A NEW VISION: SMART EDUCATION AND E-LEARNING

(A Peer-reviewed Research Papers of
the Second International Conference of Teacher Educators)

Christian College of Education

Marthandam, Kanniyakumari District, Tamilnadu.

VOLUME - I

in co-ordination with

Estd. 1996

Kanniyakumari Academy of Arts and Sciences

(A Multi-Discipilinary Researchers' Forum)

KAAS Publications 2016
Nagarkovil

CULTIVATING CRITICAL THINKING IN E-LEARNING ENVIRONMENT

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ABSTRACT

E learning enabled classroom make students more active in the learning process. E learning integrated pedagogy fosters higher order thinking skills such as critical thinking. Critical thinking is the ability to discriminate, analyse and evaluate the given situation. The use of different learning approaches and along with the e learning environment nurture critical thinking of students. This paper presents the concepts of critical thinking and how e-learning environment cultivate critical thinking skill among students.

Keywords: E learning environment ,higher order skills, critical thinking

Introduction

E learning environment has produced a rich array of new visions in teaching and learning that makes individuals lifelong learners and prepares them for the 21st Century. It provides a re-conceptualisation of teaching and learning, and successfully prepare all learners with the skills and capacities for 21st century citizenship such as global awareness, creativity, critical thinking, collaboration, problem-solving, and self-directed learning. It creates a very interesting challenge and opportunity to reconsider, re-imagine, and re-invent learning environments able to prepare and excel each individual for effective life-long learning.

E-Learning

E-learning is a new educational concept by using the internet and technology tools that are web- based, for the purposes of education.

It facilitated and supported through the use of information and communication technology. It can cover a spectrum of activities from the use of technology to support learning as part of a 'blended' approach to learning that is delivered entirely through online. The term e-learning therefore essentially covers the use of computers and technology as a vehicle for knowledge exchange within teaching and learning. E-learning covers a wide set of applications of computer-assisted instruction, computer-based learning, virtual classroom, online learning, blended or hybrid, asynchronous and synchronous. Both the online and asynchronous approaches are self-directed and self-paced methods of learning that enable learners to increase knowledge and skills provided the learner is ready to learn. Blended or hybrid learning is a type of learning that is a mixture of face-to-face and online learning. The online portion of this learning can be delivered in various ways, such as online tutorials, documents, interactive tests, presentations, video, audio, animations and many other types of interactive media. Typically this approach involves approximately thirty percent of face-to-face classroom time combined with the remaining time spent online (Mitchell & Honore, 2007). They list the advantages of this type of learning are:

i. convenience
ii. increased interaction
iii. flexibility
iv. increased learning
v. higher retention
vi. reduced seat time
vii. higher order thinking
viii. problem solving
ix. collaboration
x. immediate reinforcement
xi. active learning
xii. self pacing
xiii. decreased costs

Critical Thinking

Critical thinking is an important and vital topic in the modern education. According to the Foundation of Critical thinking, 'Critical thinking is that mode of thinking about any subject, content, or problem in which the thinker improves the quality of his or her thinking by skilfully taking charge of the structures inherent in thinking and imposing intellectual standards upon them'(http://www.criticalthinking.org/articles/27thconf-keynote.cfm.). Ennis (1987) that explained critical thinking as "reasonable reflective thinking focused on deciding what to believe or do". Critical thinking is a type of a cognitive ability that has a special importance in decision making and judgment processes (Chartrand, Ishikawa, & Flander, 2009). The Center for Critical Thinking, 2004, (Mandernach, 2006) defines, "Critical thinking is the intellectually disciplines process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/ or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action". Michael Scriven and Richard Paul define critical thinking as the "intellectually disciplined process of actively and skilfully conceptualizing, applying, analyzing, synthesizing and evaluating information gathered from or generated by, observation, experience, reflection, reasoning and communication, as a guide to belief and action".

Critical Thinking in the e learning environment

The advent of e learning technology has permitted the learning to take place virtually, in an electronic, distant environment. This distant and electronic format poses more high-level learning (Saade & Bahli, 2005; Saade & Galloway, 2005). Weblogs, social networking (for example Facebook) and discussion forums as Web 2.0 tools have the potential to develop learner's critical thinking. Critical thinking is an important skill to foster in students engaged in the learning process, for both their professional and personal prosperity (Noll & Wilkins, 2002). Saade, R. G., et al.(2012) viewed that the virtual environment

enhances critical thinking through the integration of creative instructional strategies, constructivist learning philosophies, active learning, team-based learning, and discussion using digital media. Burgess (2009) found that integrating Web based classroom teaching has improved reading engagement and critical thinking skills. Thomas and Morin (2010) found that critical thinking was supported by online instruction. E-learning accompanied critical thinking skills encourage students to be ready for modern society and meet the demands of 21st century skills. Student based e-learning system saves students' time and they can think deeply when they have to answer to the questions and do their assignments (Benson & Samarawickrema, 2009).

E learning in a cooperative manner creates a unique learning experience, deeper insight of learning and critical thinking (Garrison & Vaughan, 2007). Akyuz and Samsa (2009) examined the effects of blended learning environment on the critical thinking skill of the students and found out that it had strong influence on developing critical thinking skill. Multi-media tools for educational purposes that includes web-based instruction, streaming video conferencing, face-to-face classroom time, distance learning through television or video or other combinations of electronic educational models encourage participants to be well-educated and critical thinker as well. (Bates & Poole, 2003).

E learning environment cultivate critical thinking through the following ways.

i. *Questioning*

   e learning strategies provide ample opportunities for questioning in the classroom.

ii. *Problem-based learning*

   e learning mostly comprised of Problem based learning strategies which enhance student's logical reasoning and evaluation skill.

iii. *Active listening*

   e learning engage students as active listeners.

iv. *Cooperative conflict resolution*

Pave way for cooperative problem solving situation.

v. *Thinking aloud*

e learning promote thinking through problems solving

vi. *Concept mapping*

Create environment for brainstorming

vii. *Learning portfolios/records of progress*

Develop opportunities for individuals and groups to develop documents that reflect learning progress over time (minutes/ journals; blogs/media productions; speeches/presentations)

viii. *Classroom space accommodates interaction*

Encourage active interaction between small and larger groups of students as well as the teacher.

ix. *Illustrate concepts*

explain the concepts with suitable examples and link students' own experiences to concepts and their applications.

x. Provide feedback to the learner

Immediate feedback is provided to the learner during the learning process.

Conclusion

Critical thinking in the e learning environment is facilitated by physical and intellectual skills that encourage a spirit of discovery. Students can share the stage with the teacher and interact with each other in the virtual classroom which fosters their critical thought processes .To reach this goal, schools and colleges should redesign their curriculum with e learning environment to cultivate critical thinking.

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