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USE OF VIRTUAL CLASSROOM SOFTWARE FOR TEACHING

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Abstract

In 21st Century, Education emerges as effective tool of change in the society. It has several dimensions like philosophy, psychology, sociology etc. Now the technology is playing a vital role in the field of education particularly in school education. Classrooms are going to change from traditional to smart. When we talk about smart classroom we require certain things like computer, internet, video camera, speakers, microphone, projector etc. This technology is also called Virtual Classroom Technology where the teacher can deliver lecture with both the mode like synchronous and asynchronous virtual mode through internet. This paper focuses on the role of virtual classroom software which provides the facility of synchronous and asynchronous virtual mode of teaching. By using this Virtual Classroom Software [VCS], the teacher can not only deliver the lecture but also evaluate the students. This software has several features like live class/online class, offline class, create future class, notice board, assessment, feedback etc. The teacher can use power point presentation/word documents while delivering live lecture. Students can easily communicate through chat/feedback segment to teacher and get quick reply also. The role of Virtual Classroom Software is very important. It reduces the huge paperwork and gives quick assessment. It is called "Any time, Any where classroom". Teacher should manage the progress of the each students of the class through this software. It will be very beneficial for teachers, students and entire educational system.

Keywords: Virtual Classroom Software, Synchronous and Asynchronous Mode, any time any where classroom

Introduction:

Today, ICTs play the same role in our information and communication process and their outcomes as played by other technologies in making our lives quite comfortable and purposeful. As a result, they have become quite popular in all walks of our life. The modern ICTs, in fact, have brought a revolution in the field of business, industry, insurance, banking,

agriculture, medicine, transport, postal and telecommunications, service organizations and various other fields affecting our day-to-day activities.

Teachers with in-school access to modems, computer and phone lines may be searching for useful curricular resources, engaging their students in pen-pal relationships with other schools or in multi-site science or social studies investigations and exchanging e-mail with friends and relatives in distant parts of the globe.

E-learning is also frequently being used interchangeably with term such as online learning, virtual learning, distributed learning, web-based learning also open and distance learning. Despite their unique attributes, each of these terms fundamentally refers to educational processes that utilize information and communication technology (ICT) to mediate asynchronous as well as synchronous learning and teaching activities. Indeed, with expectation of the conventional print based open and distance education, it can be argued that the emergence of e-learning is directly linked to the development of, and access to information and communication technology infrastructure.

Virtual Classroom: Platform of Effective Teaching and Learning

Virtual means a simulation of the real thing, Virtual Classroom is a simulated classroom via internet. It allows the learners to attend a class from anywhere in the world. Virtual Education is a learning environment where the teacher and the students are separated by time and space or both. They communicate via Multimedia, Internet and Videoconferencing. Virtual Education in our country (India) is provision of ubiquitous access to quality-oriented, low-cost, personalized learning to every citizen, irrespective of the age and type of education.

Virtual Education is made possible only by the e-content development and use of ICT. In a virtual classroom students will be present with his teacher and fellow learners in the classroom, they will not present physically but connected to the classroom via internet, everyone will be able to share experiences with other participants virtually.

In the recent era of globalization, technological advancement has increased dramatically in every sphere including mainstream education. These advances have

introduced new educational nomenclature i.e. "virtual education", "virtual classroom", "virtual Universities", "on line Courses", "electronic" and "cyberspace institution" etc.

A Virtual Classroom is a learning environment created in the virtual space. It is a computer-generated space (computer-mediated communication system), specially designed to host and deliver e-education. Teachers and students interact via the Internet. It allows online interactive collaboration between students and teachers. Virtual classroom is an environment unlike the traditional classroom. In actual fact, the virtual classroom is wherever we and our computer happen to be. It could be in our room, in one of the University microcomputer labs, or at an isolated site far removed from the school or college campus. Our virtual class schedule is whatever time we want it to be. Virtual classroom can be developed with facilities.

Development of Virtual Classroom Software

Virtual Classroom Software is a programme that simulates a real classroom environment in the internet world. VCS offers similar advantages to a classroom, it offers the added bonus of allowing students to participate from any computer, whether from home, campus computer lab, or local library. With VCS tool, if students can connect to the Internet, students can be in a Virtual Classroom. A VCS tool is accessed from a computer that is connected to the internet. A VCS has several features which are common to most VCS tools. Author developed Virtual Classroom Software (VCS) by using PHP programming and MY SQL database having several features. Features are as follows:

- Video Window for Live and Recorded
- Conferencing Window Display
- Power Point Presentation facility
- Participant list
- Whiteboard
- Feedback
- Class Attendance List and many more

Asynchronous Virtual Classroom

Learning scenario of the asynchronous virtual classroom, it starts reconsidering how one learns collaboratively in an asynchronous distance-learning environment. Such an environment may not allow a learner to meet other real learners on networked PCs.

Asynchronous learning is a student-centered teaching method that uses online learning resources to facilitate information sharing outside the constraints of time and place among a network of people. Asynchronous learning is based on constructivist theory, a student-centered approach that emphasizes the importance of peer-to-peer interactions. This approach combines self-study with asynchronous interactions to promote learning, and it can be used to facilitate learning in traditional on-campus education, distance education, and continuing education. This combined network of learners and the electronic network in which they communicate are referred to as an asynchronous learning network.

Elements of Asynchronous Classroom are virtual libraries/repositories of documents, presentations, graphics, audio files, videos, e-mail, discussion boards, social networking, e-portfolios, DVD/CD-ROM etc.

Author developed Asynchronous Virtual Classroom in the software. Students can login by entering User-Id and password. They can access class-wise video lectures and download some power point presentation another study material for the lessons. After assessing the videos, they can solve assignment. If they have doubt about the content, they can ask questions to concern teacher by sending feedback or comment from contact option or e-mail. Notices have been displayed for their guidelines. Student's record will be kept in teacher's user id. All these features are available in Virtual Classroom Software.

Synchronous Virtual Classroom

Synchronous Virtual classroom allows instructors and students to interact online synchronously. The best advantages of synchronous online instruction are that faculty and students can talk to each other using text, audio and video. Synchronous Virtual Classrooms provide the instructors with the ability to poll students instantly and afford the students the chance to participate in group activities that they can interact as if they were face-to-face. These interactive elements are unavailable in an asynchronous mode.

The features available in synchronous virtual classroom play an important role in maintaining interaction. Most of the virtual classroom technologies have content frame to

share the instructors power points, text chat and so that. Elements of Synchronous Classroom are chat (text only), voice (telephone or voice-over IP), video conferencing, internet radio/podcasts, virtual worlds etc.

The service allows users to communicate with peers by voice using a microphone, video by using a webcam, and instant messaging over the internet. Phone calls may be placed to recipients on the traditional telephone networks. Calls to other users within the Skype service are free of charge, while calls to landline telephones and mobile phones are charged via a debit-based user account system. Skype has also become popular for its additional features, including file transfer, and video conferencing.

Author used Skype for synchronous virtual classroom in Virtual classroom Software. Students got their Skype user Id and passwords. Schedule of the live classes was displayed through the notice board. Before class starts, Students can download study materials like power point presentation, document file having text, graphics etc. Students interact with teacher through Skype. Teacher asks some questions on the taught portion and simultaneously students asked doubts regarding content. Students solved assignment and some tests. Results of the assignments and tests will be got available in teacher's user ID.

Use of Virtual Classroom Software in Teaching

For centuries, textbooks have been the most important teaching-learning tool in all types of schools. The physical format of the textbook does not easily allow students and teacher to depart from the prescribed path, or to link to new concepts and ideas from other disciplines. Whereas the virtual textbooks move the learners beyond content mastery to information seeking and problem solving skills. This enables the learner to evaluate and synthesize information from diverse sources and understand and apply the difference between facts and opinions, grasp multiple and diverse perspectives and draw insights from these and utilize these within the context of one's own knowledge base and experiences.

In comparison to traditional textbook, the web based teaching seems to be more suitable for learning, where the information can be delivered in both linear and non-linear format. It can be presented via multimedia with text, pictures, video, sound and animation. Vast amount of information can be searched and downloaded from internet. In traditional classrooms, most teachers make use of a chalkboard for further clarification of a point. But the instructor of a virtual classroom may use the whiteboard to answer the questions of

students. Such tools allow images to be displayed, manipulated, annotated, and shared between two learners or among a whole group.

An important part of the physical class environment is the personal interaction as questions are asked by the students. Allowing all students to hear the questions and answers helps everyone to learn and encourages additional questions. In virtual learning environment, list servers can be used to redistribute e-mail messages. Usenet newsgroups, computer conferencing and collaborative work spaces may serve for sharing this kind of interactions. More dynamic questions and answer interaction can be created using text-based chat sessions, text-based virtual learning environments and net-based virtual auditorium or lecture room systems. The net-based virtual auditorium or lecture room systems are more sophisticated and provide voice communications and more features of traditional classrooms such as slides, application sharing and students' feedback. Videoconferencing and teleconferencing are used in Virtual Classroom Software to make the presentation more attractive and lively.

Virtual classrooms are more accessible, flexible and convenient in their approach towards students and teachers. Virtual learning environment encourages freedom of expression and students are more open to communicate. Studies have shown that online learning has a valuable learning experience due to its novelty effects, which creates a perception of increased value. Recent research found that online courses supported critical thinking skills, leadership, communication, problem solving and ethics. Often the students' prefer the delivery mode and work at their own pace and take time to analyze and synthesize the learning materials.

Conclusion

Virtual Classroom Software is promoting virtual environment for teaching. Moreover, multimedia use has made the virtual learning more interesting and lively, thus has paved the way for fulfilling the emerging needs of school education in 21st century India. Virtual classrooms also promote collaborative learning attitude among students. Also the quick delivery feedback ability of the Web can make learning more effective. Through virtual collaboration, researchers can also share data visualization and create documents collaboratively producing and editing text in real time. Virtual Classroom Software is really effective and follows the principle of '*Any time, Any where teaching and learning'*.

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