CREATING ENGAGED LEARNING ENVIRONMENTS

Rhonda Rhodes, College of Business Administration, California State Polytechnic University, Pomona, 3801 West Temple Avenue, Pomona, CA 91768, 951.741.4618, rrhodes@cpp.edu

ABSTRACT

The 21st century has arrived, but most university classrooms are still in the dark ages. Research indicates that student engagement is one benchmark for success in today's university. This study investigated creating engaged learning environments in a university setting. An inductive research methodology which develops theory rather than a deductive methodology which tests existing theories was used. Constant comparative analysis of the data lead to the emergence of conceptual concepts/theories. The concepts/theories for Creating Engaged Learning Environments included: learning strategies, virtual and physical spaces, technology, support, learners and facilitators. Specific themes in each theory were listed.

INTRODUCTION

The calendar confirms it, we are well into the 21st century -- the digital age, but our university classrooms shout OLD SCHOOL. In an age of Facebook, Amazon, Alexa, Twitter, online collaboration and rapid technological change, the world of chalkboards simply won't meet the demands of today let, alone tomorrow [14]. The National Teaching and Learning Forum described how research on human attention and retention reports against the value of long lectures. Students focus most effectively in intervals of 10 to 18 minutes, and any time over that amount significantly decreases the information they retain. Therefore, it is nearly impossible for today's students to absorb content that is delivered in a two or three-hour sessions [1]. Salman Khan [10] stated in the Education section of Time magazine: "if attention lasts 10 or 15 minutes while passively listening, it is questionable why valuable time in classrooms with teachers and peers should be devoted to lecture at all.

Increased student engagement and true integration of technology are important indicators of success in 21st century learning. In her summary of findings from a large, three-year research project in the United Kingdom, Thomas found that student engagement is so prominent in the literature because it unequivocally connects with student success [17]. Universities should provide students with a high-quality education and allow learners to discover new ways of getting information, transforming knowledge and constructing meaningful learning [13]. Traditional learning strategies are not successful for the emerging challenges of the technology age [2].

Studies show that well-designed learning environments play an important role in motivating students [18] [3] [8][4]. However, many of today's educators still lack the understanding of the appropriate technologies and techniques that best support students' needs and engage the learners [11] [16] [5].

While it has become increasingly clear that 'success' means helping all students to become more engaged learners in higher education, thus improving their academic outcomes and their progression opportunities after graduation. What is not increasingly clear is what we need to do to engage our learners. What is the process? What are the tools and techniques? Who must be involved? What is needed for a complete Engaged Learning Environment? This study investigated Creating Engaged Learning Environments.

RESEARCH DESIGN

While the number of publications was great and the topics included were numerous, the understanding and clarity of the big picture about the engaged learner and the creation of an engaged learning environment is minimal if not non-existent. Much of the literature is anecdotal and focuses on faculty or programs challenges of design and implementation [12].

Because of this initial lack of clarity and cohesion about engaged learning and creating the engaged learning environment, an inductive research methodology--grounded theory--was selected as most appropriate. Kahu [9] states, "The use of in-depth qualitative methodologies is recommended to capture the diversity of experience." Grounded theory *develops* theories that are *grounded* in the data rather than *testing* existing theories. It follows a set of rigorous research procedures leading to the emergence of conceptual categories/theories [6].
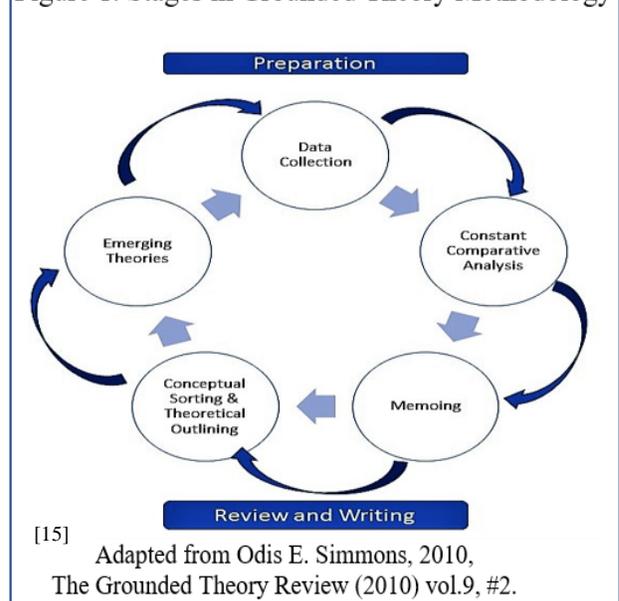
The stages of Grounded Theory are Preparation, Data Collection, Constant Comparative Analysis (CCA), Memoing, Conceptual Sorting, Theoretical Outlining, identifying Emerging Theories, and Review and Writing. Figure 1 shows the process of Grounded Theory. The arrows and curved arrows indicate that the steps overlap and are ongoing until theories emerge and no new data is discovered (data saturation).

Data Collection. Grounded Theory encourages data collection from both primary and secondary sources. Interviews, questionnaires, surveys, participant observations, focus groups, case studies, documents, records, publications, social networking, and information from a digital learning institute constituted the first round of data collection. Initial analysis determines where to go and what to look for next. Analysis and collection continually inform one another.

Constant Comparative Analysis (CCA) required relating data to ideas, then ideas to other ideas and codes, and finally how these codes relate. The constant comparative method is a process in which any newly collected data is compared with previous data. This is a continuous ongoing procedure, because theories are formed, enhanced, confirmed, or even discounted as a result of any new data that emerges from the study.

Figure 1. Stages in Grounded Theory Methodology

[15]
Adapted from Odis E. Simmons, 2010,
The Grounded Theory Review (2010) vol.9, #2.

At the end of these processes, you will have produced a set of theoretical propositions. During the comparative analysis stage, the following questions are kept in mind. What is the data a study of? What category does this incident indicate? What is happening in the data? Everything must have relevance and fit to be coded.

Memoing. Memos are used for the theorizing write-up of ideas about codes and their relationships. Data collection, constant comparative analysis, conceptual sorting, theoretical outlining, and memoing overlap and are ongoing until no new data is discovered and data saturation is achieved.

Conceptual Sorting and Theoretical Outlining. Conceptual sorting of memos into an outline of the emergent theory, showed the relationships between concepts. After conceptual sorting, theoretical outlining identified the emerging patterns.

Writing. The completed conceptual sorting and theoretical outlining constituted the first draft of Creating Engaged Learning Environments. The research was then refined and polished into a final paper.

Independent Review. A person with experience in grounded theory methodology reviewed all the research papers and notes. The review helped insure that the series of systematic, exact methods of Grounded Theory research were executed and to confirm that the process was completed accurately.

FINDINGS

During Constant Comparative Analysis, data were reviewed and coded, producing over 240 codes. Selective coding uncovered topics that captured the emerging theories in the data. The conceptual sorting of memos into an outline of the emergent theories showed distinct themes within each theory. Holme's [7] word stemmer, which prepares chunks of text for quantitative text analysis, was used. This tool cleans the text and stems the words using an algorithm.

Theories

The emergent theories were Strategies (pedagogy), Technology, Support, Space, Facilitator, and Learners. Each Theory along with its themes follow.
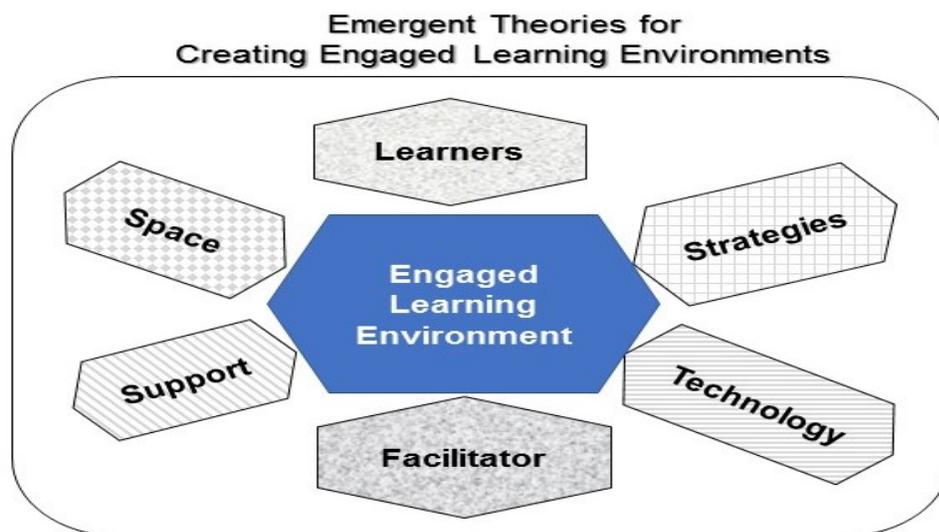

Figure 2 Emergent Theories for Creating Engaged Learning Environments

Strategies. The distinct and necessary themes for Learning Strategies are Course Design, Goals and Objectives, Traditional/ Hybrid/ Flipped/ Online, Tools and Techniques, Syllabus, and Assessment.

Technology. Research reports that engaged learning is not guaranteed by incorporating digital learning technologies… However, today's educators still lack the understanding of the appropriate technologies and techniques that best support students' needs and engage the learners [11] [16] [5].

At a minimum, the engaged learning environment includes computers, smart books or digital learning systems, mobile devices (that means cell phones in the classroom), learning management systems, class response systems and social media. Online collaboration tools, such as those in *Google Apps*, Presentation software (such as *PowerPoint*), Tablets can be linked to computers, projectors and the cloud so that students and instructors can communicate through text, drawings and diagrams. Course management tools such as *Canvas* allow instructors to organize all the resources students need for learners, Lecture-capture tools, such as *Panopto*, allow instructors to record lectures directly from their computer, without elaborate or additional classroom equipment.

Space—Virtual or Physical. The traditional classroom space does not lend itself well to engaged learning environments. The space must accommodate new technologies and new strategies. The themes that emerged from Space – Virtual/Physical were: presentations space, break out space, discussion areas, team/group areas, collaborative areas, cloud storage, wi fi access, appropriate software and appropriate hardware.


Support. Support for the engaged facilitator and the engaged student is critical, especially when the facilitator and learners are using new strategies. True engagement is a process that requires support from colleagues, departments, universities, faculty development, LMS technicians, campus technicians, publisher technicians, and financial assistance and time is needed for training. In addition, money for necessary materials, software, hardware and other items is essential.

Ideally, engagement will become a part of the institutions strategic plan. This plan should then cascade down to colleges, departments, faculty, information technology, and facilities. Each entities' strategic plan should include engagement.

Facilitators are an integral part in Creating an Engaged Learning Environment, just as they have been an integral part in every classroom. The themes that were revealed about facilitators in an engaged learning environment include the ability to change, show a great deal of enthusiasm, are student-centered, are willing to give up the traditional methods of teaching and use engaged learning strategies, and are willing to learn new methods.
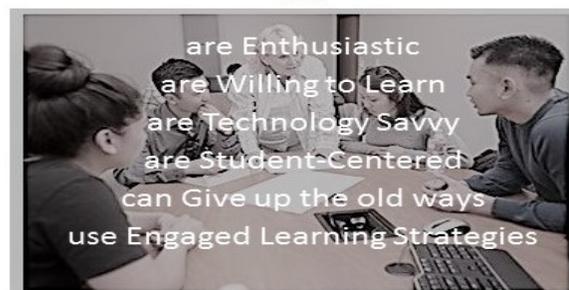
The engaged learning environment requires the "teacher" to become a "facilitator." The facilitator is not expected to just transfer knowledge to the learner, but find ways for the student to become engaged in their learning. Facilitators for engaged

learning should be enthusiastic, willing to learn, are technology savvy, are willing to change and give up the old ways, and use engaged learning strategies.

Learners in the Engaged Learning Environment must play an active role. Just as the strategies and facilitators of the traditional classroom must change, so must the learners. The facilitator cannot create an engaged learning environment alone. The learners can no longer sit passively in the classroom. The engaged learners must think, listen, question, seek help, participate collaborate, communicate, challenge ideas, exert their best effort, be technology savvy, be higher order thinkers, use Metacognitive strategies, be enthusiastic about learning, be responsible for their learning and show a sustained behavioral involvement in their classes. Learners will require information and training in order to become engaged learners.

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary. This study investigated creating engaged learning environments in a university setting. An inductive research methodology which develops theory rather than a deductive methodology which tests existing theories was used. Constant comparative analysis of the data lead to the emergence of conceptual concepts/theories. The concepts/theories for Creating Engaged Learning Environments included: learning strategies, virtual and physical spaces, technology, support, learners and facilitators. Specific themes in each theory were listed.

Conclusions. Institutions, learners, and facilitators do not just "become" engaged. The Engaged Learning Fairy does not wave a magic wand and poof you have engaged learning. True engagement is a process that requires ongoing learning from students, facilitators, colleagues, departments, universities. Twenty first century learning strategies and technology must be embedded throughout the university. Faculty development is critical. Learning Management Systems technicians, campus technicians, and publisher technicians must be an integral part of the engagement process. Financial assistance and time is needed for training. Technology must be constantly updated and requires ongoing funding. In addition, funding for necessary materials, software, hardware and other items is essential.

Engagement must become a part of the strategic plan for institutions. This plan should then cascade down to colleges, departments, faculty, information technology, and facilities. Each entities' strategic plan should include engagement. Ideally, engaged learning should be come part of our country's strategic plan.

Recommendations

- Now that theories exist that are grounded in data, these theories and themes need to be researched,
- A quantitative methodology should be used to test the theories,
- Much more hard research needs to be completed in this area,
- Don't wait for more research start "engaging" now.

Our educational system has needed updating for years. It is just the beginning…

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