holistic Understanding of Cultures with one unit.

TAs

There were a total of 16 units for the TAs reflecting six of the eight categories. However, some differences in the TAs' perceptions about the categories of the DQ and those that the professor formulated occurred due to the two missing categories: Societal Differences and Elements of Culture. For the students, answering the DQ depended heavily on TAs' recitation sessions as TA understanding of the categories of the DQ was important for the students' learning and understanding. Clearly, the TAs understood the major categories of the DQ.

Students

There were a total of 22 units for the students: World Power and Control with 6 units, Cultural Roles with four units, Addressing Important World Questions with five units, Interconnectedness with five units, Holistic Understanding of Cultures with three units, and Role

of Culture with four units. No units were found on Societal Differences, Elements of culture, Interconnectedness of all Humanity, and The Role of Cultures in the World System.

Research Question 1.2: Student construction of an artifact

This subsection addresses the success of student construction of an artifact from the perspectives of the professor, TAs, and students.

Professor

There were six units total: Critical Thinking--"getting out of their own mindset"--with three units, Creativity with two units, and Interconnectedness with one unit. However, there were too few units to develop themes. The most important aspect of creation of student projects – the creation of the cultures - was Critical Thinking, which helped students to better understand that all parts of culture adhere as a whole.

TAs

The TAs worked during the recitation sessions with the students as they created their cultures as artifacts. They guided the students on how to look for information on different components of a culture and led them to make connections. These connections sparked critical thinking among the students. The re-shuffling of the continents on the world map helped the students to think "out-of-the-box" and made them create a relevant (geographic) place for their cultures.

Students

There were a total of 24 units for the students: Researching and Creating Cultures with nine units, Group Communication with six units, Cultural Self-Determination with five units, and Working in a Group with four units.

Research Question 1.2.1: Student Construction of an Artifact-World Simulation-TAs

There were 20 units for this question, which generated three themes: Authentic Learning, Empathy, and Hegemony. Twenty-four units were on the theme of Authentic Learning comprising Vicarious Experience with eight units, Contextualization with six units, and Role Play with six units. By experiencing anthropological concepts through the World Simulation, students were able to role-play and experience Hard Power and Soft Power issues within the context of their cultures. This vicarious experience allowed the students to learn in an authentic manner, which is one of the cornerstones of PBL. In many ways, authentic learning achieved prominence through the World Simulation experience, as the professor intended. The TAs, as a whole, believed in the value of the World Simulation. All of the TAs compared it to reading a textbook, where reading a textbook and taking a quiz or a test is understood to not be effective learning.

There were 18 units on the theme of Empathy comprising three categories: Genocide 7 units, Cultural Loss 6 units, and Starvation 5 units. Students learned to care about their cultures and then finally to care about other cultures around the world. According to the TAs, this was the goal of the class, and it was achieved through authentic learning in this simulation.

There were 13 units on the theme of Hegemony comprising three categories: Economy 5 units, Agriculture 4 units, and Industry 4 units. Through planned hegemony on the part of the professor, students learned vicariously about suffering; thereby they learned to empathize with others.

***Research Question 1.2.1: Student Construction of an Artifact-World Simulation-
Students***

There were 56 units total for this question regarding students, and three themes emerged: Hegemony 27 with units, Survival with 17 units, and Authentic Learning with 8 units. Hegemony consisted of three categories: Colonization 21 Units, Genocide 3 units, and Survival 3 units. The students were able to understand the role of Soft Power and Hard Power quite well. In the World Simulation, cultures were colonized by either propaganda or coercion, and students learned to use these tools to a greater or smaller degree for survival, as well as for other more non-traditional means.

Research Question 1.3: Teacher Role

This subsection addresses the success of the Teacher's Role from the perspective of the professor, TAs, and students.

Professor

There were only five units, total, from the professor on the Role of the Teacher: Teacher as Facilitator with three units, and Inspiring Students with two units. The professor saw his role as a lecturer "sage on the stage" and as a facilitator "guide on the side." He lectured twice per week to inspire the students by exposing them to different cultures and the social make up thereof. These themes indicated that the professor engaged with students as a facilitator and inspired the students during the lectures. He also saw himself as facilitator of the TAs.

TAs

There were 11 units on the Teacher's Role for the TAs comprising two themes. Six units were on Collaboration and Facilitation, and five units were on Class Ownership. The TAs

promoted and stimulated collaboration among students during the creation of their project – their cultures. The TAs mainly saw their roles as facilitators who implemented the professor’s plan to engage students in face-to-face and online discussion. They believed the interaction amongst the students would lead to research, which would answer questions. The five units on the Class Ownership indicated that TAs guided students during the recitation sessions and encouraged participation by those students who thought their own roles were not significant. The TAs encouraged those students to contribute to the project.

Students

There were 26 units in the Students category regarding Teacher’s Role, from which five major themes emerged: Real-world connection with 12 units, Connections to student’s personal life with seven units, Sense of ownership of the class/project learning with three units, Interdependence with two units, Compassion with two units. First, the students believed that the teacher’s role was to connect their learning to the real-world and to their own lives. Second, by doing the project, directed by the teacher, they took ownership of their learning and in doing so exhibited interdependence and gained compassion for other cultures.

Research Question 1.4: Assessment

This subsection addresses the success of Assessment from the perspectives of the professor, TAs, and students.

Professor

There were three units from the professor on assessment that were Constructivist in nature, stressing Assessment Internalization, which was best internalized through active engagement. The professor adhered to the constructivist nature of assessment (emphasizing the internalization of assessment), which best happens through “active engagement.” He aimed the

students toward progressing from “receptive” (passive learners taking in information and knowledge) to “procedural” (active learners learning how to learn), with the best learners being procedural learners. He described the assessment process, ideally, as being internalized by the students at the end of the course.

TAs

There were nine units on Assessment from the three TAs generating four categories: Student Engagement with three units, Connectedness with two units, Student Responsibility with two units, and TA/Student Relations with two units. From these four categories two themes emerged: “Engagement” and “Class Ownership”. Since the TAs were responsible for 75% of students’ grades, their overall aim was to implement the professor’s goals to help transform students from passive to active learners. As part of their daily routine, the TAs encouraged students to attend the recitation sessions and actively participate in the creation of the project – their culture. This led to fostering collaboration among students. Apparently, the main assessment concerns of TAs were student participation and engagement.

Students

There were nine units for the students, and of these, three major themes emerged: Connectedness with four units, Interdependence with two units, and Engagement with three units. All the students who were interviewed reported that they had learned in this class, though much of what they learned appeared to be intangible.

Research Question 2: How Technology Is Used to Support PBL

This section addresses the success of technology use from the perspectives of the professor, TAs, and students.

Professor

There were 13 units on the professor's Use of Technology from which emerged four categories: Class Advanced Technology Use with three units, Maintaining Student Interest with four units, Using Technology for Class Lectures with four units, and Using Emerging Technologies with two units. From these categories two themes emerged: Advanced Technology Use for Student Interest (eight units) and Technology Exploration (five units). The professor's use of emerging technologies to enhance student interest likely reflected his constant exploration of new technologies.

TAs

There were 33 units for the TAs on technology: Student Technology Use with six units, Teaching Students to Use Course Technology [wiki] with nine units, Student Lack of Technology Use with five units, Professor Technology Use with seven units, Student Wiki Use with four units, and Student Facebook use with three units. From these units, three categories emerged. Student Course Technology Use, with 13 units, was the largest category. The other two categories included Student Lack of Knowledge of Technology, with 11 units, and Professor Advanced Technologies Use with seven units. From these categories, two themes emerged: Student Course Technology Skills Acquisition with 26 units, and Professor Course Advanced Technologies Use with seven units.

TAs used the class management website (the wiki) for culture construction, which necessitated adaptation on the part of the students, since most had never used this type of technology for assignments before. As a result of the student learning curve, the formal use of the wiki did not lend itself to informal communication.

Students

There were 65 units on technology topics for the students: Course Wiki Use with 28 units, Professor's Lecture Video with 18 units, Professor's Lecture Music Use with seven units, Professor's Lecture Non-Use of PowerPoint with four units, Professor's Lecture Website Use with four units. Out of these categories emerged two themes: Professor Lecture Technology theme with 33 units and, Advanced Course Technology Use with 32 units. Clearly, students admired the professor's use of technology during the lecture to show text, pictures, videos, and to play sound, which the students found both highly engaging and advanced.

Summary Additional Themes

The open coding revealed two additional themes: Emotional Involvement and Non-Participation. The professor, TAs, and the students felt the need to be involved, to feel empathy, to learn to feel a kinship with those who suffer throughout the world, and to feel an emotional attachment to others through our common humanity. A total of nine units were found on the feeling of attachment (two units) Sorrow (three units), Empathy (two units), and Connectedness (two units). These were then formed into two categories of Connectedness (five units) and Empathy (four units). From these categories came the theme of Emotional Involvement.

On the Emotional Involvement there were two units from the professor. Sometimes, during the lectures, the professor told stories that had impact on students' emotions and caused them to shed tears. At times the professor himself had tears in his eyes.

There was one unit in the Emotional Involvement category from one TA who explained that through the construction of their cultures, students take ownership of their culture – their

learning. They do this by becoming attached to the props (elements of their culture) so that gaining or losing a prop (food, currency) became emotional for them.

There were six units on Emotional Involvement by the Students. One of the students talked about the professor, who did not hide his emotions, and how they affected him (the professor). The student said that by not hiding his emotions, the professor made things “more real.” The students liked the fact that the professor talked about his research and talked with respect and love about the people of Papua New Guinea. Moreover, they were touched by the happy and sad stories, all related to anthropology, that the professor told them.

For Student Non-Participation, there were four units, two from the professor and two from the TAs. The professor acknowledged that the students had different ways of learning. He noted that some students who were not looking at him during the lecture, but were looking down at their notes, likely really were listening to what he was talking about. The professor believed that the students who were looking down during the lectures were not necessarily tuned out. He had also learned not to be bothered by the students who fell asleep during the lectures, which were usually early in the morning.

The two units on Student Non-Participation from the TAs revealed their frustration with the fact that some students thought the recitation sessions were optional. In the beginning of the semester, those students did not understand the importance of working collaboratively on their project – to build the cultures. The TAs had to find different ways to motivate those students.

There were no units found on Student Non-Participation from the students. For the main table of themes please see Appendix M.

CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

Chapter Overview

The research was designed to explore the four most common characteristics of PBL: (1) a Driving Question, (2) Student Construction of an Artifact, (3) Teacher’s Role, and (4) Assessment. It was also intended to be an examination of the use of technology. These research issues were also evaluated in terms of the how well the PBL elements fit with Chickering and Gamson’s (1987) *Seven principles for Good Practice in Undergraduate Education*. Conclusions for each of the research questions are provided, as well as two additional themes found through open coding: “Emotional Involvement” and “Non-Participation.” Finally, Chapter Five includes recommendations for faculty and researchers.

Research Question 1.1 – The Driving Question (DQ)

Blumenfeld et al. (1991) contended that a driving question organizes and drives the activities in project-based learning. As a result of these activities, students create artifacts or products that address the driving question. A driving question must be meaningful to students, include relevant content, foster collaboration, and allow students develop their own investigations (Lehman, et al., 2001)

Professor

In the Introduction to Cultural Anthropology class the questions “How does the world work?” and “How does the world not work?” organized the scenario for the professor to design and manage the teaching and learning process in the class. Also, the questions helped the professor plan the learning outcomes of the class, and in particular, the DQ, which was authentic

because it sparked the curiosity of the students and caused them to invest themselves in the project.

TAs

The TAs understood the course goal and the DQ and, through regular meetings with the professor, were able to stay on task. In those meetings, the TAs would discuss problems and achievements. Moreover, at the end of the two weekly lectures, the researcher observed that the TAs would accompany the professor across campus to his office while discussing course and other topics with him and among themselves.

Students

The DQ addresses the main idea of the curriculum and directs student investigation in the learning process. In addition, the DQs create conditions in which the students face and struggle with complex concepts and principles (Blumenfeld, et al., 1991; McGrath, 2005). A DQ must be central to the discipline, doable, and important to the students.

When the students in Introduction to Cultural Anthropology initially received the course syllabus and goals, they did not really understand the nature of the course or the DQ. However, by participating in the construction of their culture and the project, the majority of them came to understand, as a group, the goals and the DQ in context. As such, the DQ fit well with Chickering and Gamson's (1987) vision of the *Seven Principles for Good Practice in Undergraduate Education*. Of these seven principles, the DQ embodied one directly: (1) "Active learning," which was developed in class through the creation of a culture, was the basis for the professor's DQ, and was consonant with constructivist teaching, thereby creating interconnectedness and a holistic understanding of the DQ.

Research Question 1.2.1 – Student construction of an Artifact

Postman (1971) and McGrath (2003) found students in traditional classrooms demonstrated their knowledge by taking tests and writing papers. In project-based learning classrooms, students are asked to work individually or in groups on projects to create an artifact. Blumenfeld et al. (1991) described the term “artifact” as a sharable and “critiquable” manifestation of students’ cognitive work in classroom. The term “artifact” is used as a synonym for the term “product.”

Professor

For the students to learn about the world system, the professor believed that students should be involved in a project in which each student was responsible for actively researching and creating a component of a culture. Through planned hegemony on the part of the professor, students learned vicariously about suffering, through which they also learned to empathize with other cultures through the World Simulation. Further, by making students work together to make the culture a cohesive whole, the professor encouraged the students to identify with the cultures in the World Simulation and thereby achieve a better understanding of the world system. The juxtaposition of cultures in difficult situations in the World Simulation created the nexus in which students learned about why the simulated world (and therefore our world) works the way that it does.

TAs

The TAs whom the researcher observed and interviewed faced challenges in regard to student participation in and understanding of the goals of culture creation. However, these challenges were reduced as the semester and student learning progressed through class discussions and group participation in culture creation. Ultimately, the TAs guided student

progress in constructing the cultures and preparing for the World Simulation through the recitations. Their work was critical in developing the cultures as cohesive wholes and in creating a sense of shared culture for each recitation section. Based on recitation observations and interviews, their goals of culture creation and share culture were achieved.

Students

In the beginning, the students did not understand the concept of the project, and some complained about doing it, largely because of this, based on recitation observations. When the TAs explained it to them in detail over two to four recitation sessions, the students then understood and were able to do it. As the semester progressed, most students began to be invested in culture creation and to enjoy collaboration with their group.

With respect to student construction of an artifact, five of the principles in Chickering and Gamson's (1987) vision of the *Seven principles for Good Practice in Undergraduate Education*, apply to this course project: 1) encourages contact between students and faculty, 2) develops reciprocity and cooperation among students, 3) encourages active learning, 4) gives prompt feedback, and (5) emphasizes time on task. That five of the seven principles applied attests to the high degree of active, engaged learning that took place in this course.

Research Question 1.2.2 – Student construction of an Artifact – World Simulation

Blumenfeld et al., (1991) asserted that it is very important for the outcome of the driving question not to be predetermined, which may hinder student's opportunity to develop their own approaches to answering the driving question. Blumenfeld et al. (1991) suggested that students must be granted the autonomy how to create artifacts. In the Introduction to Cultural Anthropology, the student projects (the cultures) resulted in the World Simulation.

TAs

The World Simulation, based on real-world scenarios, represented the culmination of the student cultural artifact developed during the recitation sessions. This project demonstrated how the internalization of the learning occurred: When students were presented with real-world experiences, they tended to take ownership of their projects (the learning), and connect to real-life situations.

Research Question 1.2.2 – Student construction of an Artifact – World Simulation

Students

The student projects, which culminated in the World Simulation, helped the students to understand the mechanism of the world system in regard to how it does and does not work. The students could not predict the results of the World Simulation, based on the choices the professor gave cultures during the simulation. Even the professor could not predict the end results of the simulation and the outcome of each culture, due to the individual choices made by students during the WS. This element of uncertainty drove the WS and made the results real and immediate, thus achieving authenticity for all concerned.

Some cultures were colonized and some of those gained their independence. Portions of some cultures, and even whole cultures, were destroyed, which often led to the students becoming emotionally affected since, during construction, students became attached to their cultures and to their roles therein. Consequently, many ‘colonized’ students did not like the simulation for a period of time afterward, despite admitting having learned a lot. However, upon reflection, they later expressed that they had not only grown past their experience of

colonization, but they had also developed empathy as a result. This development echoes one of the *Seven Principles*, which is “develops reciprocity and cooperation among students.”

Research Question 1.3 – Teacher’s Role

In a traditional classroom, teachers direct students and tell them what to do and how to do it. Students are required to provide the “right answer” regardless of the subject (Postman & Weingartner, 1971). The content of these courses is rarely remembered beyond the last quiz. Goodlad (1984) reported that teachers in traditional instructional frameworks dominated class discussion 95% to 99% of the time.

In PBL classrooms, the role of the teacher gradually changes from an authoritarian to the role of a facilitator where the teacher is no longer the center of attention (Means & Olson, 1995; Moursand, 2003). In PBL classrooms, students construct their projects. They either work individually or in groups, or work in groups by interacting with each other. In PBL environments, the teacher varies the degree to which coaching, modeling, examples, and problem dissection takes place. The goal is to engage students so they take ownership of their learning. The role of the teacher changes to the role of a facilitator who sets project goals, guides the students to resources, and guides them through continuous formative assessment (Perkins, 1986).

The students in the Introduction to Cultural Anthropology class who were interviewed by the researcher believed that the teacher’s role was to help them connect their learning to the real-world, and to their own lives. By doing the project, they took ownership of their learning and exemplified this goal, and consequently, they exhibited interdependence and gained compassion for other cultures.

The Introduction to Cultural Anthropology class of fall 2008 had two major components: (1) twice weekly lectures, and (2) recitation sessions in which the students worked on creating their project-the culture. During the lectures, the role of the professor was that of lecturer. The role of the teacher was more of “guide,” but not on the “side.” Active involvement of the teacher in student progress was essential to teach goals.

Of the *Seven Principles*, two more were embodied in this class: (1) “Encourages contact between students and faculty” applied to the teacher’s role, in that the professor, with a class of 400, was in regular contact with the TAs to monitor course progress; and (2) “Gives prompt feedback to students” and to the TAs. The weekly meetings with the TAs to hear their reports of the recitation sections demonstrated the professor’s prompt feedback as did his answering both student and TA questions promptly via e-mail.

Research Question 1.4 – Assessment

Knight (2002) asserted that the goal of assessment is not to gather data and produce results. On the contrary, assessment is a process that starts with the questions of decision-makers, which involve them in the collection and interpretation of data, and informs and helps guide improvement. Assessment procedures, such as non-conventional exams, group projects, oral presentations, collective projects, and peer assessments are increasingly used in higher education to facilitate more realistic and meaningful assignments and offer diverse and more conclusive indicators of students’ achievements (McDowell, 1995).

The PBL environment differs from traditional learning environments. In PBL environments, which utilize constructivist approaches, students face challenges and opportunities that students in traditional classrooms may not confront (Murphy & Gazi, 2001). Additionally,

Romiszoski (1997) explained that collaborative learning is considered the main element of constructivism, which is fostered in project-based and simulation game activities.

PBL learning presents challenges for teachers to evaluate, since much of the assessment, other than the final artifact, rests in the process. The challenge of assessment in PBL is based upon the construction of artifacts that represent students' learning. It is also important for the teacher to provide feedback that is constructive and authentic to the objectives of the project.

In the Introduction to Cultural Anthropology class, the professor, on principle, did not agree with the traditional way of grading students through multiple choice and true-false questions. Instead, 50% of the students' grade was based on the creation of the culture for the project. The other 50% of the final grade was based on the four exams that students took during the semester, the two major essays, and weekly reflections on the weekly lectures. The professor's assessment was based on PBL principles--stressing assessment internalization through active engagement. By assessing student progress through continual and regular monitoring of the student project process, he was able to intervene in a timely manner to guide the students when difficulties arose. Assessment for this class was not only the results of the exams, but involved continual evaluation of student progress during the creation of student projects. This concept--continual assessment, is a function of constructivist learning.

With respect to assessment, of the *Seven Principles*, four were embodied in this class: (1) "Respects diverse talents and ways of learning," (2) "Communicates high expectations," (3) "Emphasizes time on task," and (4) "Gives prompt feedback." The professor allowed great creativity in the ways that students could construct and express their cultures. When the researcher asked if there were any restrictions in culture creation, a student replied:

Not very many, unless you decided that our people had tentacles growing out of our head, I mean, that wouldn't be very realistic. As long as it was realistic and it really could have happened that way in history, we were free to kind of choose what we wanted.

The professor clearly stated in his course goals and through rubrics the standards that he set for the students. At one point, the professor and TAs had a heated discussion about student contributions to their culture, the wiki was not as organized as it could have been, so the TAs corrected it 2 hours later. The professor always asked the TAs about student progress and the results of each exam. Then he would provide guidance to the TAs on how to remedy some of the problems that occurred with the students. The professor's lectures were planned, and there were 5 minutes to write a reflection on that lecture on an index card, which was then handed to the TAs in the room. The purpose of this was for the TAs to ascertain the degree to which the students got the main points of the lecture and to provide that feedback to the professor. The TAs gave prompt feedback, whether through e-mail or during the recitation sections.

Research Question 2 – How is Technology Used to Support Project-Based Learning?

Technology has become increasingly popular in use in higher education and has drastically changed course delivery (ECAR 2010). This trend is witnessed by the presence of new technology that have been quickly adopted including personal computers, email, the World Wide Web, cell phone, instant messaging, digital still and video cameras, video conferencing and online teaching (Laurillard, 2006). When properly used, technology can increase student achievement (Berman, 1997). When properly developed, project based technology can enhance a constructivist approach to teaching and learning (Means & Olson, 1995).

Professor

Based on the responses of the TAs and the students who were interviewed, the study revealed that the professor used technology effectively to support PBL. In the classroom, the professor used a computer, video projector, speakers, microphone, laser pointer, and visual presenter. These tools were used to show and demonstrate complex ideas and concepts related to cultural anthropology, and showed examples of different aspects of different cultures to the students. To support students as they created their projects, he used Wetpaint, a wiki used for the course. Additionally, the students were free to choose media to effectively communicate with each other.

His use of social media was very advanced for the university, and for university faculty use, nationally. He continually worked to find better ways to use social media for student communication and progress on assignments. For example, while Facebook was unofficially adopted by some student groups, most students used it to socialize with each other and post more personal, social information. As a result, the professor chose not to use Facebook for class communication, though he stated that he continually re-evaluated the use of technology for each class as its use changed by the students. The professor, TAs, and students also used e-mail; however, these were closed communications and not available for study by the researcher. The wiki was also used by students for class and individual communication, although this was beyond the scope of the study.

Regarding technology and PBL, of the *Seven Principles*, two were embodied in this class: (1) “Encourages contact between students and faculty,” and (2) “Gives prompt feedback.” The first principle embodied, “Encourages contact between students and faculty,” was achieved

through e-mail, and “Prompt feedback” was provided on the course wiki site, which was used by both the students and TAs, though the researcher did not include the wiki in the study.

TAs

During the recitation sessions, technology was not necessary because the sessions were face-to-face discussions among the students with the guidance of the TAs. However, twice, two different TAs played music for the students. Also, one attempt was made by one of the TAs to show the students some websites during the recitation session; unfortunately, the network connection failed. Accordingly, the TA gave the students the URLs to examine the websites for themselves. TAs also helped the students learn how to use the Wetpaint Wiki, and they used email to communicate with the students and with the professor. In addition, some TAs used Facebook to communicate with their recitation group(s).

Students

The students in each group uploaded their projects, namely components of the cultures, to the wiki, a flexible tool that facilitates online collaboration, where they also commented on each other’s work. Students were able to conveniently upload their materials from anywhere they had access to the internet. Without the technology, the students would have had to wait until the next scheduled recitation session and discuss their projects face-to-face. Thus, the wiki web tool allowed the students to be time and place independent.

Research Question 1 - How does an exemplary on-campus undergraduate large Introduction to Cultural Anthropology course encompass the PBL learning model characteristics, specifically focusing on the following: 1.1) Driving question, 1.2) Student construction of an

artifact, 1.3) Teachers' role, and 1.4) Assessment? The answer in this case is that all four elements of the PBL model were present in this class and were executed well.

Research Question 2 – How is technology used to support PBL? The answer is that advanced technology was used successfully by the professor. The technology was used in the lecture by the professor, in the wiki course management system by the students and TAs, and in the World Simulation for the final project. Though students were hesitant in the beginning, through the work of the professor and the TAs, the students learned to use the course technology and grew to enjoy it.

Additional Themes

Two themes emerged through open coding: Emotional Involvement and Non-Participation.

Emotional Involvement

The data indicated that professor, TAs, and students became emotionally involved in the course through the construction of the artifact and the World Simulation. Most students were involved in the course through both the lecture and the recitation sessions, and the professor, TAs, and students “teared up” during lectures, particularly in the last lecture. Students experienced anger at colonization and sadness at being genocided, largely because they had learned to become invested in the outcome of their culture as a result of the following elements of the experience. Each culture had to develop a greeting for each other. They also were given a stuffed animal as a symbol of their sacred animal for that culture. Later, when during colonization some of the colonizers ‘killed’ the sacred animal, students in these colonized cultures grieved about the loss and what it represented.

Non-Participation

The professor encouraged participation. However, some students sat in the back of the classroom and listened to their iPods or browsed the web with their laptops. Although the professor talked about some students falling asleep in the lectures, the researcher did not observe any students falling asleep in the lecture.

In the recitation sessions, some students did not participate actively. The TAs talked about this as being a problem, not only for the TAs in terms of teaching the class, but also in terms of the lack of collaboration provided to others in their recitation group. The TAs took the act of non-participation very seriously and talked to those students about this issue, sometimes to no avail.

Summary

This study answered the two research questions:

1. How does an exemplary on-campus undergraduate large Introduction to Cultural Anthropology course encompass the PBL learning model characteristics, specifically focusing on the following: 1.1) Driving question, 1.2) Student construction of an artifact, 1.3) Teachers' role, and 1.4) Assessment?
2. How is technology used by the professor, teacher assistants, and students to support project-based learning?

Overall Research Question 1--How does a large lecture course encompass PBL?

The researcher directly observed the two weekly general lectures for Introduction to Cultural Anthropology conducted in a large classroom of 400 students each Monday and Wednesday all

semester. Also, the researcher observed 3 of the 20 recitation groups that met once a week throughout the semester during which the students created their artifacts (the cultures). Additionally, the researcher observed most of the weekly professor/TA meetings. The researcher also observed the final project, the “World Simulation” events at the end of the semester in which all the cultures converged and simulated the real world. Moreover, the researcher examined course materials (Syllabus, the World Simulation Setup, World Simulation Rules, Culture Description, Assignments, and Course Goals – see Appendices A-E), and finally, the researcher interviewed the professor, three TAs and nine students, three from each recitation group under his observation.

PBL Research Question 1:1. How does the Driving Question (DQ) support Project-based learning?

The professor’s driving question was “How does the world work?” which generated the legitimate corollary question, “How does the world not work?” The DQ enabled the professor to design the course and students’ learning outcomes. Driving questions focus on the big ideas of the curriculum and guide student investigation in learning about a subject. Understanding the DQ, the TAs assisted the professor mainly with the recitation sessions and the administration of the four semester exams. Based on the responses and work of the students, the DQ was relevant to them. They were able to relate the subject matter to the real world, which sparked their interest, and by asking more questions they invested themselves in the project.

PBL Research Question 1:2. Student construction of an Artifact

The professor believed that students learn better when they are actively involved in the construction of a project. Accordingly, each recitation group was asked to create a culture, and each student in a recitation group actively researched and created the component of the culture

for which they were responsible. All the students interviewed reported that, in the beginning, the project was difficult. However, as time passed, they became involved in researching their topics, in seeing how their component of the culture related to the other components in the culture, and how assessing all those components related to the real world. Then, the project became more interesting, and indeed, most students interviewed, David, Patricia, Linda, Carol, and others said that “it was fun.”

PBL Research Question 1.2.1. Student construction of an Artifact – World Simulation

To answer the DQ “How does the world work,” the professor created the World Simulation, which was ultimately populated and modeled by the cultures students had created in their recitation sessions. The World Simulation helped the students learn and understand the mechanism of the world system – how it does work and how it does not work. Due to the individual choices made during the simulation, no one, including the professor, could predict the fate of each culture by the end of the simulation. Meanwhile, during the simulation, students experienced Soft Power and Hard Power as some cultures were colonized, others gained independence, and some were even subject to genocide. This affected the students emotionally. They became attached to their cultures and their individual roles therein. Because the student cultures and the World Simulation reflected real world events and tragedies, the students who were interviewed expressed that they came to understand how the world works.

PBL Research Question 1.3. Teacher’s Role

Up to 400 students would attend the two weekly Introductions to Cultural Anthropology general lectures. The students who were interviewed reported that the professor’s lectures were inspirational and that they did not want to miss any. In the lectures, the professor had placed tick

marks by material to indicate where, every 3 minutes, he would engage the entire class. These engagements kept students alert and interested in the subject.

In addition to being an inspirational lecturer, the professor's role was to guide the TAs to help students as they created their projects. Subsequently, in the weekly meetings, the TAs would report student progress. They also discussed the challenges they faced in the recitation sessions and how they would benefit from the advice of the professor and other TAs.

PBL Research Question 1.4. Assessment

Fifty percent of student grades were based on four exams, two major essays, and weekly reflections. The other 50% was based on the student constructed artifact and participation in the World Simulation because the professor believed that assessment should be internalized through active engagement. By assessing student progress through continual and regular monitoring of the student project process, he was able to intervene in a timely manner to guide the students when difficulties arose. Thus, students earned points for doing the work and thereby for actively engaging in the learning. Ultimately, assessment for this class was through exams and also through continual evaluation of student progress during the creation of their projects.

Overall Research Question 2 – How is Technology Used to Support PBL?

During the lecture, the professor used a computer, video projector system, and sound system. He substituted PowerPoint with a webpage that contained hyperlinks to different components of the presentation to give him immediate access to the audiovisual aids. The students and the TAs who were interviewed believed that the professor used technology effectively during the lecture and to help students construct the cultures.

To help the students create and present their cultures, the professor used the Wetpaint wiki so that each culture had its own site to which students uploaded their part of the culture and gave feedback to each other, individually and collectively. The wiki sites were continually monitored by the TAs and by the professor and provided timely feedback to the students. The students and the TAs communicated with the professor via the email. The TAs also used email to communicate among themselves, while students were free to use the communication tool of their choice to communicate with each other.

Additional Themes

The open coding revealed two themes: Emotional Involvement and Non-Participation. The data revealed that when students took ownership of their learning (their component of the culture, the whole culture, and the World Simulation), they became emotionally involved. These emotions mainly stemmed from the fact that they witnessed colonization, starvation, genocide, and independence. To support this growth during the lectures, the professor made connections between students' lives and real world situations: diseases, starvation, poverty, injustice, and other factors, and which brought tears to the eyes of the students and the TAs. At times, the professor would tear up, too.

Through the course syllabus and other course documents, his lectures, and through the TAs, the professor encouraged participation. However, a very small number of students did not actively participate during the lectures, some because they thought that the creation of the project would be easy, and some thought that participation in the recitation sessions was optional. The TAs talked to those students and encouraged them to take active part and were mostly successful.

It is fair to conclude that project-based learning is a strong and efficient approach to teaching and learning in a large undergraduate lecture class. In particular, constructivism

provides a workable framework that can enrich the effectiveness and outcomes of project-based learning, and can be enhanced by advanced technology, especially that which focuses on social networking.

Recommendations for Higher Education Faculty

Recommendation 1: Project-based learning is a laborious process. If PBL has not been implemented in teaching before, then start with small projects that can be done in a short amount of time, i.e. one week or two weeks. This will allow time to evaluate the project and make necessary changes before lengthening it or making it more complex.

Recommendation 2: Choose projects that students can relate to – ones in which students can make connections to real-life situations.

Recommendation 3: A driving question should be the core of the class. Choose a driving question which is authentic enough to be able to guide you to design a project which can offer multiple correct answers.

Recommendation 4: Assessment should be an ongoing process and should be coupled with timely feedback.

Recommendation 5: Make students form groups, either of their own accord, of the teacher's or a choice of either. Much learning occurs through discussion and cooperation as students work toward possible answers.

Recommendation 6: Use technology in lectures so that it adds to the experience. Do not restrict presentations to a linear presentation tool, i.e. PowerPoint. There are many other options that can be used, as well, such as webpages with hyperlinks, social media tools, and other non-linear presentation tools.

Recommendations for Future Studies

Recommendation 1: PBL is most concerned with process, so a study of the process of assessment in PBL would be of value in future.

Recommendation 2: Future research is needed to analyze how students interact with each other in the use of social media in LULC.

Recommendation 3: It would be interesting to examine the extent to which social presence among the students increased through technology-enhanced PBL.

Recommendation 4: A study on technology use in a LULC and transactional distance could shed light on the ways in which technology can be used effectively to reduce transactional distance, which is so common in these types of classes, in order to create enhanced teacher/learner engagement.

References

- Ames, C. (1992). Classrooms: goals, structures, and student motivation. *Journal of Educational Psychology*, 84(3), 261-271. EJ 452 395.
- Anderson, P. (2007). What is Web 2.0? Ideas, technologies, and implications for education. *JISC reports*. Retrieved on June 25, 2010 from:<http://www.jisc.ac.uk/media/documents/techwatch/tsw0701b.pdf>
- Asselin, K. (2008). Blogging: The remediation of academic and business communications. M.I.S., Wayne State University. Retrieved September 20, 2008, from ProQuest Digital Dissertations database. (Publication No. AAT 1452706)
- Balestri, D. P., Ehrmann, S. C., & Ferguson, D. L. (1992). *Learning to design, designing to learn: Using technology to transform the curriculum*. Washington, DC: Taylor & Francis.
- Barron, B., et. al. (1998). Doing with Understanding: Lessons from Research on Problem- and Project-Based Learning. *The Journal of the Learning Sciences*, Vol. 7, No. 3, Learning through Problem Solving. pp. 271-311
- Bembry, S. & Anderson, C. (2010). Improved Learning through Social Networking Tools. In D. Gibson & B. Dodge (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference 2010* (pp. 2649-2654). Chesapeake, VA: AACE. Retrieved from <http://www.editlib.org/p/33770>.
- Berman, B. (1997). *The effectiveness of using technology in K-12 education: A preliminary framework and review*. Washington, DC: American Institutes for Research.
- Blair, L. M. (2003). Student, teaching assistant, and faculty learning during innovation in an introductory biology course. Ph.D., Oregon State University. Retrieved September 18, 2008, from ProQuest Digital Dissertations database. (Publication No. AAT 3061886)
- Benkler, Yochai (2006). *The wealth of networks*. New Haven, CN: Yale University Press

- Bligh, D. A. (2000). *What's the use of lectures?* San Francisco, CA: Jossey-Bass.
- Blumenfeld, P., Soloway, E., Marx, R., Krajcik, J., Guzdial, M., & Palincsar, A. (1991).
Motivating project-based learning: Sustaining the doing, supporting the learning.
Educational Psychologist, 26(3), 369-398.
- Bogdan, R., & Biklen, S. K. (1992). *Qualitative research for education: An introduction to theory and methods*. Boston, MA: Allyn and Bacon.
- Bonk, C., Wisner, R., & Nigrelli, M. (2004). Learning communities, communities of practice: Principles, technologies, and examples. In K. Littleton, & Miell, D., & Faulkner, D. (Eds.), *Learning to collaborate, collaborate to learn* (2004). Happaug, NY: NOVA Science.
- Bonk, C. J., & Graham, C. R. (2006). *The handbook of blended learning: Global perspectives, local designs* (1st ed.). San Francisco, CA: Pfeiffer.
- Bonk, C. J., & King, K. S. (1998). *Electronic collaborators: Learner-centered technologies for literacy, apprenticeship, and discourse*. Mahwah, NJ: L. Erlbaum Associates.
- Bonwell, C. C., & Eison, J. A. (1991). *Active learning: Creating excitement in the classroom*. *ERIC Digest* No. EDO-HE-91-1) ASHE-ERIC Higher Education Reports, The George Washington University, One Dupont Circle, Suite 630, Washington, DC 20036-1183.
- Boston University (2010). What is Anthropology? Retrieved Feb 2011, from <http://www.bu.edu/anthrop/about/what-is-anthropology/>
- Botti-Salitsky, Rose Mary (2005). Evaluation of a virtual design studio for interior design education. Ph.D. dissertation, Capella University, United States -- Minnesota. Retrieved October 30, 2010, from Dissertations & Theses: Full Text.(Publication No. AAT 3159702).
- Boyd, D., & Ellison, N. (2007). Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication*, 13(11), 1.

- Boyer Commission on Educating Undergraduates in the Research University. (1998). *Reinventing undergraduate education : A blueprint for America's research universities*. New York: University of New York at Stony Brook, NY.
- Boyer Commission on Educating Undergraduates in the Research University. (2007). *Reinventing undergraduate education : A blueprint for America's research universities*. Retrieved from:
[http://naples.cc.sunysb.edu/Pres/boyer.nsf/673918d46fbf653e852565ec0056ff3e/d955b61ffd590a852565ec005717ae/\\$FILE/boyer.pdf](http://naples.cc.sunysb.edu/Pres/boyer.nsf/673918d46fbf653e852565ec0056ff3e/d955b61ffd590a852565ec005717ae/$FILE/boyer.pdf)
- Bransford, J., Brown, A., & Cocking, R. (2002). *How people learn: Brain, mind, experience, and school*. Washington, DC: National Academy Press.
- Briggs, L. (1979). *Instructional design: Principles and applications*. Englewood Cliffs, NJ: Educational Technology Publications.
- Brown, J. S., & Duguid, P. (1995). *Universities in the digital age*. Retrieved from
<http://www2.parc.com/ops/members/brown/papers/university.htm>
- Brown, J. S. (1996). *Stolen knowledge*. Retrieved October, 2003, from
<http://www2.parc.com/ops/members/brown/papers/stolenknow.html>
- Burns-Sardone, N. L. (2008). An investigation of the relationship between higher education learning environments and learner characteristics to the development of information technology fluency and course satisfaction. Ph.D. Dissertation, New York University United States – New York. (Publication Number AAT 3308311).
- Cady, G. H., & McGregor, P. (1995). *Mastering the internet* (First ed.). Alameda, CA: Cybex.
- Cassidy, J. (2006). Me media. New York, NY: *The New Yorker*, pp. 50-59.
- Chickering, A. W., & Gamson, Z. F. (1987). *Seven principals for good practice in undergraduate education*. University of Hawaii, Honolulu.
<http://honolulu.hawaii.edu/intranet/committees/FacDevCom/guidebk/teachtip/7princip.htm>

- Chickering, A. W., & Gamson, Z. F. (1991). Applying the seven principles for good practice in undergraduate education. *New Directions for Teaching and Learning*, 47(Fall)
- Colin, M. (1981) Simulation games and the studies teacher. *Theory into Practice*, 20(3), 187-193. Retrieved 05/09/2008 from <http://www.jstor.org/stable/1476973?origin=JSTOR-pdf>
- Conway, J. (1998). *Authentic learning and technology*. Retrieved September 10, 2005, from <http://copland.udel.edu/~jconway/authlrn.htm>
- Creswell, J. (2003). *Research design: Qualitative, quantitative, and mixed methods approach* (Second ed.). Thousand Oaks, London, New Delhi: Sage.
- Cummins, J., & Sayer, D. (1995). *Brave new schools: Challenging cultural illiteracy through global learning networks*. New York, NY: St. Martin's.
- Churchill, D. (2007). Towards a useful classification of learning objects. *Education Technology Research and Development*, 55(5), 479-497.
- Davidson, N., (Ed.), & Worsham, T., (Ed.). (1992). *Enhancing thinking through cooperative learning*. Teachers College Press, 1234 Amsterdam Avenue, New York, NY 10027 (\$21.95).
- Davis, R. (2010). The case for integrating technology in higher education. In Z. Abas et al. (Eds.), *Proceedings of Global Learn Asia Pacific 2010* (pp. 820-825). AACE.
- DeJoy, J. S. (1998). Educational effectiveness and participant preferences regarding an accounting simulation administered to adult undergraduate students. Ph.D., University of Idaho. Retrieved September 20, 2008, from ProQuest Digital Dissertations database. (Publication No. AAT 9839265)
- Duderstadt, J. J., Atkins, D. E., & Van Houweling, D. E. (2002). *Higher education in the digital age: Technology issues and strategies for American colleges and universities*. Westport, CT: Praeger.

- ECAR (2010). The ECAR study of undergraduate students and information technology, 2010. EDUCAUSE Center for Applied Research, Retrieved from <http://www.educause.edu/ers1006>
- Educause Learning Initiatives (2006). *Seven things you should know about Facebook*. Retrieved from <http://net.educause.edu/ir/library/pdf/ELI7017.pdf>
- Entwistle, N. J., Marton, F., & Hounsell, D. (1984). *The experience of learning*. Edinburgh: Scottish Academic Press.
- Eskrootchi, Rogheyeh (2001). Project-based learning in information technology environment. Ph.D. dissertation, University of Kansas, United States -- Kansas. Retrieved December 15, 2008, from Dissertations & Theses: Full Text.(Publication No. AAT 3049516
- Frydenberg, M. (2008). *Making the internet participatory and dynamic*. Retrieved October 12, 2008, from http://www.elearning.b2bmediaco.com/issues/spring08/sping_08_usingwebtools.html
- Gay, P. (2010). *Teaching, learning & research technologies at Tufts*. Retrieved June 2010 from <https://wikis.uit.tufts.edu/confluence/display/TLR/Spring+2010+-+Using+Digital+Tools+to+Promote+Active+Learning>
- Garrison, R. (2000). Theoretical challenges for distance education in the 21st century: a shift from structural to trans- actional issues. *International Review of Research in Open and Distance Learning*, 1(1).
- Garrison, D. R., & Vaughan, N. D. (2008). *Blended learning in higher education: Framework, principles, and guidelines* (1st ed.). San Francisco, CA: Jossey-Bass.
- Good, T. & Brophy, J. (1991). *Looking in classrooms*. Berkeley, CA: McCutchan.
- Goodlad, J. I. (1984). *A place called school: Prospects for the future*. New York, NY: McGraw-Hill Book Co.

- Gordon, D. (2009). A case study of the Applied Learning Academy: Reconceptualized quantum design of applied learning. Ph.D., Texas A&M University. Retrieved June, 15, 2010, from ProQuest Digital Dissertations database. (Publication No. AAT 3400724)
- Grabe, M., & Grabe, C. (2007). *Integrating technology for meaningful learning*. New York, Boston: Houghton Mifflin Company.
- Graham, C., Cagltay, K., Lim, B., Craner, J., & Duffy, T. (2001). Seven principles of effective teaching: A practical lens for evaluating online courses. *The Technology Source at the University of North Carolina*, October 10, 2008.
- Grant, M. (2002). *Getting a grip on project-based learning: Theory, cases and recommendations*. Retrieved November 21, 2005, from
- Griffith, E. (2008). America's top wired colleges, 2008 edition. *PC Magazine*. Retrieved October 2008 from <http://www.pcmag.com/article2/0,2817,2329359,00.asp>
- Gunawardena, C., & McIsaac, M. (2004). Distance education. In D. Jonassen (Ed.), *Handbook of research on educational communications and technology* (2nd ed., pp. 355-395). Mahwah, N.J.: Lawrence Erlbaum.
- Haas, S., & Senjo, S. (2004). Perceptions of effectiveness and the actual use of technology-based methods of instruction: A study of California criminal justice and crime-related faculty. *Journal of Criminal Justice Education*, 15(2), 263.
- Han, S., & Bhattacharya, K. (2008). *Constructionism, learning by design, and project based learning*. Retrieved July/21, 2008, from http://projects.coe.uga.edu/epltt/index.php?title=Constructionism%2C_Learning_by_Design%2C_and_Project_Based_Learning
- Haigh, W., & Rehfeld, D. (1995). Integration of secondary mathematics and science methods courses: A Model. *School Science and Mathematics*, 95, 240-247

- Hannifin, J., & Land, S. (1997). The foundations and assumptions of technology-enhanced, student-centered learning environments. *Instructional Science*, 25(167), 202.
- Harada, V., Kirio, C., & Yamamoto, S. (2008). Project-based learning: Rigor and relevance in high schools. *Library Media Connection*, March, 14-20.
- Hart, T., Greenfield, J., MacLaughlin, S., & Geier, P. (2010). *Internet management for nonprofits: strategies, tools and trade secrets*. Hoboken, NJ: John Wiley & Sons, Inc.
- Haviland, W. A., Prins, H. L., Walrath, D., & McBride, B. (2008). *Cultural anthropology: The human challenge* (12th ed.).
- Hird, A. (2000). *Learning from cyber-savvy students: How internet-age kids impact classroom teaching* (1st ed.). Sterling, VA: Stylus.
- Jackson, S. A. (2004). Ahead of the curve: Future shifts in higher education. *Educause*, 39(1), 10-18.
- Jackson, S. A. (2004). Ahead of the curve: future shifts in higher education. *EDUCAUSE Review*, 39(1), retrieved from <http://www.educause.edu/EDUCAUSE+Review/EDUCAUSEReviewMagazineVolume39/AheadoftheCurveFutureShiftsinH/157876>
- Januszewski, A., Molenda, M. (2008). *Educational technology: A definition with commentary*. New York, NY: Lawrence Erlbaum Associates.
- Jonassen, D. H., Davidson, M., Collins, M., Campbell, J., & Haag, B. B. (1995). Constructivism and computer-mediated communication in distance education. *The American Journal of Distance Education*, 9(2), 7-26.
- Jonassen, D. (2000). *Computers as mindtools for schools*. Upper Saddle River, NJ: Prentice-Hall, Inc. Pearson Education.

- Jonassen, D. H., & Land, S. M. (2000). *Theoretical foundations of learning environments*. Mahwah, NJ: L. Erlbaum Associates.
- Jonassen, D., Howland, J., Moore, J., & Marra, R. (2003). *Learning to solve problems with technology: A constructivist perspective*. Upper Saddle River, NJ: Pearson Education, Inc.
- Jonassen, D., Howland, J., Moore, J., Marra, R., & Crismond, D. (2008). *Meaningful learning with technology*. Upper Saddle River, NJ: Pearson.
- Jonassen, D. H., Peck, K. L., & Wilson, B. G. (1999). *Learning with technology: A constructivist perspective*. Upper Saddle River, NJ: Merrill.
- Jonassen, D. H., Tessmer, M., Hannum, W. H., & NetLibrary, I. (1999). *Task analysis methods for instructional design*. Mahwah, NJ: L. Erlbaum Associates.
- Kaplan A. & Haenlein M. (2010). Users of the world, unite! The challenges and opportunities of social media. *Business Horizons*, 53(1), 59-68.
- Karakas, M. (2006). College science professors' understanding and use of nature of science. Ph.D., Syracuse University. Retrieved September 18, 2008, from ProQuest Digital Dissertations database. (Publication No. AAT 3251773)
- Knight, L. A. (2002). The role of assessment in library user education. *Reference Services Review*, 30(1), 15.
- Kock, A. D., Slegers, P., & Voeten, J. M. (2004). New learning and the classification of learning environments in secondary education. *Review of Educational Research*, 74(2), 141-170.
- Kovalik, D., & Kovalik, L. (2002). Language learning simulations: A piagetian perspective. *Simulation & Gaming*, 33, 345-352.

- Kozma, R., & Schank, P. (1998). Connecting with the twenty-first century: Technology in support of educational reform. In D. Palumbo (Ed.), *1998 yearbook: Learning and technology* (pp. 319-27). Alexandria, VA: ASCD.
- Kramer, B., Walker, A., & Brill, J. (2007). The underutilization of information and communication technology-assisted collaborative project-based learning among international educators: A Delphi study. *Educational Technology, Research and Development, Washington, 55*(5), 527.
- Laurillard, D. (2006), *Rethinking University Teaching: A conversational framework for the effective use of learning technologies*(2nd ed). New York, NY: Routledge/Falmer.
- Lehmann, J. (2007). Student perception of learning using voice-over internet protocol in online graduate-level courses. Ed.D., Walden University. Retrieved September 18, 2008, from ProQuest Digital Dissertations database. (Publication No. AAT 3249928)
- Lewis, S. E. (2006). An evaluation of a pedagogical reform designed for college chemistry teaching with large classes. Ph.D., University of South Florida. Retrieved September 18, 2008, from ProQuest Digital Dissertations database. (Publication No. AAT 3240395)
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage Publications.
- Livingstone, D., & Lynch, K. (2000). Group project work and student-centered active learning: Two different experiences. *Studies in Higher Education, 25*(3), 325-345.
- Lunce, L. M. (2007). An investigation of the use of instructional simulations in the classroom as a methodology for promoting transfer, engagement and motivation. (Ph.D., University of North Texas).
- MacGregor, J. (2000). *Strategies for energizing large classes: From small groups to learning communities*. San Francisco, CA: Jossey-Bass.
- Mason, R. (2006). Learning technologies for adult continuing education. *Studies in Continuing Education, 28*(2), 121-133.

- Mayfield, Anthony (2008). *What is social media?* e-book from iCrossing. Retrieved June 2010 from http://www.icrossing.co.uk/fileadmin/uploads/eBooks/What_is_Social_Media_iCrossing_ebook.pdf
- McCombs, B., & Vakili, D. (2005). A learner-centered framework for e-learning. *Teachers College Record, 107*(8), 1582.
- McDowell, L. (1995). The impact of innovative assessment on student learning. *Innovations in Education and Teaching International, 32*(4), 302-313.
- McGrath, D. (2002). Launching a PBL project. *Learning and Leading with Technology, 30*(4), 36.
- McGrath, D. (2003). Artifacts and understanding. *Learning and Leading with Technology, 30*(5), 22.
- McGrath, D. (2003). Developing a community of learners. *Learning and Leading with Technology, 30*(7), 42.
- McGrath, D. (2003). Doing to learn. *Leading and Learning with Technology, 30*(6), 50.
- McGrath, D. & Sands, N. (2004). Finding the time: high school projects in a high-PBL district. *Learning and Leading with Technology, 32*(1), 52
- McIsaac, M., & Gunawardena, C. (1996). *Distance education*. Retrieved February 28, 2005, from <http://seamonkey.ed.asu.edu/~mcisaac/dechapter/>
- McKeachie, W. J., & Gibbs, G. (1999). *McKeachie's teaching tips: Strategies, research, and theory for college and university teachers* [Teaching tips] (10th ed.). Boston: Houghton Mifflin Co.
- McKenzie, J.,(2000). *Beyond technology: Questioning, research and the information literate school community*. Bellingham, WA: FNO Press.

- McPherson, M., & Nunes, M. (2004). *Developing innovation in online learning: An action research framework* New York, NY: Routledge Falmer.
- Means, B., & Olson, K. (1995). *Technology's role in education reform: Findings from a national study of innovating schools*. San Francisco, CA: SRI.
- Meebo, M. (2008). *Meebo me*. Retrieved September 15, 2008, from <http://www.meebome.com/>
- Mehmet, K. (2006). *College science professors' understanding and use of nature of science*. (Doctoral Dissertation). Retrieved from ProQuest Dissertations & Theses Database (Publication No. AAT 3251773)
- Meldrum, H. M. (1990). *Interpersonal relations education: Perspectives from psychology and communicology*. Ed.D., Clark University. Retrieved from ProQuest Dissertations & Theses Database. (Publication No. AAT 9112335)
- Menzie, K. A. (2006). *Building online relationships: Relationship marketing and social presence as foundations for a university library blog*. Ph.D., The University of Kansas. Retrieved from ProQuest Dissertations & Theses Database. (Publication No. AAT 3214805)
- Merriam, S. B. (2002). *Qualitative research in practice: Examples for discussion and analysis* (1st ed.). San Francisco, CA: Jossey-Bass.
- Merriam, S. B., & Merriam, S. B. (1998). *Qualitative research and case study applications in education* (2nd rev. and expand ed.). San Francisco, CA: Jossey-Bass.
- Merriam-Webster. (2010). *Artifact*. Retrieved from <http://www.merriam-webster.com/dictionary/artifac>
- Meyers, C., & Jones, T. B. (1993). *Promoting active learning; Strategies for the college classroom*. San Francisco, CA: Jossey-Bass.
- Michaelsen, L. K. (1983). Team learning in large classes. In Bouton C. & Garth, Y. (Ed.), *Learning in groups* (pp. 13-22)

- Miles, B. M., & Huberman, A. M. (1994). *An expanded sourcebook: qualitative data analysis*. Thousand Oaks, CA: SAGE Publications.
- Milner-Bolotin, M. (2001). *The effects of topic choice in project-based instruction on undergraduate physical science students' interest, ownership, and motivation*. (Ph.D., The University of Texas at Austin. Retrieved from ProQuest Dissertations & Theses Database (Publication No. AAT 3033585)
- Moore, G. S., Winograd, K., & Lange, D. (2001). *You can teach online: Building a creative learning environment*. Boston, MA: McGraw-Hill.
- Moursund, D. G. (2003). *Project-based learning using information technology*. Eugene, OR: International Society for Technology in Education.
- Murphy, K. & Gazi, Y. (2001). Role plays, panel discussions and simulations: Project-based learning in a web-based course. *Educational Media International*, 38(4), 261-270.
- Nagel, D. (2008). Is higher ed technology keeping up with student demands? *Campus Technology*, <http://campustechnology.com/Articles/2008/10/Is-Higher-Ed-Technology-Keeping-Up-with-Student-Demand.aspx?p=1>
- National Research Council. (2002). *The knowledge economy and postsecondary education: Report of a workshop*. Edited by P. A. Graham and N. G. Stacy. Washington, DC: National Academy Press
- Newby, T. J. (2000). *Instructional technology for teaching and learning: Designing instruction, integrating computers, and using media* (2nd ed.). Upper Saddle River, NJ: Merrill.
- Newman, D., Griffin, P., & Cole, M. (1989). *The construction zone: Working for cognitive change in school*. Cambridge Cambridgeshire; New York, NY: Cambridge University Press.
- Newman, J. M. (2007). The effects of synchronous voice and video tools on acceptance of online communications by students in undergraduate technology courses. (Ph.D., University of Nevada, Reno).

- O'Brien, J. R. (2008). Developing a multi-vehicle aerospace simulation environment (MASE). M.S., University of Colorado at Boulder. Retrieved September 20, 2008, Retrieved from ProQuest Dissertations & Theses database. (Publication No. AAT 1453553)
- Palloff, R. M., & Pratt, K. (2005). *Collaborating online : Learning together in community* (1st ed.). San Francisco, CA: Jossey-Bass.
- Patton, M. Q. (1990). *Qualitative Evaluation and Research Methods* (2nd ed.). Newbury Park, CA: Sage Publications, Inc.
- Pearlman, B. (2008). *Project-based learning on the net: What is PBL? definition from the autodesk foundation*. Retrieved June, 10, 2008, from <http://www.bobpearlman.org/BestPractices/ProjectsontheNET.htm>
- Perkins, D. N. (1986). *Knowledge as design*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Phillips, G. D. (2000). *Creatures of darkness : Raymond chandler, detective fiction, and film noir*. Lexington: University Press of Kentucky.
- Piaget, J. (1971). *Science of education and the psychology of the child*. New York., NY: Viking Press.
- Ponta, D., Donzellini, G., & Markkanen, H. (2003). ASEE/IEEE frontiers in education conference. Paper presented at the *PROJECT BASED LEARNING IN INTERNET*, Boulder, Colorado. Retrieved October 12, 2008, from <http://fie.engrng.pitt.edu/fie2003/papers/1564.pdf>
- Postman, N., & Weingartner, C. (1971). *Teaching as a subversive activity*. New York, NY: Delta.
- Powell, T. A. (2002). *Improving assessment and evaluation methods in film and television production courses*. Ph.D., Capella University. Retrieved from ProQuest Dissertations & Theses database. (Publication No. AAT 3034481)

- Prawat, R. (1996). Constructivism, modern and postmodern. *Educational Psychology*, 31(3,4), 215.
- Prensky, M. (2001). Digital natives, digital immigrants. *On the Horizon*, 5(9), 1-15.
- Prensky, M. (2010). *Teaching digital natives: Partnering for real learning*. Thousand Oaks, CA: Corwin Press.
- Protheroe, N. (2005). Technology and student achievement. *National Association of Elementary School Principals*, 85(November 2), 46-48.
- Qualman, Erik (Producer) (2009). *Social media revolution*. Retrieved from <http://www.youtube.com/watch?v=sIFYPQjYhv8>
- Reid-MacNevin, S. A. (1994). *Ideology, critical thinking and current criminological issues: Using debates as a pedagogical tool in undergraduate education*. Ph.D., University of Toronto-Canada. Retrieved September 18, 2008, from ProQuest Digital Dissertations database. (Publication No. AAT NN97251)
- Richards, C. (2010). The online social networking of higher education academic communities. In Z. Abas et al. (Eds.), *Proceedings of Global Learn Asia Pacific 2010* (pp. 1364-1371). AACE
- Roblyer, D. (2006). Do you see what I see? Five ways technologies are transforming teaching. *Keynote Address for the Oregon Technology in Education Network Annual Conference*, Portland, Oregon.
- Rockstraw, L. J. (2007). *Self-efficacy, locus of control and the use of simulation in undergraduate nursing skills acquisition*. Ph.D., Drexel University. Retrieved September 20, 2008, from ProQuest Digital Dissertations database. (Publication No. AAT 3242242)
- Rogers, D.L. (2000). A paradigm shift: Technology integration for higher education in the new millennium. *AACE Journal*, 1(13), 19-33. Charlottesville, VA: AACE.

- Romizhowski, A., & Mason, R. (2004). Computer-mediated communication. In D. Jonassen (Ed.), *Handbook of research for educational communications and technology* (2nd ed., pp. 397-431). New York: McMillan.
- Savage, R., Chen, K., & Vanasupa, L. (2007). Integrating project-based learning throughout the undergraduate engineering curriculum. *Journal of STEM Education*, 8(3/4)
- Sheingold, K., & Hadley, M. (1990). *Accomplished teachers: Integrating computers into classroom practice*. Center for Technology in Education, Bank Street College of Education, 610 West 112th Street, New York, NY.
- Shor, I. (1996). *When students have power: Negotiating authority in a critical pedagogy*. Chicago, IL: The University of Chicago Press.
- Simoes, L. & Borges Gouveia, L. (2008). "Web 2.0 and higher education: Pedagogical implications". *Proceedings of the 4th International Barcelona Conference on Higher Education*, Vol. 2. Knowledge technologies for social transformation. Barcelona: GUNI. Retrieved on June 25, 2010: <http://www.guni-rmies.net>
- Simonson, M., Smaldino, S., Albright, M., & Zvacek, S. (2000). *Teaching and learning at a distance: Foundations of distance education*. Upper Saddle River, NJ: Merrill/Printice Hall.
- Sole, J., & Schrader, D. (2010). *Getting REAL: The Philadelphia story*. Retrieved August 2101 from <http://www.designshare.com/index.php/articles/philadelphia-story/>
- Taylor, J., 2002. A review of the use of asynchronous e-seminars in undergraduate education. In: Hazemi, R. and Hailes, S., Eds. *The digital university: Building a learning community*. London: Springer, pp. 125-138.
- Simoes, L. & Gouveia, L. (2008), "Web 2.0 and Higher Education: Pedagogical implications". *Proceedings of the 4th International Barcelona Conference on Higher Education*, Vol. 2. *Knowledge technologies for social transformation*. Barcelona: GUNI. Available at <http://www.guni-rmies.net>

- Smith, J. (2006). *Updated lists of all companies and regions on facebook*. Retrieved October, 26, 2008, from <http://www.insidefacebook.com/2006/11/15/updated-lists-of-all-companies-and-regions-on-facebook/>
- Stake, R. E. (1995). *The art of case study research*. Thousand Oaks, CA: Sage Publications.
- Surowiecki, James (2005). *The wisdom of crowds*. New York, NY: Anchor Books.
- Sylvester, A. (2007). *An investigation of project-based learning and computer simulations to promote conceptual understanding in eighth grade mathematics*. Ph.D. Dissertation, Kansas State University, United States. Retrieved March 15, 2008, from ProQuest Digital Dissertations database. (Publication No. AAT 3259349)
- Tellis, W. (1997). Introduction to case study. *The Qualitative Report*, 3(2), 1.
- Thomas, W. R. (2002). *An analysis of student collaboration and task completion through project-based learning in a web-supported undergraduate course*. Ph.D., Louisiana State University and Agricultural & Mechanical College. Retrieved September 18, 2008, from ProQuest Digital Dissertations database. (Publication No. AAT 3049238)
- von Glasersfeld, E. (1995). *Radical constructivism: A way of knowing and learning*. London, UK: Falmer Press.
- Vygotsky, L. S., & Cole, M. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Washburn, T. M. R. (2006). *How can a university approach the construction of a blog space for use as a recruiting tool?* (M.S., State University of New York Institute of Technology).
- Wetpaint, (2008). *What is a wetpaint site?* Retrieved from <http://www.wetpaintcentral.com/page/What+is+a+Wetpaint+Sit>
- Williams, J. G., & Pope, E. (1976). *Simulation activities in library, communication, and information science*. New York, NY: Marcel Dekker.

- Wilson, B. G. (1996). *Constructivist learning environments: Case studies in instructional design*. Englewood Cliffs, NJ: Educational Technology Publications.
- Wolsey, T. D. (2004). *What is a threaded discussion group*. Retrieved February 28, 2005, from http://www.readingonline.org/articles/art_index.asp?HREF=wolsey/index.html
- Yang, B. (2007). *How students with different learning styles collaborate in an online learning environment*. Ph.D. Dissertation, Kansas State University, United States. Retrieved March 15, 2008, from ProQuest Digital Dissertations database. (Publication No. AAT 3259302)
- Yin, R. (2003). *Case study research: Design and methods* (3rd ed.). Thousand Oaks, London, New Delhi: Sage Publication.
- Yin, R. (2009). *Case study research: Design and methods* (4th ed.). Los Angeles, London, New Delhi, Singapore, Washington DC: Sage Publication.
- Zvacek, S. M. (1999). What is my grade? *Tech Trends*, 43(5), 39.

Appendix A - Syllabus

Due to the subject matter of this course, this syllabus is always open to revision based on student input and world events. The most recently updated syllabus will always be available on the course WIKI.

**ANTH 200 – Reference Number 23910 – 3 Credit Hours Instructor: Dr. Michael Wesch Tuesday and Thursday
9:30 – 10:45 am in Bluemont 101 206 Waters Hall / 532-6866
mwesch@ksu.edu**

Office Hours: T U 7:30 – 8:30 am or by appointment COURSE DESCRIPTION

Cultural Anthropology explores different cultures in all of their manifestations -from how people make a living to what people live *for*. In an increasingly interconnected world, cultural differences lie at the root of many of our most pressing challenges, throughout the world and in our own personal lives. There has never been a time when Cultural Anthropology has been more important than it is right now.

Successful students will:

- learn the basic tools, concepts, and methods of cultural anthropology and be able to apply these to their own lives regardless of what career path they may choose.
- identify ways in which different aspects of culture – economic, social, political, and religious practices and institutions – relate to one another and are integrated in a cultural system.
- be able to draw comparisons between different cultures, recognizing that such comparisons require a holistic understanding of each of the cultures involved in the comparison.
- describe the processes of globalization and the ways they shape, and are *shaped by*, different aspects of culture in human communities throughout the world.
- improve their abilities to “think outside the box” by recognizing their own cultural biases and questioning the assumptions, beliefs, concepts, and ideas they had previously taken for granted.
- learn to ask challenging and productive questions about the world and humanity.

REQUIRED TEXTS

- **Cultural Anthropology: The Human Challenge. 12th Edition.**
Haviland, Prins, Walrath, and McBride.
- **Annual Editions: Anthropology 08/09** Edited by Elvio Angeloni
- **Additional readings will be posted on K-State Online**
- **You also must bring a 3”x5” notecard to each class.**

COURSE REQUIREMENTS

PRESENCE – Your full presence (not just your “attendance”) is required at every class. This means that you must be fully actively engaged with the class at all times. Your presence will be measured by your **thoughtful** responses on notecards to be turned in every day (or almost everyday) in class.

ON-LINE QUIZZES – The on-line quizzes must be completed before class **each Thursday by 9am**. They will always be over that week’s readings (including the readings for the Thursday the quiz is due). The readings form an important part of the storyline of the course. This class moves through over 40,000 years of human existence and

jumps all over this world which is 25,000 miles around in any one of the infinite directions you might wish to travel and we only have 17 weeks. So hold on, and please keep up with the readings. The points for each quiz will vary from 10 to 30.

WORLD SIMULATION GROUP PROJECT - The class will be broken up into 15-16 groups of 12-14 people in each group. Each group will create their own culture, step-by-step, as we go through each aspect of culture in class. Each member of the group will be assigned to write a particular section of the final ethnography about the culture. Late in the semester we will have an actual world simulation in which all cultures will interact with one another in the Union Ballroom. The goal of this simulation is to actually experience how cultures are interrelated, both for better and for worse. More details will be distributed as the semester continues. Your part of the project is worth 100 points.

PARTICIPATION - Your participation will be graded by your fellow group members and is worth 100 points.

NAME QUIZ - You will be required to know the names and something about each of your fellow group members by the 4th week of class. There will be a quiz worth 20 points.

WORLD SIMULATION REFLECTION - After the simulation you must write a reflection piece worth 30 points.

EXAMS - Each exam is worth 100 points (10% of your final grade for a total of 40%.)

MAKE-UP POLICY

Quizzes: If you missed the deadline for a quiz, you can type a 500 word summary of the articles for that week and turn it in to be graded. You will receive 1 point off for each week that it is late. The summary will be carefully graded, so 500 words does not automatically mean that you will receive full credit.

Attendance: Find a 1-2 hour educational experience related to that particular day's lecture material (see notes or ask a friend to find out what was discussed). This may be watching a video in the library or researching a particular topic in the library or on the internet. One possibility is to simply look at the notes from the day's lecture and do further research on your own into one or more of the topics discussed. Turn your notes in for credit. You must make up your attendance within 2 weeks of the day you were absent.

Exams: You must have a note that excuses your absence. This can be obtained from the Office of Student Life, provided you have a valid excuse. Beware that make-up exams are significantly difficult.

900 – 1000 points	A
800 – 899 points	B
700 – 799 points	C
600 – 699 points	D
500 – 599 points	F
Academic Dishonesty	XF

GRADING SCALE

Kansas State University has an Undergraduate Honor System based on personal integrity which is presumed to be sufficient assurance in academic matters that one's work is performed honestly and without unauthorized assistance. Undergraduate

students, by registration, acknowledge the jurisdiction of the Undergraduate Honor System. The policies and procedures of the Undergraduate Honor System apply to all full and part-time students enrolled in undergraduate courses on-campus, off-campus, and via distance learning. A component vital to the Honor System is the inclusion of the Honor Pledge that applies to all assignments, examinations, or other course work undertaken by undergraduate students. The Honor Pledge is implied, whether or not it is stated: **"On my honor, as a student, I have neither given nor received unauthorized aid on this academic work."** A grade of XF can result from a breach of

Presence	100 points
On-Line Quizzes	250
World Simulation Ethnography	100
Participation	100
Name Quiz	20
World Simulation Reflection	30
Exams (4 x 100 each)	400
TOTAL	1000

academic honesty. The F indicates failure in the course; the X indicates the reason is an Honor Pledge violation.

If you have any condition, such as a physical or learning disability, which will make it difficult for you to carry out the work as I have outlined it or which will require academic accommodations, please notify me in the first two weeks of the course. TENTATIVE Class Schedule (Check Wiki for OFFICIAL schedule)

Fall 2008 Class Schedule

August 25 – Introductions

August 27 – a brief history of Anthropology and why they don't eat cows in India

Haviland, Chapters 1 & 2

Online Reading: Holy Cow Remains Subject of Legal Fight

September 1 – No class. (Labor Day)

September 3 – Virtual Fieldwork Experience in Central New Guinea

Haviland Chapter 3

Reader: Body Ritual Among the Nacirema by Horace Miner

September 8 – Race and Structural Racism

Haviland Chapter 4 (pages 91-95)

Examine Website: Race: The Power of an Illusion **September 10 – Language (& Body Language)**

Haviland Chapter 5

Reader: Fighting For Our Lives by Deborah Tannen

September 15 – Language, Worldview, and Media Ecology

Reader: Shakespeare in the Bush by Laura Bohannon

Online: Amusing Ourselves to Death by Neil Postman

September 17 – Language, Gender, Personality, Self, and Identity

Haviland Chapter 6

Reader: "I Can't Even Open My Mouth!" by Deborah Tannen

Koobecaf Assignment due by Saturday at Midnight (submit by e-mail to TA or bring to class)

September 22 – EXAM ONE

September 24 – Introducing the World Simulation

Haviland Chapter 7

Discussion Section Name Quiz - 20 points.

September 29 – A History of the World ...

Haviland Chapter 8

Reader: Too Many Bananas ... by David Counts

SPECIAL READING FOR YOUR GROUP (ASK TA FOR DETAILS)

October 1 – Exchange and Coca-Colanization

Reader: Why Can't People Feed Themselves by Lappe & Collins

October 6 – No class.

October 8 – Sex, Love and Marriage

Haviland Chapter 9

Reader: When Brothers Share a Wife (87-89)

Reader: Who Needs Love! In Japan, Many Couples Don't (112-115)

Discussion: Sex, Love and Marriage ... Brainstorm Basic Simulation Rules

October 13 – PreRecorded (video shown in class) Family, Social Organization, and Stratification

Haviland Chapters 10 and 11

October 15 – A Portal To Media Literacy (Online Lecture About the World Simulation shown online AND in Umberger 105 at normal class time.)

Read "The Crisis of Significance." by Michael Wesch

Exam Two Review Sheet

Discussion: Family, Social Organization and Stratification ... Brainstorm Simulation Rules

WHAT IS LOVE? Extra credit due before section this week (submit by e-mail to TA or bring to class)

October 20 – EXAM TWO (100 points)

October 22 – Power (Hard, Soft, and Structural)

Haviland Pages 381-384

Discussion: Family, Social Organization and Stratification ... Brainstorm Simulation Rules of Engagement

October 27 – Political Organization, Law & Order

Haviland Chapter 12

Reader: The Secrets of Haiti's Living Dead by Del Guercio

October 29 – Culture and the Supernatural

Haviland Chapter 13

Reader: Baseball Magic by George Gmelch

Discussion: Political Organization & Religion + Brainstorm Simulation Rules

November 3 – New Religious Movements

November 5 – Art & Music

Haviland Chapter 14

Discussion: Religion, Art, and Cultural Values + Brainstorm Final Simulation Rules

November 7th (Friday) EXAM THREE DUE ON-LINE BY 11:59 pm (open book) (100 points)

November 9th (Sunday) Simulation Rules Proposals Due by 11:59 pm (100 points)

November 10 – Culture Change and the World System

Haviland Chapter 15

Reader: Why Can't People Feed Themselves (Read Again – really, it's that important.)

TAs & Wesch will begin preparing props and other necessities for the World Sim

November 12 –Introduction to Structural Power and the World Simulation (final rules will be revealed)

Haviland Chapter 16

Posters Due. Bring them to Waters 206 or leave in Waters 204.

FINAL ETHNOGRAPHY SECTIONS DUE BY FRIDAY, NOVEMBER 14th at 11:59 pm! (100 points)

(Final integration of ethnographies due by Sunday, November 16th at 11:59 pm)

Discussion: Go over World Simulation Rules

November 17 – WORLD SIMULATION PART ONE

Review pages 381-393

SimUpdate Quiz Due by Tuesday at Midnight

November 19 – WORLD SIMULATION PART TWO

Reader: The Price of Progress by John Bodley

Discussion: World Simulation Outcomes & Correspondences to Real World History

Historians send first draft of history reports Wednesday night to Wesch so he can start piecing it all together for the final video

November 24 - Discuss World Simulation - Structural Power and Structural Violence Videographers must submit short video histories in class or before class (see instructions) World Simulation Reflection (30 points) due by midnight November 25th! (on K-State Online like a Quiz)

November 26 – THANKSGIVING BREAK

December 1 – No class ... sorry! :(I'll be in Rome, Italy.

Online Readings may also be assigned as appropriate, depending on results of simulation.

December 3 – Arrive at 8:25 am: Watch "An Anthropological Introduction to YouTube" by Wesch (shown online AND in Umberger 105 at normal class time.)

I will be in Berlin, Germany discussing results of World Simulation.

December 8 - Video and Discussion of World Simulation / Finding Solutions to Global Problems

December 10 – An Ethnography of the Future

Online: Read **Ray Kurzweil's Vision of the Future**

Final Exam Friday, December 19th at 11:50 am in Umberger 105

Appendix B - Course Goals and Assignments

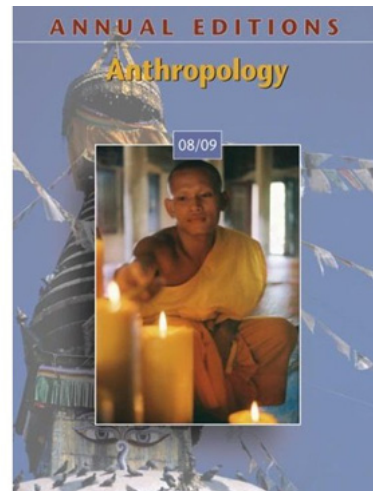
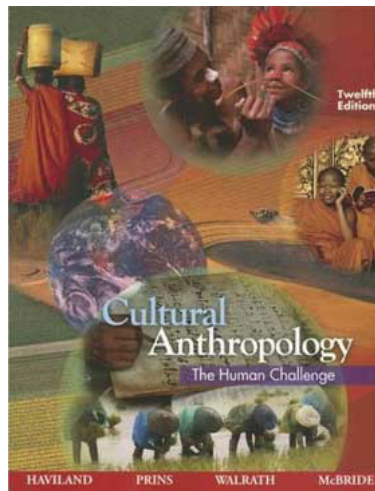
Course Description:

Cultural Anthropology explores different cultures in all of their manifestations - from how people make a living to what people live *for*. In an increasingly interconnected world, cultural differences lie at the root of many of our most pressing challenges, throughout the world and in our own personal lives. There has never been a time when Cultural Anthropology has been more important than it is right now

Successful students will:

- learn the basic tools, concepts, and methods of cultural anthropology and be able to apply these to their own lives regardless of what career path they may choose.
- identify ways in which different aspects of culture – economic, social, political, and religious practices and institutions – relate to one another and are integrated in a cultural system.
- be able to draw comparisons between different cultures, recognizing that such comparisons require a holistic understanding of each of the cultures involved in the comparison.
- describe the processes of globalization and the ways they shape, and are *shaped by*, different aspects of culture in human communities throughout the world.
- improve their abilities to “think outside the box” by recognizing their own cultural biases and questioning the assumptions, beliefs, concepts, and ideas they had previously taken for granted.
- learn to ask challenging and productive questions about the world and humanity.

REQUIRED TEXTS



Cultural Anthropology: The Human Challenge. 12th Edition.

Haviland, Prins, Walrath, and McBride.

Annual Editions: Anthropology 08/09 Edited by Elvio Angeloni

Additional readings will be posted on K-State Online

You also must bring a 3"x5" notecard to each class.

COURSE REQUIREMENTS

PRESENCE – Your full presence (not just your “attendance”) is required at every class. This means that you must be fully actively engaged with the class at all times. Your presence will be measured by your *thoughtful* responses on notecards to be turned in every day (or almost everyday) in class.

ON-LINE QUIZZES – The on-line quizzes must be completed before class **each Tuesday by 11:59 pm**. They will always be over that week’s readings (including the readings for the Wednesday the quiz is due). The readings form an important part of the storyline of the course. This class moves through over 40,000 years of human existence and jumps all over this world which is 25,000 miles around in any one of the infinite directions you might wish to travel and we only have 17 weeks. So hold on, and please keep up with the readings. The points for each quiz will vary from 10 to 30

WORLD SIMULATION ETHNOGRAPHY - The class will be broken up into 20 groups of about 20 people in each group. Each group will create their own culture, step-by-step, as we go through each aspect of culture in class. Each member of the group will be assigned to write a particular section of the final ethnography about the culture. Late in the semester we will have an actual world simulation in which all cultures will interact with one another in the Union Ballroom. The goal of this simulation is to actually experience how cultures are interrelated, both for better and for worse. More details will be distributed as the semester continues. The ethnographic section you write is worth 100 points.

PARTICIPATION - Your participation will be graded *by your TA* and is worth 100 points.

NAME QUIZ - You will be required to know the names and something about each of your fellow group members by the 4th week of class. There will be a quiz worth 20 points.

KOOBECAF ETHNOGRAPHY. Write a 500-600 word essay on your experiences with the Nacirema use of "Koobecaf" using the tools and techniques learned in class.

WORLD SIMULATION REFLECTION - After the simulation you must write a reflection piece worth 30 points.

EXAMS - Each exam is worth 100 points (10% of your final grade for a total of 40%.)

MAKE-UP POLICY

Quizzes: If you missed the deadline for a quiz, you can type a 500 word summary of the articles for that week and turn it in to be graded. You will receive 1 point off for each week that it is late. The summary will be carefully graded, so 500 words does not automatically mean that you will receive full credit.

Attendance: Read the lecture notes on the wiki from the day you missed. Spend 50 minutes doing additional research on the topics covered in class, and add supporting links, pictures, and videos to the lecture notes. E-mail your TA to let them know you have completed this.

Exams: You must have a note that excuses your absence. This can be obtained from the Office of Student Life, provided you have a valid excuse. Beware that make-up exams are significantly more difficult than the in-class exams.

HONOR SYSTEM

Kansas State University has an Undergraduate Honor System based on personal integrity which is presumed to be sufficient assurance in academic matters that one's work is performed honestly and without unauthorized assistance. Undergraduate students, by registration, acknowledge the jurisdiction of the Undergraduate Honor System. The policies and procedures of the Undergraduate Honor System apply to all full and part-time students enrolled in undergraduate courses on-campus, off-campus, and via distance learning.

A component vital to the Honor System is the inclusion of the Honor Pledge that applies to all assignments, examinations, or other course work undertaken by undergraduate students. The Honor Pledge is implied, whether or not it is stated: ***"On my honor, as a student, I have neither given nor received unauthorized aid on this academic work."*** A grade of XF can result from a breach of academic honesty. The F indicates failure in the course; the X indicates the reason is an Honor Pledge violation.

If you have any condition, such as a physical or learning disability, which will make it difficult for you to carry out the work as I have outlined it or which will require academic accommodations, please notify me in the first two weeks of the course.

Appendix C - Course Website Screenshots

Anthropology Fall 2008 Homepage

The screenshot shows a web browser window displaying the homepage for the Anthropology Fall 2008 course. The browser's address bar shows the URL ksuanth.wetpaint.com/page/Schedule/revision/144. The page features a header banner with the text "Introduction to Cultural Anthropology at Kansas State University with Professor Wesch" and a navigation menu with links for Home, Discussions, Photos, Videos, News, Updates, and Members. A search bar is located in the top right corner.

The main content area is titled "Schedule | Version 144 - [view current page](#)". It includes a "Quick links" section with the following items:

- [Assignments and Course Goals \(includes make-up policy\)](#)
- [World Simulation description](#)
- **Lecture notes are linked from the schedule below**
- **All pages on the wiki can be accessed from the menu on the left (click the triangles to see more pages under each heading)**

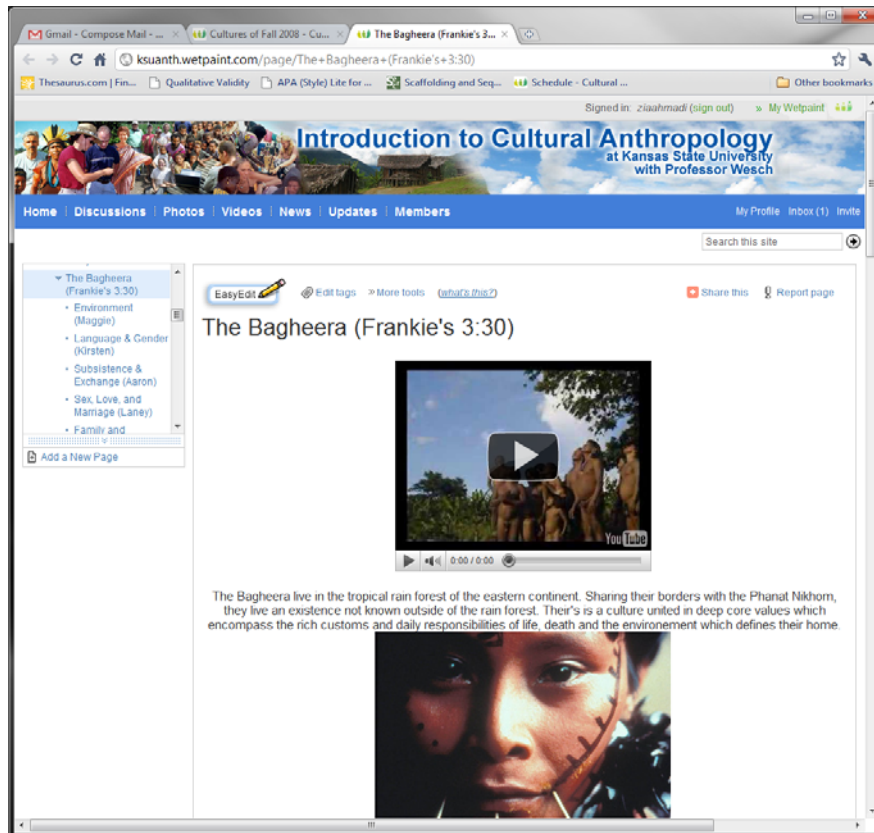
There is also an "Announcements" section with the text: "We need to totally redesign the World Simulation. It will not be in the ballroom this year." and an "About this class:" section describing the course's focus on cultural anthropology.

On the right side, there is a "Recent Activity" section listing recent updates and a "Best content in KSU Anthropology I Digo - Groups" section with links to various resources.

The "Fall 2008 Class Schedule" section lists the following dates and topics:

- August 25 - Introductions**
- August 27 - a brief history of Anthropology and why they don't eat cows in India**
Haviland, Chapters 1 & 2
Online Reading: Holy Cow Remains Subject of Legal Fight
- September 1 - No class. (Labor Day)**
- September 3 - Virtual Fieldwork Experience in Central New Guinea**
Haviland Chapter 3
Reader: Rivty Ritual Among the Nacirema by Horace Miner

Sample Screen of a Website for a Recitation Class Culture



Anthropology Course TA Discussion Website

Schedule - C... Gmail - Inbo... 'shish-kabo... Facebook | T... Facebook | w...

www.facebook.com/group.php?gid=23883878749&v=app_2373072738

Thesaurus.com | Fin... Qualitative Validity APA (Style) Lite for ... Scaffolding and Seq... Other bookmarks

facebook Search

TA's4life* Wall Info Discussions Photos

+ Start New Topic

Displaying all 4 topics.

Meeting at 2:30 today 1 post. Created on November 17, 2008 at 9:12am	Latest post by Michael Wesch Posted on November 17, 2008 at 9:12am
Student Answers: What should they be tested on? 2 posts. Created on September 15, 2008 at 7:59pm	Latest post by Leschia McElhane Posted on September 16, 2008 at 4:36pm
why lEaRN naMes? 5 posts. Created on August 28, 2008 at 1:16am	Latest post by Autumn SCOGGAN Posted on August 28, 2008 at 8:44pm
Lesson plan 2 posts. Created on August 27, 2008 at 8:06am	Latest post by Kelly Emibear Marshall Posted on August 28, 2008 at 12:53am

Nick Timmons Chat (2)

Appendix D - World Simulation

What is it? The World Simulation is a radical experiment in learning that is the centerpiece of the Introduction to Cultural Anthropology course at Kansas State University, created in a fit of frustration with the large lecture hall format which seems inevitable in a classroom of 200-400 students. Of utmost concern to me, was the nature of questions I was hearing from students, which tended to be administrative and procedural rather than penetrative, critical, and insightful. My least favorite question was also the most common: "What do we need to know for this test?" Something had to be done, so I set to work creating the World Simulation

Students are asked to imagine the world in the classroom. We create a map that mimics the geographical, environmental, and biological diversity of our real world. The map is laid onto a map of the classroom, and students are asked to imagine themselves living in the environment that maps onto them. The class is divided into 15-20 groups of about 12-20 students in each group. Each group is challenged to create their own cultures to survive in their own unique environments.

The World Simulation itself only takes 75-100 minutes and moves through 650 metaphorical years, 1450-2100. It all takes place in large room where all of the "cultures" interact with one another with props for currencies, natural resources, and other elements that recreate the world system. I will explain this in more detail in a future post, but essentially we attempt to simulate (not "act out") world history in an attempt to understand the underlying social and cultural processes that interconnect us all. The ultimate goal is to allow students to actually experience how the world system works and explore some of the most important questions now facing humanity such as those of global inequality, globalization, culture loss, environmental degradation, and in the worst case scenario, genocide.

The simulation is recorded on roaming digital video cameras and edited into one final "world history" video using clips from "real world" history to illustrate the correspondences. We

watch the video together during the last week of class and have amazing moments together as we contemplate our world. By then it seems as if we have the whole world right before our eyes in one single classroom - profound cultural differences, profound economic differences, profound challenges for the future, and one humanity. We find ourselves as co-creators of our world, and the future is up to us. It is in this environment that even the worst questions take on all the characteristics of the best: What do we need to know for this test?

Appendix E - World Simulation Rules

World Simulation Rules and Objectives

by Michael Wesch. Reposted from Savage Minds, April 9th 2006.

Using the now classic metaphor, if we imagine all of human evolution to have occurred in the past hour, the last 550 years that the World Simulation attempts to simulate is no more than a few tenths of a second. While these final tenths have brought us tremendous technological advances, they have also brought us unparalleled global inequality, the most deadly wars of all time, and a precarious environmental situation. Our population is more than 10 times what it was just a few short tenths of a second ago. The richest 225 humans on earth have more wealth than the poorest 2.5 billion people combined and the richest 20% of humans on earth account for 86% of consumption and on average make over \$25,000/year. Meanwhile, 1.2 billion people make less than \$1/day and over half the world makes less than \$2/day. Humans produce more than enough food to feed everyone in the world, but at least 800 million people are starving. In 2004, worldwide military expenditures were \$950 billion. In that same year, Worldwatch estimated that it would cost just \$12 billion for reproductive health care for all women, \$19 billion for the elimination of hunger and malnutrition, \$10 billion for clean drinking water for all, and \$13 billion to immunize every child in the world from common major diseases. In these final few tenths of a second we have created a global economy running on nonrenewable fossil fuels, all of which will be gone within the next second on our imaginary clock. The use of these fuels has increased carbon dioxide levels by almost 30%, nitrous oxide by about 15%, and concentrations of methane have more than doubled - all of which contribute to a rise in global temperature leading to rising sea levels, expanding deserts, and more intense storms. Perhaps most dramatic, it is in these final tenths of a second on our metaphorical clock that we human beings have attained the ability to literally stop the clock and annihilate ourselves. Whether or not the clock keeps ticking into the next hour will largely be up to the students we are now teaching. This is no small task they face. It may take an almost complete reinvention of how we live and a total revision of how we see the world and our fellow human beings.

So how do our students view these problems and what do they plan on doing about them? Some students are well aware of these issues and are seriously engaged in finding solutions. Unfortunately, the more common perception among students is that these problems are not theirs to solve. Technology will take care of the environmental problems and those in poverty should take care of themselves. "We" are rich because we are smart, hard-working, and have our head on straight. "They" are poor because they are lazy, not smart, and probably corrupt. In short, our system works. Their systems do not. There is little recognition that "our system" might in some ways depend on those of others and vice versa - that perhaps there is ultimately only one system after all, the world system.

It is almost impossible to say all that and keep the attention of those who don't want to hear it. These are statements that are destined to always be preached to the choir and not far beyond. Fortunately these statements are really secondary to what we really need from our students: good questions that will drive them to understand more about our world and become active and responsible global citizens working to ensure our clock keeps ticking.

The World Simulation is designed to point the way to the questions, while only tentatively suggesting a few answers. It attempts to bring the entire world into one single room to give students a brief glimpse into how the world works, what the problems are, and how the conditions of one human group are profoundly dependent on the conditions of other human groups, even if those groups may be separated by vast oceans.

In this post I will lay out the basic rules of the simulation. Unfortunately I cannot reveal too much because the simulation relies heavily on an element of surprise and some students may find their way to read this.

The Basics



The simulation is made up of 4 or 5 interaction rounds. Each interaction round runs for about 12 minutes followed by a 3 minute intermission allowing students to take account of what has occurred and to see if they can "feed themselves." The main rule of the simulation is very simple: in order to survive, at the end of each round each student must have a piece of food (cereal) to eat. This will require either land (represented by a cereal box from which the student can get food) or money to buy food from others. If a student cannot eat at the end of the interaction, their death is marked as a "famine" by the "cultural historian" (see below) and the death decreases the total population of the culture by 5%. The student who starved must go to a nearby land as a refugee and hope for the best.

After the intermission, there is a 3 minute "news update" which I use to draw connections to real world events that are currently being simulated. The news is an audio-visual extravaganza complete with commercials advertising some of the new products being created by emerging imperialists.

At the beginning of the simulation, each group has at least 3 things: a box of cereal representing their "land," envelopes to be opened at the beginning of each round (providing various challenges or instructions), and a collection of colored notecards representing various

resources or goods that they can trade with others (these can represent many things depending on their ethnography, but some examples are white = salt, green = plant materials, orange = obsidian, and pink = shells).

All the props cost me just over \$100. The most important props are boxes of cereal. There are three types of cereal in the simulation, each one of them profoundly symbolic. Fruit Loops represent a rich, varied, and nutritious diet. I'm aware of the irony of this, but the multiple colors are what set them apart. Cocoa Puffs represent luxury consumption goods such as cocoa, coffee, sugar, and tobacco. Cheerios represent large-scale monocrop cultivation. Of course, almost as soon as the simulation begins all of the cereals begin to take on different meanings for different people, which is exactly how it should be.

Each culture also has one sacred item, usually represented by a stuffed animal. The meanings they attach to this are up to them.

Populations are adjusted to represent the estimated population of the world in 1450 CE (about 400 million). The population automatically grows in each interaction, simulating the real world's population growth so that we end the 2nd to last round with 6.2 billion people. (The last round is a special "future projection" round in which we try to solve all of the problems we have created.) Throughout the simulation the population of each group may increase or decrease based on famine, disease, or a shift to a new subsistence pattern (e.g. industrial agriculture would increase the "carrying capacity" and thereby increase the population).

Based on the ethnographies, I create mobility maps for each group showing where they are able to travel. Anybody who travels must carry a mobility map with them and cannot go beyond the boundaries that their mobility map sets for them.

I select 3-5 groups who seem to be on the verge of seeking other areas to explore or colonize. They are given full mobility to travel the entire world and a separate set of instructions with a box of materials that facilitate the colonization of other lands. Their materials include colored flags to mark their conquests, various tools and materials to facilitate production of luxury goods, money, and a special map that tells them where certain luxury goods will grow and where they will not (so Cocoa Puffs only grow in certain areas, Fruit Loops grow better in some areas than others, etc.). I can't reveal those materials or instructions here because much of the simulation depends on an element of surprise that forces students to find solutions to emerging issues or capitalize on the opportunities given. Starting in the second round, these three groups are also required to find fossil fuels (represented by yellow notecards) to power their industrial revolution. They need to turn in one yellow card at the end of each round or they lose half of their hard power. There are not enough yellow cards in the room to last until the end of the last round (representing 100 years into the future).



Those with money can participate in the world market exchange - a table in the front of the room where groups can exchange money, natural resources and hard power. Exchange rates change throughout the simulation

to simulate technological developments, scarcity, and other factors.

Hard Power & the Rules of War

Each culture starts with a certain amount of hard power with which to launch attacks or protect themselves. Hard power is represented on small cards with numbers ranging from 0 to 1,000,000. Each culture has as many as 50 hard power cards with different numbers on them. The total amount of hard power a culture starts with depends on their population, technology, and other relevant cultural factors. When traveling a student should carry some of this hard power with them either for protection or conquest, however they have to strategize because taking too much depletes the amount of hard power others in the group can carry or could leave the homeland completely unprotected. Alliances can also be made, allowing one culture to draw on the hard power of the other and vice versa.

A battle begins when somebody from one culture challenges another. Both sides quickly decide how much hard power they want to use in the first battle and place these cards in their right hand. At the count of 3 each side shows the other the hard power they are holding in their right hand. The side with the most hard power wins the battle and gets all of the hard power expended by the other culture. The war is over when one side surrenders or is completely out of hard power. Terms of surrender are negotiable between the two warring parties but may include a right to hold on to some hard power, money, land rights, etc.

The winner occupies the land and then acts as a colonizer or occupier. The colonizer can tax the people, take the land, force people into labor, or force them to grow different crops.

Of course, this is where it gets interesting.

As I said before, I cannot reveal too much, but this is how the simulation has typically gone in the past 3 trials:

We start by arranging the tables in the room to match our world map as closely as possible:



Emerging colonial powers almost immediately begin exploration and colonization and have colonized most of the world by the end of the second round.



Colonizers often attempt to completely transform local economies. They tax or take the land (the box of Fruit Loops), forcing the local people to work for money to survive. This not only creates a cheap labor pool, it also creates a market for their exports (Cheerios). They use the cheap labor to manufacture luxury goods (Cocoa Puffs and Fruit Loop necklaces).



As the simulation proceeds, the colonies begin to acquire an emerging sense of nationalism and a growing population. Eventually they overthrow their colonizer, or the colonizer finds it too difficult to manage the colony. There are often several atrocities during this phase of the simulation that send refugees to other lands. Several new nation-states also form during this time.



Even as processes of decolonization set people "free," they still find that they are dependent on a global system of trade in which they are working for low wages and spending all of their money on goods exported from previous colonial centers. The world system of the real world maps onto our simulated world:



Prior to the final round, students are asked to look around at the world they have created. We take a quick survey to determine how our numbers compare to those of the real world. Like the real world, over half of the people in our world are working for very little money and struggle to find enough food to eat. I announce that there are not enough yellow cards to power the fossil fuel economy through the next round. When they open their envelopes for the final round, they find more problems.

The last round often inspires valiant efforts to solve the world's problems. Some students try to create expansive alliances with other low-wage laborers to drive wages higher. Others stage protests and beg for empathy from the colonizers.



In our simulation, they have only 10 minutes to think through solutions - a trivial amount of time. The solutions we create are likewise trivial. But the questions the simulation inspires are not. And if students leave the simulation asking questions they didn't ask before the simulation, or begin asking questions in different ways, there is no telling what might happen. Maybe it will inspire them to keep that clock ticking after all.

Appendix F - Professor's Email about the Driving Question

Hi Mike,

I hope you are having a good summer.

Under your driving question--the purpose of the course-- "How does the world work?" and its corollary "It doesn't work so well", my major professor and I have endeavored to operationalize these concepts in order to be able to analyze student and TA understandings of the driving question. We have found the following 8 categories of the driving question. However, we wish to guard against any overlap or other issues of clarification. Could you please review our findings and provide feedback? We wish to proceed analyzing our data based on these categories:

Power and control

Cultural roles

Societal and differences

Addressing important world questions

Elements of culture

Interconnectedness of all humanity

The role of culture in the world system

Holistic understanding of cultures

Regards,

From: Michael Wesch

To: Zia

That looks about right.
Hope all is well for you,
Mike

Appendix G - Professor's Vitae

Michael Wesch

Associate Professor of Cultural Anthropology
Kansas State University
PhD Anthropology: University of Virginia 2006
BS Anthropology: Kansas State University 1997

Education

- 1997 BS in Anthropology with Honors, Summa Cum Laude, Kansas State University
2006 PhD in Cultural Anthropology, University of Virginia

Academic Appointments

- 2010-present Associate Professor of Cultural Anthropology, Kansas State University
2004-2010 Assistant Professor of Cultural Anthropology, Kansas State University

Specializations

Topical: cultural anthropology, media ecology, Technology and Higher Education, "Web 2.0" and digital ethnography, print and literacy, witchcraft and sorcery, neocolonialism, modernity

Areas: YouTube and other online social media
Melanesia with an emphasis on Mountain Ok peoples of central New Guinea

Awards for Research and Creativity

- 2010 Named one of the first Fellows of the National Institute for Technology in Liberal Education (NITLE)
2009 National Geographic Emerging Explorers Award (1 of 10 selected worldwide from all fields, for "making a substantial contribution to global knowledge while still early in their careers")
2008 Named to the Encyclopedia Britannica Editorial Board of Advisors
2007 Wired Magazine Rave Award for Video
2007 John Culkin Award for Outstanding Praxis in Media Ecology
2007 Faculty of the Salzburg Seminar in Austria on "The New Information Networks: Challenges and Opportunities for Business, Government, and Media."
2007 US Nominee for the World Summit Award (United Nations Award for best e-content)
'02-'03 Fulbright-Hays International Dissertation Research Fellowship \$31,901

'99-'02 National Science Foundation Graduate Research Fellowship \$82,000

1999 Jacob K. Javits Fellowship

Teaching Awards

- 2008 CASE / Carnegie Foundation U.S. Professor of the Year
- 2008 Presidential Award for Outstanding Undergraduate Teaching, Kansas State University
- 2008 Inspire Integrity Regional Award Winner (1 of 15 in the nation) from the National Society of Collegiate Scholars
- 2008 Outstanding Faculty Member of the Year (KSU fraternity and sorority community)
- 2007 William L. Stamey Award for Outstanding Teaching
- 2006 Women in Science and Engineering Program Making a Difference Award
- 2006 Distinguished Member of National Society of Collegiate Scholars
- 2005 Nomination for Professor of the Year by residence hall students (again in 2007)
- 2005 Mortar Board Outstanding Professor Award

Also recognized by numerous student organizations for outstanding teaching.

Peer-Reviewed / Major Publications

- 2009 YouTube and You: Experiences of Self-Awareness in the Context Collapse of the Recording Webcam.. Explorations in Media Ecology Volume 8 Number 2. 15 pages.
- 2008 "An Anthropological Introduction to YouTube" Digital Video Published on YouTube, July 25th http://www.youtube.com/watch?v=TPAO-IZ4_hU
 - Featured by David Byrne in New York Times Magazine's "Moments that Mattered"
 - Originally delivered as a speech at the Library of Congress
 - Featured by the editors of YouTube in August 2008.
 - over 1 million views
 - Top 100 All-Time Favorites on YouTube in the Education category
 - Top 10 on Technorati for the month of August
 - Translated into Bulgarian and Portuguese
 - Segment shown on CBS Sunday Morning, April 26th 2009
 - Featured in **Bookmark: wissenswelten von der keilschrift bis YouTube** (*translation: Bookmarks: From Cuneiform to Youtube*) at the Kestnergesellschaft, an arts organization and exhibition house in Hanover, Germany.
 - Featured in California Museum of Photography show titled "*Mediated*". Full text transcript will be published in the exhibition catalogue. From the curator: "*Mediated* features contemporary artists who use internet and Hollywood source material to make new works... some like mash-ups, but others using innovative installation techniques to push the concept further. Your research will give the show context and help give people who do not use the internet the background necessary to understand important concepts related to the artwork and

social phenomena that has produced it.”

“An Anthropological Introduction to YouTube is exactly what it says it is, and, of course, it itself is also a YouTube phenomenon that looks at other YouTube phenomena and back at itself.”

- David Byrne, New York Times Magazine “Moments that Mattered”

“Wesch’s work has the narrative pacing of a thriller; it’s likely your adrenalin might start pumping with anxiety, like mine did, around 38 minutes. ... Wesch makes a mind-blowing argument – and he makes it so convincingly that YouTube will never look the same.”

- CJ Janovy, Kansas City Pitch

“[a] builder and curator of a cabinet of wonders ... Watching him and his work is like watching a time-lapse photograph of the Empire State Building going up. Every morning a new story appears. Amazing.”

- Gardner Campbell, Director of the Academy for Teaching and Learning
Associate Professor of Literature and Media, Honors College, Baylor University

- 2008 "Creating "Kantri" in Central New Guinea: Relational Ontology and the Categorical Logic of Statecraft" M/C Journal of Media and Culture 11(5).
<http://journal.media-culture.org.au/index.php/mcjournal/article/viewArticle/67>
- 2008 "Revisiting a Vision of Students Today" Originally published on Britannica Blog, October 2008. Published in Journal of Media Literacy in 2009.
<http://www.britannica.com/blogs/2008/10/a-vision-of-students-today-what-teachers-must-do/>
- 2008 “From Knowledgeable to Knowledge-able: Learning in New Media Environments”
Academic Commons December 2008.
- 2008 “Anti-Teaching: Confronting the Crisis of Significance.” Education Canada 48(2):4-7.
http://www.cea-ace.ca/media/en/AntiTeaching_Spring08.pdf
- Positively reviewed in the Ideas section of the Toronto Star. May 25th 2008.
 - Translated into Spanish as, “**Anti-Ensenanza: Confrontando la Crisis del Sentido**”
[http://www.diegoleal.org/docs/2008/Wesch\(2008\)-Antiensenanza.pdf](http://www.diegoleal.org/docs/2008/Wesch(2008)-Antiensenanza.pdf)
- 2007 “Web 2.0 ... The Machine is Us/ing Us.” Digital Video Published on YouTube, Jan. 31st.
http://www.youtube.com/watch?v=NLIgopyXT_g
- Winner of the Wired Magazine Rave Award for Video
 - Reviewed and accepted for broadcast on Current TV.
 - Selection for the Margaret Mead Film Festival, November 11th 2007.
 - Featured by the editors of YouTube in February 2007.
 - #1 video on Technorati for the month of February.
 - Featured at numerous academic conferences worldwide including TED 2007 conference
 - Made into a live dance piece choreographed by Wooster Professor of TA Dance, Kim Tritt, and scored by Kent State's Sebastian Birch
 - Translated in over 15 languages
 - Named one of the Top 100 Most Iconic Internet Videos by URLESQUE (the only academic video to make the list)
 - Latitude 48° 34' 52, Longitude 7° 45' 33 exhibition at the Strasbourg Ecole Superieure des Arts Decoratifs / France features *Web 2.0: The Machine is Us/ing Us*. The exhibition deals with a specific problematic linked to pedagogy using images, with the transmission

- of sciences and knowledge and with cultural mediation.
 - Also featured at the world's first gallery about the social impact of the internet at the National Media Museum in Yorkshire in the UK
 - Over 10 million views
- 2007 "A Vision of Students Today." Digital Video Published on YouTube, October 12th.
<http://www.youtube.com/watch?v=dGCJ46vyR9o>
- Reviewed and accepted for broadcast on Current TV.
 - Featured by the editors of YouTube on October 26th 2007.
 - #1 video on Technorati on October 16th
 - Featured at numerous academic conferences worldwide including TED 2008 conference
 - Over 3 million views
 - Translated into 6 languages
 - Featured on ABCnews.com in March 2008
 - Made into live dance piece by Bala Sarasvati, University of Georgia CORE Concert TA Dance Company
 - 1 of 5 finalist for a YouTube Award for Most Inspirational Video 2007
- 2007 "Information R/evolution." Digital Video Published on YouTube, October 12th.
<http://www.youtube.com/watch?v=-4CV05HyAbM>
- #1 video on Technorati on October 21st
 - Featured at numerous academic conferences worldwide
 - Translated into Catalan and German
 - Twist Image "Best of 2007" – selected by David Weinberger of the Harvard Berkman Center for Internet and Society
- 2007 "A Witch-hunt in New Guinea: Anthropology On Trial."
 Anthropology and Humanism, Vol. 32, No. 1, pp. 4-17
- 2007 Mediated Cultures (mediatedcultures.net). Accepted into the Intute Social Sciences Online Catalog on August 2nd 2007. ("Intute employs a network of subject specialists to find, evaluate and catalogue the best of the Web." <http://www.intute.ac.uk/policy.html>) Also featured in a segment on Click! a program on BBC.
- 2002 Virtual Snow: On-line Resources on the Life and Anthropology of Edmund Snow Carpenter. (includes digital translation of "Oh, What a Blow That Phantom Gave Me!")
<http://mediatedcultures.net/phantom/>
Accepted into the Social Science Information Gateway Internet Catalogue in 2005
Visualanthropology.com Spotlight Choice for February 2002
- 2000 Nekalimin.net. A developing on-line resource and ethnography of a Papua New Guinea people (<http://mediatedcultures.net/phantom/png/nekalimin/>)
"by far and away the most interesting web-mounted hypermedia ethnography to date."
Cardiff University Hypermedia Ethnography Project Links Page, September 13, 2003
<http://www.cardiff.ac.uk/socsi/hyper/links.html>

Non-Refereed and other Publications

- 2009 "Human No More: Digital Subjectivities in a Post-Human Anthropology" co-authored with Neil Whitehead. Anthropology News 50[9]:12.
- 2009 "A Sense of Purpose" *EDUCAUSE Review*, vol. 44, no. 5 (September/October 2009): 8–9

- 2008 Digital Ethnography: Understanding Digital Culture. ON magazine. January 2008.
- 2008 "Das ist eine kraftvolle Entwicklung" extensive interview in Sueddeutsche Zeitung (Germany's largest newspaper) Oktober 2008.
- 2007 Web 2.0. Edited by Vito di Bari. Il Sor 24 Ore. Italy. (one of 23 "international experts" who contributed to the book. Others included Howard Rheingold, Jay Adelson, and Thomas Vander Wal.)
- 2007 "What is Web 2.0? What does it mean for Anthropology?" Anthropology News May 2007, Vol. 48, No. 5, pp. 30-31 also translated into Romanian and published in the Romanian Journal of Social Informatics.
- 2007 "An In-depth Look at the Cyber-Phenomenon of Our Time: Web 2.0" The Lawlor Review XV(2), pp. 10-16.
- 2007 A Brief Interview with Michael Wesch (The Creator of That Wonderful Video ...) extensive written interview with John Battelle of Federated Media. Published on SearchBlog.
- 2005 Review of "Becoming Sinners: Christianity and Moral Torment in a Papua New Guinea Society" by Joel Robbins. Anthropological Forum 15(2): 219-221.
- 2003 "Tumolbil, Wara Smol, and the 141st Meridian: Past and possible future effects of the Indonesian-Papua New Guinea border on the people and environment of Tumolbil and Wara Smol." Report submitted to the Border and Special Projects Division, Papua New Guinea.
- 2002 Review of "Arrow Talk: Transaction, Transition, and Contradiction in New Guinea Highlands History" by Andrew Strathern and Pamela J. Stewart. *Pacific Studies* 25(3):112-115.
- 2000 "The Drum and the Mask: Time of the Tubuan" Review of video co-authored with Roy Wagner. *American Anthropologist* 102(4):886-887.

Podcasts

- 2009 Educause Now Show #13 featured interview (podcast):
<http://www.educause.edu/blog/gbayne/EDUCAUSENow13Obamas2010Budgetf/168155>
- 2009 Michael Wesch: A Cultural Anthropologist Looks at Digital Technology. Interview with Steve Hargadon. <http://www.futureofeducation.com/forum/topics/michael-wesch-a-cultural>
- 2009 Connect@NMC: Michael Wesch and Digital Ethnography. April 23rd 2009.
<http://www.nmc.org/connect/wesch>
- 2009 Seedlings Interview. May 1st 2009. <http://www.edtechtalk.com/node/3735>

Refereed Presentations & Panels

- 2009 Organized Presidential Invited Session at the American Anthropological Association meetings called "Human No More: Digital Subjectivities, Un-Human Subjects and the End of Anthropology" with Neil Whitehead (U Wisconsin) and presented "Anonymity, Anonymous, and the End/s of Identity and Groups Online"
- 2009 "The Machine is (Changing) Us: YouTube and the Politics of Authenticity." Personal Democracy Forum 2009 Keynote Presentation (40 minutes). Jazz at Lincoln Center. Over 1,000 in attendance. Received standing ovation.
- 2008 "Toward an Ethnography of YouTube" DIY Video Summit at USC, Los Angeles, CA. Feb. 8th.(invitation only event for top scholars and web video producers)
Positively reviewed in an article on the PBS website MediaShift:
<http://www.pbs.org/idealab/2008/02/michael-wesch-toward-an-ethnog.html>
- 2008 "YouTube and the Mediation of the Sacred." Media Ecology Association Conference. June 20th. Santa Clara, California.
- 2008 Organized "Remixing Anthropology: Collaboration 2.0 in the Reputation Economy" for the American Anthropological Association meetings in San Francisco, but could not attend due to a conflict with the CASE/Carnegie Prof. Of the Year Awards Ceremony.
- 2007 "Digital Subjectivities" Co-organized with Jay Hasbrouck from Intel. American Anthropological Association Meetings. December 1, 2007. Washington DC.
Presented a paper titled, "Why WeTubed on YouTube: Vlogging and Participant Observation in a Digitally Mediated Community"
- 2007 Margaret Mead Film Festival. Moderator & Presenter on the panel, "The Machine is Us/ing Us" (named after my video of the same name.) American Museum of Natural History. New York, NY.
- 2006 Co-organizer for a double session titled "Beyond E-Text: The Challenges and Possibilities of Digital Ethnographies" with Shelly Errington of UC- Santa Cruz. November 2006 in San Jose, CA. Presented a paper titled, "What Phantoms are Lurking in Hypermedia 2.0"
- 2005 Co-organizer for a double session titled "Witnessing Witchcraft: Quandaries of Engagement" with Tom Strong of Princeton University. December 2005 in Washington DC. Presented a paper titled, "Quandaries of Engagement: A New Guinea Example"
- 2005 Invited panelist for "Oh What a Blow That Carpenter Gave Me!" a retrospective on the effects of Edmund Carpenter's scholarship on Media Ecology. The 6th Annual Convention of the Media Ecology Association. New York City. June 25th 2005.
- 2005 "That Phantom Still Lurking: The Effects of Media on Central New Guinea 35 Years after Carpenter." Visual Cultures Conference. Kansas State University.
- 2003 "Operation Clean & Sweep: Neo-colonialism in New Guinea. With ethnographer commentary on the ethics of participation." Graduate Association for Visual Anthropologists. Visual Cultures conference. Chicago, IL, November 21 2003.

- 2003 "Witch Nation? 141 degrees, 30 seconds, and the Power of Measurement in the National Order of Things." Invited presentation at the Cosmos Club, Washington DC. November 15, 2003.
- 2003 "Of States & Sorcery: Making Groups in New Guinea." Presented at the Melanesian and Pacific Studies Center, Waigani, Papua New Guinea. August 25th 2003.
- 2001 "Hypermedia's Greatest Potential (Dilemma): Preserving and Presenting Creativity" Presented at GAVA Futures Conference, Smithsonian Institution, Washington DC, November 2001. On-line at <http://www.people.virginia.edu/~mlw5k> under "Theses"
- 2001 "Epistemological Tourism: Pragmatics and Paradox in Mountain Ok." Co-presented with Roy Wagner. April 6, 2001. University of Virginia Pro-Seminar.
- 2000 "Schizmogenesis in the Oeuvres of Frankie Avalon" A tribute to Roy Wagner co-authored with Peter Metcalf. Presented at the American Anthropological Association Meetings in San Francisco, November 17, 2000, in the panel, "Twenty-five Years after 'The Invention of Culture': A Critical Retrospective," organized by David Murray and Joel Robbins.

Especially Notable Invited Keynotes and Plenary Presentations

- 2009 (Re)Mixed Messages. Pop!Tech. October 24th. Camden Maine. *Pop!Tech brings together about 2 dozen scientists, artists, and thinkers from all fields to share their latest insights and innovations in a series of 15 minute presentations (much like TED). According to Time Magazine's Hero of the Planet, Geoffry Ballard, PopTech is "the single best conference about new ideas I have ever attended."*
- 2009 "The Machine is (Changing) Us: YouTube and the Politics of Authenticity." Personal Democracy Forum 2009 Keynote Presentation (40 minutes). June 30th. Jazz at Lincoln Center in New York City. Over 1,000 in attendance. Received standing ovation. *The Personal Democracy Forum brings scholars together with some of the most important people in politics and government. For example, my presentation followed that of Alec Ross, Chief of Innovation for Secretary of State Hillary Clinton, and Vivek Kundra, Federal Chief Information Officer for President Barack Obama.*
- 2009 "From Knowledgeable to Knowledge-able: Learning in New Media Environments" January 20th. Educause Learning Initiatives Conference Keynote. Orlando Florida. *The Educause Learning Initiatives Conference is widely considered to be one of the most important Educational Technology conferences in the nation.*

Other Major Keynotes and Plenary Presentations

The following schedule lists the keynotes I have given. At each event I gave one or more of the following presentations:

"From Knowledgeable to Knowledge-able: Learning in New Media Environments"

an argument for changing the format of classes to practice knowledge skills necessary for new media environments

“The Crisis of Significance and the Future of Higher Education”

a cultural analysis of the current state of Higher Ed and how we can create a better future

<http://hosted.mediasite.com/flash/ELI/HumanFuturesforTechnologyandEducation/>

“A Portal to Media Literacy”

a demonstration of how various “Web 2.0” technologies can be harnessed in the classroom in a way to help students harness and leverage the web themselves

<http://www.youtube.com/watch?v=J4yApagnr0s>

“Mediated Culture: Lessons from New Guinea for New Media”

a cultural analysis of the impact of writing in New Guinea and what we can learn from this as we think about the impact of the Web on global society

International

- 06/24/10 The Society for Teaching and Learning in Higher Education. Toronto, Canada.
- 10/21/09 PopTech 2009. Camden, Maine.
- 09/08/09 Association for Learning and Technology Conference Keynote. Manchester, UK.
- 05/15/09 La Ciencia y Web 2.0. Universidad del Sagrado Corazón. Puerto Rico
- 12/4/08 Online Educa Berlin. Berlin, Germany. World's largest e-learning conference.
- 11/28/08 Nati Digitali Conference. Rome, Italy.
- 10/16/08 Pro*Voke: Inspirar, Liderar, Innovar. Madrid, Spain.
- 8/11/08 World Education Conference. Las Vegas, Nevada. (presented with 3 former students)
- 5/2/08 Nordic Executives Summit. Monaco.
- 3/28/08 Education 2.0 Sponsored by Google Russia. Moscow. (delivered via web video)

National

- 07/15/10 Building Learning Communities 2010, Boston, Massachusetts.
- 03/06/10 TEDxNYED (special TEDx event on education)
- 02/18/10 CHAT Festival (HASTAC), University of North Carolina
- 11/20/09 Lilly Conference
- 03/20/09 Information Architecture Summit. Memphis, Tennessee.
- 01/20/09 Educause Learning Initiatives Conference. Orlando Florida.
- 10/19/08 The League Conference on Information Technology. Salt Lake City, Utah.
- 4/4/08 National Institute for Technology and Education Summit Keynote, San Francisco.

- 1/29/08 Educause Learning Initiatives Conference. San Antonio, Texas.
- 10/4/07 IDEA conference. New York, NY.
- 6/12/07 Educause Summer Summit on the Tower and the Cloud. Boulder, Colorado.
- 4/17/07 Web 2.0 Expo UnConference. San Fransisco, CA.

Universities & Colleges

- 01/12/10 University of Saskatoon and the University of Regina (Canada)
- 10/02/09 Saint Louis University
- 05/18/09 Georgetown University.
- 03/30/09 Middle Tennessee State University.
- 9/11/08 New Times, New Pedagogies Conference. Virginia Tech University.
- 8/21/08 Innovation in Instruction Conference. Elon University, North Carolina.
- 6/17/08 University of Manitoba
- 5/13/08 Maricopa Teaching & Learning with Technology Conference. Tempe, Arizona.
- 10/18/07 University of St. Thomas. St. Paul, Minnesota.

Regional

- 03/23/09 Wisconsin Educational Media & Technology Association. Madison, Wisconsin.
- 03/02/09 Learning, Libraries, and Technology Conference. Columbus, Ohio.
- 5/21/08 Minnesota e-Learning Summit. Bloomington, Minnesota.
- 4/11/08 Northeast Media Literacy Conference at the University of Connecticut
- 5/07/07 WiscNet Futures Conference. Madison, Wisconsin

University Administrators and Educational Technology User Groups

- 7/20/09 Society for College and University Planning Annual Conference. Portland, Oregon.
- 7/13/09 FUSION 2009 (Desire2Learn Users Conference). St Paul, Minnesota.
- 04/15/09 CiTE 2009. Denver, Colorado.
- 04/08/09 Wimba Connect Conference. Scottsdale, Arizona.
- 03/16/09 It's Learning Conference. Bergen, Norway.
- 10/6/08 Big 12 CIO Conference. Manhattan, KS.
- 7/16/08 Association for ICT Professionals in Higher Education. Las Vegas, Nevada.
- 7/13/08 Blackboard Developers Conference. Las Vegas, Nevada.
- 6/16/08 Canadian Association of University Business Officers. Winnipeg, Canada.

4/13/08 SunGard Summit. Anaheim, California.
3/8/08 DataTel CIO Executive Forum. Washington DC.
2/29/08 CAMEX. San Antonio, Texas.
10/23/07 Educause CIO Annual Meeting. Seattle, Washington.

Local

11/09/09 Kansas State University Board of Trustees annual gala dinner.
11/17/09 Principals & Counselors College Conference. Union Ballroom.
10/20/09 K-State Research and Extension Annual Conference. Forum Hall.
10/31/08 Special Presentation for Provost and multiple campus organizations, Kansas State
8/8/08 Garden City Community College Annual Inservice. Garden City, Kansas.
3/6/08 Mid-America Computers in Education Conference. Manhattan, KS.

Service-Oriented

6/01/09 Plenary presentation to K-18 teachers as part of the College of Education's "Equity & Access Project" (\$500 donated to Digital Ethnography)
6/17/09 Eastern Association of Colleges and Employers. Buffalo, New York.
6/12/09 National Association of Colleges and Employers. Las Vegas, Nevada.
6/25/08 eXtension Annual Conference for University Extension Officers. Lexington, Kentucky.

Selected Media Coverage

Sunflower Journeys segment on our my work and Digital Ethnography at KSU. Aired on KTWU/Channel 11. Episode #2201.

“Anthropologist Wows Personal Democracy Forum. Whatever.” Wired News. June 30th 2009.

<http://www.wired.com/epicenter/2009/06/anthropologist-wows-personal-democracy-forum-whatever/>

“All About You(Tube)” CBS Sunday Morning (interview & several portions of videos I created

were featured) <http://www.youtube.com/watch?v=i1LrAPPNsSg>

“When College Students Reinvent the World.” by Stacy Teicher Khadaroo. Christian Science Monitor, January 12th 2009 Edition.

<http://features.csmonitor.com/backstory/2009/01/12/when-college-students-reinvent-the-world/>

“K-State prof Michael Wesch: World Wide Wonder” by CJ Janovy, Kansas City Pitch.

December 11th 2008 http://blogs.pitch.com/plog/2008/12/catching_up_on_snooty_east.php

“OurTube” by David Byrne in Moments that Mattered. New York Times Magazine. November 21st 2008

http://www.nytimes.com/2008/11/23/magazine/23Favoritest.html?_r=3&pagewanted=3&ei=5070&emc=eta1

“Top Profs” by Jack Stripling, Inside Higher Ed. November 20th 2008.

<http://www.insidehighered.com/index.php/news/2008/11/20/profs>

“Professor wins national award for innovative teaching” by former student, Katie Morford.

K-State Collegian. December 2nd 2008. <http://www.kstatecollegian.com/1.1042252>

“Anthropology Professor, Now a YouTube Star, Says Web Video Can Help People Craft Their Identities” The Chronicle of Higher Education. June 25th 2008.

<http://chronicle.com/wiredcampus/index.php?id=3116>

“Michael Wesch: Toward an Ethnography of YouTube.” PBS Mediashift Idea Lab. February 8th 2008.

<http://www.pbs.org/idealab/2008/02/michael-wesch-toward-an-ethnog.html>

“Webscape: Mediatedcultures.net.” BBC News / Click January 11th 2008.

Transcript: http://news.bbc.co.uk/2/low/programmes/click_online/7181239.stm

“Information R/evolution”, la vidéo qui explique comment les internautes s'emparent de l'information” Telerama (French). November 26th 2007.

<http://www.telerama.fr/techno/22087->

information_evolution_la_video_qui_explique_comment_les_internautes_emparent_de_information.php

“The Machine is Using Us” Future Tense. (American Public Media) October 25th 2007.

Podcast: <http://www.publicradio.org/columns/futuretense/2007/10/25.shtml>

“An Anthropologist Explores the Culture of Video Blogging” Video and text by Jeffrey

Young. May 7th 2007. Text: <http://chronicle.com/weekly/v53/i36/36a04201.htm>

Video: <http://chronicle.com/media/video/v53/i36/youtube/>

“The Explainer” Wired Magazine April 24th 2007.

http://www.wired.com/culture/lifestyle/multimedia/2007/04/ss_raves?slide=14

“V 14 dneh od profesorja antropologije do najprodornejše zgodbe s področja Web 2.0”

Extensive Interview by Violeta Bulc, Dnevnik (Croatian newspaper) March 22nd 2007.

<http://www.dnevnik.si/novice/tehnologije/235638/>

“Leben 2.0 Wir Sind Das Netz.” Der Spiegel. Spiegel Special NR.3/2007 pages 2-3.

“Tech Tops the Pop Charts.” By David Margulius InfoWorld March 15th 2007.

http://www.infoworld.com/article/07/03/15/12OPentinsight_1.html

“YouTube is a hit in K-State classroom, world.” 49 ABC News (TV segment and text). Feb 15th 2007.

http://www.ktka.com/news/2007/feb/15/kstate_professor_goes_hightech_instill_appreciatio/

In addition, more than 20,000 blogs have published material on my research and teaching, including the following which are read by more people than USA Today or the LA Times:

BoingBoing, Engadget, Gizmodo, Zdnet, and TechCrunch

Appendix H - Observation Protocol

Introduction to Anthropology

Fall 2008

Areas of Instruction

- Teacher instruction: facilitator or dictator
- Teacher interactions with students
- Student involvement
- Interaction among students
- The project
- Collaboration
- Are student asking questions?
- Are students involved with other activities that are not related to the class?
- Are students disruptive?
- How does the teacher handle disruption?
- Do students ask questions?
- Do students take notes?

PBL

- Is the driving question of the project clear?
- What types of questions do students ask the teacher?
- How do students do research and use library resources?

- How do students use online resources?
- Do students relate their topic to the real life situations?
- Do students take charge of their project?
- How do students interact with each other during face-to-face discussions?
- What are the assessments?
- How does the professor and TA assess students?
- How do the professor and TA view assessment?

Appendix I - Professor Interview Protocol

Sample Interview Questions Introduction to Anthropology Fall 2008

Part 1. Professor Questions: Research Question #1 –

A. PBL and Large Undergraduate Class

1. When did you first teach a large undergraduate class?
2. Were you nervous?
3. Why?
4. How large was the class?
5. Did you use the project? When did you use the project approach?
6. During your lectures, it seems that an overwhelming majority of your students are paying attention. What gets their attention?
7. What impact does sharing of the World Simulation on Youtube has on the students?
8. What do students learn?
9. How do you work with your Teacher Assistants? Describe the process.

B. PBL

1. Why did you choose to have a project in your class?
2. How project activities are are planned for your students?
3. What are the main characteristics of the project for each of your groups?
4. How do your students react to your project?

5. Why did you decide to have your students to do a project – to create a culture?
What prompted you to have your students create culture?
6. What do you expect them to learn through this project?
7. What are the challenges that your students face when they are asked to work in a collaborative project?
8. How do they overcome these challenges?
9. In what ways has the project improve your student's learning outcomes?
10. What challenges do you and your students frequently encounter while doing the project?
11. How do you assess your students' project?

C. PBL Elements

1. Why did you have students undertake (driving question) the World Simulation? What was your main question or area that you wanted students to understand?
2. Why did you have students construct the culture, and what role do the props have for you, in terms of their learning?
3. What do you see your role as a teacher in this class?
4. How and why do you evaluate student work? What is the purpose of the evaluation and how does it relate to the final project, the World Simulation?
5. Describe assessment practices and grading.

Part 2. Professor Questions: Research Question #2 - Technology Use

1. What technology tools do you use during your lectures in the class? We will discuss your online stuff later. Tell me what technologies are at the instructor's podium and what do they do?
2. I have observed that you are not using PowerPoint presentation tool. Why?

3. In PowerPoint, the key points are decided by the instructor or teacher. What is wrong with that?
4. According Hird, today's students are more "tech savvy" than the teachers. Why do you use technology, in general, in your classes, and why do you use emerging technologies, in particular?
5. How and why do you decide to use a particular internet tool for teaching purposes?
6. What characteristics do you look for in an internet tool for teaching?
7. What role to students play in the selection of an internet tool, or other technologies you use in your class?
8. How do you organize all the different web tools you use in your class?
9. What contribution(s) do you see technology making in terms of student learning?
10. To what extent do you see active learning in your course as a result of using technology?
11. Does your use of technology motivate students to learn more, or is it just the novelty that propels their use? Can you explain how technology can be used aid in collaboration, communication, or other means of enhancing instruction?
12. Do you think that technology enhances learning through social collaboration? Should it?
13. Why do you use technology in teaching?

Appendix J - Student Interview Protocol

Student Semi-Structured Interview Introduction to Anthropology

Fall 2008

Name: _____ Date: _____

Background and Goal

Student Goals/Purpose of taking Introduction to Anthropology

- Why are you taking Introduction to Anthropology?
- Was there something about this course that stood out for you?

Educational and Work Background:

- What is your educational background?
- What is your work background?

Educational Experience

- How do you learn best?
- How did you come to this understanding?

Teaching Strategies in this Course

- How does your experience in this course compare to the previous or other courses?
- What is the difference in the teaching of this class and class you have had previously or other classes?

Project Focus

- Describe your project.
- Describe your team.
- What did you like most about your project?
- What were the challenges in the project?

Assessment

- Describe assessment practices and grading

The interview will continue with probing questions.

Appendix K - Student Follow up Questions

1. What happened to your culture during the simulation?
2. Now that you have had time to reflect on what happened, how do you think your culture would have changed throughout the simulation and what do you think might have happened to your culture if we were to continue the simulation further?
3. What correlations did you see between occurrences in the real world and what happened to your culture?
4. You had to relate your part with other parts of you culture. How did you collaborate with your team members? What were the challenges, and how did overcome those challenges?

Appendix L - World Map



Appendix M - Table of themes

		Theme	Unit	Total
Student Construction of an Artifact	TAs	Critical Thinking		
		Creativity		
		Interconnectedness		6
Student Construction of an Artifact	Students	Researching and Creating Cultures		
		Group Communication		
		Cultural Self-Determination		
		Working in a Group		24
Question 1.2.1: Culture Artifact Construction for World Simulation	TAs	Authentic Learning	4	
		Empathy	8	
		Hegemony	3	55
World Simulation – Authentic Learning	TAs	Vicarious Experience		
		Contextualization		
		Role Play		
		Working in a Group		24
World Simulation – Authentic Learning	TAs	Genocide		
		Cultural Loss		
		Starvation		18
		Economy		
		Agriculture		
		Industry		13
Research Question 1.2.3: Culture Artifact Construction for World Simulation	Students	Hegemony	7	
		Survival	7	
		Authentic Learning	2	56
Research Question 1.3: Teacher’s Role	TAs	Collaboration		
		TA Class Ownership		11
Research Question 1.3: Teacher’s Role	Students	Real-world connection	2	
		Connections to Student’s		

		Theme	Unit	Total
		Personal Life		
		Sense of Ownership of the Class/Project – Learning		
		Interdependence		
		Compassion		26
Research Question 1.4: Assessment	TAs	Engagement		
		Class Ownership		9
Research Question 1.4: Assessment	Students	Connectedness		
		Interdependence		
		Engagement		9
Research Question 2: How Technology Is Used to Support PBL?	Professor	Advanced Technology Use		
		Technology Exploration		13
Research Question 2: How Technology Is Used to Support PBL?	TAs	Student Course Technology Acquisition	6	
		Professor Course Advanced Technologies Use		33
Research Question 2: How Technology Is Used to Support PBL?	Students	Professor Lecture Technology	2	
		Advanced Course Technology Use	9	61
		Total		358