Cloud Computing based E-Learning System for Collaborative and Blended-Learning Environment

Vaishali G. Belsare[1] and Yogesh T. Bisen[2]

Assistant Professor, Department of Computer Science[1]

Assistant Professor, Department of Commerce

Kamla Nehru Mahavidyalaya, Nagpur, Maharashtra, India

vaishali.belsare@gmail.com[1] and sacrocks07@gmail.com[2]

Abstract: *In recent years cloud computing technologies managed and changed the way applications are going to be developed and accessed in various E-learning platforms. Now days the use of collaborative and blended learning applications has been notably supported by cloud computing environment. Cloud computing provides a very low cost services to different academic institutions to access learning applications through mobile devices ,laptops and desk top computers. In this paper we present a solution that is based on cloud computing which is used for building a virtual environment both for teaching and learning. We present an interactive, modifying and monitoring educational or course contents. The environment and the design proposed can also be used as a platform for exploring and sharing new ideas as well as for designing integration of different pedagogical approaches for both teaching and learning.*

Keywords: Cloud computing, blended learning, collaborative learning, Active learning

I. INTRODUCTION

E-Learning is the process of learning that is assisted with electronic devices and digital media. The demand for educational content mainly by the academic, industrial and professional users led to the exponential growth in the e-Learning technology. Learners from different categories are highly benefited by the e-Learning systems. These systems assist the learners to work anywhere they prefer, such as, at home or in the office, to communicate with the teacher, instructor and other learners via e-mail, discussion forums, online chatting, videoconferencing and other forms of computer-based communication [2].

Blended Learning is a form that blends various modes of learning processes that primarily integrates the benefits of online learning and classroom learning [1]. One of the major advantages of blended Learning is the provision of differentiated instructions according to the learners learning styles, knowledge level, interests, abilities and skills [9]. Instructor decides the provisioning of instructions, activities and learning environments after determining the above factors.

Collaborative learning is widely used in classrooms today. It engages learners and involves them in knowledge construction, and gives them responsibility for their own learning. It helps them to develop critical thinking. It closely matches real-world activities and broadens the individual learner's perspective. As they are allowed to work together, students become actively involved in learning process.

Active Learning is used to stimulate the logical thinking of the students by asking them to participate in various activities that enable them to think beyond facts and details.

Discovery Learning is a technique for giving instruction in which the students learn from their past experiences through the process of trial and error activities by interacting with their environment and performing experiments. It involves the different stages such as observation, reflection, abstraction and experiment.

Cloud Computing is a growing market-oriented distributed computing paradigm that globally connects everyone across the world through the use of technologies like virtualization and web services [10]. Cloud Computing enables the various small scale industries and organizations to make use of various applications as cloud services on pay basis [3]. Various researches have been examined in the building of e-Learning platform in the cloud computing environment [6] and the automatic assessment resources are used in web based. Various Cloud Computing tools for learning services are