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## **AN ANALYSIS UPON VARIOUS TEACHING STRATEGIES IN ONLINE EDUCATION**

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# An Analysis upon Various Teaching Strategies in Online Education

KM Larna Singh

Research Scholar, Mahatma Gandhi University, Meghalaya

**Abstract – Online teaching is increasingly common at many types of higher education institutions, ranging from hybrid courses that offer a combination of in-person and online instruction, to fully online experiences and distance learning. The following resources provide guidelines for creating an online course, best practices for teaching online, and strategies for assessing the quality of online education.**

**Online faculty need to engage the student. Online course work is now an integral element of mainstream. Online courses often lack face-to-face interaction, peer interaction, faculty feedback and the lack of community. Engagement of the learner is essential for learning and promoting student satisfaction. There are online teaching strategies that could enhance a student's perception of engagement.**

**With the growing awareness of the importance of teaching and learning in universities and the need to move towards evidence-based teaching, it behooves the professions to re-examine their educational research methodology. While the what, how and why of student learning have become more explicit, the professions still struggle to find valid methods of evaluating the explosion of new innovation in teaching/learning strategies. This paper discusses the problems inherent in applying traditional experimental design techniques to advances in educational practice.**

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## INTRODUCTION

In 1974, Regents External Degree was the first online program that was created in 1974, and many educators believed that distance-learning model was inappropriate for nursing education (Bastable, 2014). Distance learning (DL) has been utilized since the early 1990s, especially with the development of the Internet. In 2002, 1.6 million students took courses online across the United States. In 2003, the number of online course students rose to 1.97 million, succeeded by 2.33 in 2004, and in 2011 it was found that a third of all the students enrolled in postsecondary education had taken an accredited online course (Lederman, 2013). Online course work is now an integral element of mainstream higher education. About 63% of schools that offer undergraduate traditional classes also offer programs online (Olmstead, 2010). Nursing schools have also adapted to this mode of course delivery. According to American Association of College of Nursing, there is a current shortage of qualified nursing faculty and the number is expected to grow within the next decade. Online programs have allowed colleges to offer courses needed; however, schools still need qualified online faculty that can engage the student that will improve retention, satisfaction, and student outcomes.

Numerous educational agencies, from those that focus solely on online education, such as the Sloan Consortium, to the Institute for Higher Education Policy, have provided general guidelines and benchmarks for online education. In particular, the Sloan Consortium is nationally recognized as a resource for online education through its annual Sloan-C awards for programs and instructors that have made —outstanding contributions to the field of online learning. As a beginning to our discussion of best practice online teaching strategies, we profile one of the winners of the Sloan Consortium's *Award for Excellence in Online Teaching* as a case study example of recommended teaching strategies in action.

In 2003, the Consortium presented Bill Pelz, a Professor of Psychology at Herkimer County Community College, with the award. Pelz shared his three —Principles of Effective Online Pedagogy in a 2004 report.

Pelz's first principle is to —let the students do (most of) the work.17 As he asserts, —the more 'quality' time students spend engaged in content, the more of that content they learn.18 Pelz provides specific examples of activities for which the students do the work while the professor provides support:8

- Student Led Discussions
- Students Find and Discuss Web Resources
- Students Help Each Other Learn (Peer Assistance)
- Students Grade Their Own Homework Assignments
- Case Study Analysis

The second principle is that “[i]nteractivity is the heart and soul of effective asynchronous learning,” but Pelz stresses that interaction must stretch beyond simple student discussion.

Pelz’s final principle is to —strive for presence. According to Pelz, there are three forms of presence for which to strive in online learning environments: Social Presence, Cognitive Presence, or Teaching Presence.

Interestingly, these three principles: (1) engage student in content, (2) promote student-teacher and student-student interaction, and (3) strive for presence, are also found in literature regarding benchmarks and recommendations for successful online teaching. For instance, the Institute for Higher Education Policy’s 2000 report of benchmarks for successful online education emphasizes interaction and engagement in its best practices for online teaching/learning and course development:

#### *Online Teaching/Learning Benchmarks -*

- Student interaction with faculty and other students is an essential characteristic and is facilitated through a variety of ways, including voice-mail and/or e-mail.
- Feedback to student assignments and questions is constructive and provided in a timely manner.
- Students are instructed in the proper methods of effective research, including assessment of the validity of resources.

#### *Course Development Benchmarks -*

- Guidelines regarding minimum standards are used for course development, design, and delivery, while learning outcomes – not the availability of existing technology – determine the technology being used to deliver course content.
- Instructional materials are reviewed periodically to ensure they meet program standards.

- Courses are designed to require students to engage themselves in analysis, synthesis, and evaluation as part of their course and program requirements.

The most important factor affecting student learning is the teacher. Everyone understands, on a personal level, the importance of teachers to their educational success. Teachers who know their subject, understand how to teach and can adjust their teaching to student needs will be successful in raising student achievement, research shows. Teacher expectations also are a significant factor in how much and how well students learn.

Online learning provides the opportunity for every middle grades and high school student, regardless of where he or she lives or attends school, to have access to a quality teacher. Many of these students benefit by being challenged academically by an online teacher who, in some cases, possesses stronger academic credentials and essential teaching skills than traditional classroom staff, especially in certain geographic and subject-shortage areas. Access to quality online teaching can result in improved student academic performance and increased course completion rates.

Quality online teaching reflects the attributes of any effective teaching, whether in the traditional classroom or online. Both traditional classroom teachers and online teachers need to know their subjects and how to teach them. They also must know their students, stay up to date in their subject areas, and manage and monitor students’ academic progress to ensure success.

But in the 10 years since Web-based courses were first made available to students, the understanding of what is required to be a successful online teacher has increased significantly. The technology used to access and provide Web-based courses effectively also has improved. Now it is important to re-examine what qualifications are needed to be an effective online teacher.

Equally important is an understanding of the attributes of today’s students, who have access to and can use technology to pursue opportunities and information never before available to them. For many students, this access has changed the way they see the world and the way they work and play. Consideration of these student issues is critical for a teacher to be effective.

## **ONLINE TEACHING STRATEGIES**

Educator’s role is to facilitate online discussions and providing structure. Learning outcomes for the student is essential. There are online teaching strategies that could enhance a student’s perception of engagement, increase retention, and satisfaction.

- Open the course at least one week prior to traditional classes starting.
- Post a brief introduction of yourself, with a current picture.
- Provide links.
- Discussions should be weekly, informal or formal.
- Use rubrics for grading online discussions and assignments.
- Provide syllabus, course schedule, and your expectations of the student.
- Online office hours.
- Provide the student with campus office hours and your email.

The above strategies is found in many different articles, however the above is also based on this educator's personal experience with the peer review process for online courses. By opening the course at least one week prior to regular classes starting, allows the student ample time to review the setup of the online course. The course needs to be complete with a course syllabus, schedule with assignment due dates, and a grading rubric. If learners have positive perceptions of their interactions with the technological tools of the learning environment, it is likely that they will also have positive perceptions of their interactions with faculty and other learners (Arbaugh & Rau, 2007). By posting a brief introduction of yourself, just like what you would state in your classroom and a picture(s) will also provide the student with a visual connection. Encourage the students to post their picture in the discussion forum. Pictures allow the student to have "face-to-face" interaction and promote the sense of community. Students should also introduce themselves and post a peer response. Include links that you will be referring to such as library, research, journals, and even videos. The book for the course can also be linked to the college bookstore, with a picture. Discussions should be weekly or chat rooms with peer posts that allow faculty feedback to promote the community and to facilitate learning. Using online office hours, posting traditional office hours, and contact information such as email, telephone number or even Skype information will enhance the student's learning perceptive. Faculty should also be complainant with American Disabilities Act (ADA) by using voice over power points to engage the hearing-impaired student.

## **ACTIVE LEARNING INTO ONLINE TEACHING**

What is active learning? Bonwell and Eison describe active learning strategies as those that involve "students in doing things and (have the students) think about the things they are doing". Active learning is a key element in the learning process and most adult learning models view interaction (active learning) as a crucial component.

In an effective learning environment that incorporates active learning strategies, "greater emphasis is placed on students exploration of their own meaning, attitudes, and values". However, a mistaken view many educators have is that learning is an active process and as such, all learning is active, even the most commonly used form of instruction, the passive lecture. In an active learning environment, "less emphasis is placed on transmitting information (teacher-centered) and more on developing students' skills (student-centered)".

Active learning is not only an effective instructional strategy in the traditional learning environment, but also, it is effective in an online environment. Instructors/designers must continue to design activities that support learning objectives, but structure them to work online, outside of the traditional classroom environment where active learning techniques are heavily dependent upon face to-face interaction (e.g., discussion, group work, role-play). For example, consideration must be given to the fact that instructor and learners may not be in the same place at the same time (asynchronous) to interact whereby relying on instructional technologies as part of the interactive learning process. However, the online environment can sometimes be a more favorable learning environment for students in that all have equal opportunity to participate, share thoughts and develop ideas over periods of time. Students' expressions are not limited by the class size, which are called upon, or time allotted to participate.

Why active learning? Succinctly stated, "active participation strengthens learning" regardless of environment. Active learning requires "intellectual effort, encouraging higher-order thinking (analysis, synthesis, evaluation)" and provides a means for the learner to assimilate, apply, and retain learning. Strategies promoting active learning are superior to passive learning (lectures) in promoting the development of student's skills in thinking and writing. Active learning accommodates a variety of learning styles, promotes student achievement, enhances learner motivation, changes student attitudes, and basically, causes learners to learn more. Bonwell and Eison contend that from a preference perspective, students (generally) prefer strategies promoting

active learning to traditional lectures and other passive methodologies (1991).

Active learning empowers students to take primary responsibility for their education (student-centered), although requiring faculty to relinquish some control to the student to encourage their learning path. What are appropriate active learning strategies for an online environment? Designing instructional strategies (traditional or online) to engage learners is challenging. Traditional strategies must be adapted and/or new strategies developed for the online learning environment. Widely used effective active learning strategies such as group work or role-play can even be successfully adapted for an online environment. When developing active learning strategies for an online environment, the instructor/designer should first consider sound design practices including, but not limited to: assessing the learners, knowing the context and environment in which learners will be operating, knowing instructional tools and techniques for delivery, developing supporting strategies in the form of directions and resources, incorporating assessment of learning outcomes and course design, and designing with active engagement in mind.

Starting from a basic instructional design model and continuing good teaching practices are important because according to Moore and Kearsley, "active learning is probably not going to happen in an online environment unless the interaction is deliberately planned and the instructor encourages it" (1999).

Components of good active learning activities are the same, whether presented in traditional or in online environments. Activities should 1) have a definite beginning and ending; 2) have a clear purpose or objective; 3) contain complete and understandable directions; 4) have a feedback mechanism; and 5) and include a description of the technology or tool being used in the exercise.

When using traditional active learning strategies, instructors/designers will want to consider the following: Can learners complete the activity independently? Will they need specific guidance before or during the activity? Will visuals or other materials be needed? Will they need to collaborate with other learners? How do the learners ask questions? Will there be formative or summative evaluation? What tools will be available to support the activity, including technology, resources, and examples? Should different strategies and tools that provide multiple ways of experiencing learning?

In summary, active learning strategies are effective in engaging learners and assisting them in creating their own learning experiences. Models and tested strategies can help instructors/designers (novice and experienced) develop new activities to engage learners in the online environment. It is the instructor's (designer's) responsibility to develop an environment

that supports active learning strategies and methods to enhance learning and support the learning objectives.

## BEST EVIDENCE

In an attempt to follow the current trend of evidence based medicine, educational bodies are concerned with building a body of best evidence in medical education (BEME). A meeting in London was held in 1999 highlighting the need for evidencebased teaching. Although this initiative is in the medical field, successful strategies could well be extended into the dental field. Hart and Harden identified six steps in the practice of evidence-based teaching: framing the question, developing a search strategy, producing the raw data, evaluating the evidence, implementing change and evaluating it. This group is working to provide guidelines for educational research. However, it is increasingly evident that synthesizing and reviewing evidence is a complex matter. Searching databases using the descriptors 'education' and 'evidence-based' yields few articles on the concept of best evidence medical education. This has led to a suggestion that BEME be renamed BEAME (best evidence *available* in medical education). Even with this proviso, it is difficult to see how the new goals are to be accomplished.

The difficulty of evaluating any educational philosophy in a scientific manner is highlighted by the many different methodologies used in attempts to prove the efficacy of problem based learning (PBL) as a lifelong learning resource.

## ARTICULATING TEACHING STRATEGIES

Teaching is one of the main roles of an academic and often takes up to half of the allocated time in their workload. This time includes not only the face-to-face tutorials and lectures, but also time spent in preparing classes, marking and student consultation. Importantly, every academic has favourite teaching strategies which they use to promote student learning in many different ways. But discussions between academics at university mainly focus on sharing ideas for research. Rarely is there dedicated time to sharing ideas about teaching except for the targeted workshops run on campus or in the occasional incidental conversation.

Importantly, many of these strategies to promote student learning in lectures, tutorials or assignments are not found in books. Instead, they have been developed from personal experience in teaching or are a feature of lecturer's intuitive skills and/or personality. A strategy, therefore, has a unit of analysis or focus as an idea or technique to present material or interact with students in a lecture or tutorial. For the purposes of developing the web site, a teaching strategy was defined in this way:

- is either a short-term strategy or the activities of a comprehensive learning environment that



assist students in developing one or more features of a graduate attribute;

- can be used in a lecture, tutorial, assignment or a combination;
- is NOT the description of a whole subject design, a collection of assignments or an overall subject structure.

Theoretically, a teaching strategy is the *practical* or *tacit knowledge* of university teaching. A strategy is often personally developed and is usually refined over several teaching episodes or even semesters of teaching through experience and reflection upon experience. Sometimes a teaching strategy is not clearly defined, but rather is implicit in the 'art' of teaching. Elbaz (1993, 2001) was one of the first educational researchers to write about the notion of practical knowledge. In teaching, she described this as: "first hand experiences of students" learning styles, interests, needs, strengths and difficulties, and a repertoire of instructional techniques and classroom management skills" (Elbaz, 1993). This practical knowledge can cover such areas as knowledge about the self, milieu, subject matter, curriculum and instruction. Others, such as Schön (1993, 1997) suggested that practical knowledge is not explicit in teaching, but rather is embedded in "the epistemology of practice" in terms of what works or does not work in the context of action or experience of teaching. Later, Shulman (1997) identified different types of knowledge in teaching such as content knowledge, pedagogical knowledge, curriculum knowledge, pedagogical content knowledge, knowledge of learners and their characteristics, knowledge of educational contexts, and knowledge of educational ends. In the collection of teaching strategies for the website, some academics were readily able to articulate their practical knowledge, whilst others were interviewed by team members to make the implicit more explicit.

## CONCLUSION

The roles instructors play in facilitating productive online discussions can include managerial, social, pedagogical, and technical. Educating our students via online format is expected in many colleges today. Educators need to take the time to develop courses that utilize the most current technology that enhances the students learning. By following teaching strategies, this will enhance the online learning environment and provide student engagement, retention, and satisfaction will increase.

Further research on this topic is recommended, in the hopes of more findings that could bear witness to the importance of immediacy and interaction in online courses, be it teacher-student, studentteacher or student-student, in order to achieve higher academic

performance and motivation in distance education modality, which will surely keep developing further into the XXI century.

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