

VIRTUAL CLASSROOM SYSTEM: A NEW HORIZON OF LEARNING

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Abstract: *Virtual Classroom is a web-based environment that allows individual to participate in life training events without travelling. Virtual classrooms allows students and teachers to communicate with each other using various technologies such as audio, video, internet, email, online chatting and other resources. It is an online learning environment which uses both synchronous and asynchronous communication tools such as video conferencing, web conferencing, message boards and charts capabilities. The objectives of the study are to know the nature and characteristics of virtual classrooms, to know about the different courses used in virtual classrooms, to know how it is helping students in rural areas, to know the use of other aids and accessories in virtual classrooms, to know the advantages and disadvantages and actual role of teachers in virtual classroom.*

Key Words: *Virtual classroom, Information technology, Internet.*

1. INTRODUCTION:

There has been a rapid increase in the number of online courses due to high advancement in information technology. Through online communication students are getting lot of experiences in everyday life. A virtual classroom is an online learning environment using internet, computers where teachers and students are not physically present but communicate with each other through internet. “Virtual” is used here to characterize the fact that the course is not taught in a classroom face- to- face but through some substitute techniques that can be associated with conventional classroom teaching. It is basically designed for students who are unable to attend regular classroom for some specific reasons. It provides students with variety of learning experiences. The students used to get both direct and indirect experiences through such online courses.

Today a number of website exists in World Wide Web online database which offers students with variety of study materials in different disciplines. Students are much free to choose their own course of study. Nowadays they don't have to depend on book learning only. While surfing the internet they can get huge information and update their knowledge. They are driven by the goal to use newly found access to global data communication. Without travelling they can learn the course through online, can fill up the form for exam, view previous question paper, examination results and a lot of information on job opportunities, career planning, vocational training which would help them in building their career.

Virtual classrooms allow teacher and students for dynamic interaction through online communication. The software applications of virtual classrooms often use multiple synchronous technologies such as web conferencing, teleconferencing, live streaming and Voice over IP (VoIP) to help remote students with ability to collaborate in real time.

In higher education virtual classrooms maintains the standard of learning by providing students an opportunity to learn in an informal way rather than continuous discussion and lecture method. Recently Virtual University has been established to offer various courses and programmes ranging from undergraduate to Ph.D., D.Sc, D. Litt., etc. Virtual classrooms are available 24 hours a day, thus facilitating teachers and students to develop novel ways of teaching and learning.

2. NEED AND SIGNIFICANCE OF THE STUDY:

World is changing rapidly. In today's occupational world there has been increasing demand for specialists, professionals, qualified teachers, students are highly motivated to pursue higher education. Most of the colleges and universities only prefer candidates with outstanding marks. There are some colleges which only admit students who come from high socio-economic background. In that case many students who come from poor family are being deprived from getting higher education. Virtual classrooms have taken a lead role in teaching-learning process. As it facilitates online learning students need not have to travel far to take education. They can study while staying at home through online communication. This may reduce their cost of travelling and save time. “Earn while learn” can be best served through this Virtual Classroom System. It proves more suitable and economical for running a number of high quality interdisciplinary and innovative courses for the benefit of learners of varied interest.

Virtual Classrooms are also accessible to students with physically challenged as they can access it from home. Learning over the internet offers a wide range of learning flexibility in virtual environments that serve the individual needs of the learner regardless of their age, gender, religion, nationality or disability. This system allows both teachers and learners to utilize their leisure hours more profitably without hampering their daily routine activities.

3. OBJECTIVES: The objectives of the present study are:-

- (1) To know the nature and characteristics of virtual classrooms.
- (2) To know about the different courses used in virtual classrooms.
- (3) To know the aids and accessories use for virtual classrooms
- (4) To know the impact of virtual classrooms on educational development of the students in rural areas.
- (5) To know the role of teachers to improve the virtual classroom system.
- (6) To know the advantages and disadvantages of virtual classroom system.

4. METHODOLOGY:

This is a qualitative study. The investigators here collected data from different secondary sources like research journals, books, websites etc.

5. FINDINGS:

According to the objectives of the study findings are discussed below-

Obj. 1: To know the nature and characteristics of virtual classrooms.

A virtual classroom is an online learning environment where teacher and student are separated by time or space or both, and the teacher provides the course content through course management applications, multimedia resources, the internet, video conferencing etc. Such media also helps students to communicate with the teacher. These are in fact cyber classrooms where teacher and students can communicate in real time. Just like a real world classroom, a student in a virtual classroom participates in a synchronise instruction, which means that teacher and students are logged into the virtual learning environment at the same time. Virtual courses are the courses provided on the internet. Here students are free to choose their study materials; there is no burden on them. The students can think independently and act accordingly. They can learn according to their needs and interests. Some characteristics of virtual classroom are follows-

Non-restricting: It is a non-restricting environment where the students enjoy maximum freedom while learning.

Affordable: The costs of virtual classrooms are more affordable than conventional classrooms. The learner need not have to travel for their education which saves both time and money.

Flexible Learning: Online classes also allow the students to move according to their own pace.

Practical and Proven: Synchronous learning is a learning environment where everyone participates in the learning process at the same time. Traditional lectures serve the purpose of this learning for hundreds of years. Virtual learning enables this same type of experience, but with far more conveniences and tools.

Accessible: Online-tutorials and lectures can be delivered through virtual classrooms. Important meetings and group projects can also be discussed through such environment. The most advantages of virtual classroom over traditional classroom are that here learning period is determined by the receiver of training.

Learning place: Special place is allotted for the students in traditional classroom. But virtual learning can take place anywhere and at any time.

Learning process: In the traditional classroom only one specific method is followed by all teachers while teaching but in the virtual classroom, there are unique training methods and content customized training for any students.

Obj.2: To know about the different courses used in virtual classrooms.

A virtual classroom is an online classroom that allows participants to communicate with one another, view presentations or videos, interact with other participants, and engage with resources in work groups (Justin, F. 2013). Different courses that are used in virtual classroom are-

Hypertext course- Courses in hypertext theory, in writing hypertext, on hypertext literature and design and implementation of hypertext tools are taught in a meaningful way.

Audio-based courses- Various audio-based courses e.g. Power Point slides synchronised with an audio track are provided which benefits the learners to understand the matter in a meaningful way.

Video-based course- Video-based courses are like face to face classroom courses where various topics of different disciplines are discussed online and learners watch the video by a way of free ware or plug-ins (e.g. Windows Media Player, Real Player).

Animated Courses- Animation on computers is one of the chief ingredients of multimedia presentations. Animations are created using Macromedia Flash or similar technologies. Through this students make presentations, slide shows, visual explanations of concepts, and visually connecting with their audience, a great skill for the future.

Web-supported text book course- Web-supported text book courses are based on specific textbooks. Students by themselves read the chapters. Review questions, topic for discussion, exercises are given chapter wise on a website and are discussed with the lecturer. Sometimes class meetings may be held to discuss matters in a chat room.

Obj. 3: To know the aids and accessories use for virtual classrooms.

Other VCR accessories like projector, LCDs, Video conferencing system, server machine, Interactive white board or Touch Panel, Digital Canvas and HD Cameras, computers provide more personalised learning experiences better suited to individuals' learning styles.

In virtual classrooms students submitted their home work assignments electronically through an attachment to an email. Students download the learning materials from internet prepared by different experts. Also with the use of CD-ROMs, DVDs various materials are provided to students on different subjects thus quenching their thirst of knowledge.

Obj.4: To know the impact of virtual classrooms on educational development of the students in rural areas.

Students in remote communities face many challenges to get education. This is especially true for indigenous and native people. In many traditional societies people do not know English and speak vernacular languages. For these students learning new content through online courses may be extremely difficult. Students of these communities are unable to rely on text-based interactions.

Web conferencing allows instructors to use multimedia resources in addition to text. In a virtual class the instructor creates presentations that contain images and text. Along with the presentation auditory supports, visual and textual information on the screen are provided. Sometimes communication between teacher and students take place through microphone and text comments.

Students in remote areas often face problems with Internet connection. The lack of bandwidth or unreliable internet connection makes it impossible for students to download files and complete their work in time. Web conferencing technology is appropriate in low bandwidth environments. Web conferencing works over any internet connection and functions even on slower, lower bandwidth connection. While some technical barriers may be found in low-bandwidth connections (unclear audio and dropped connections) web-conferencing technology is much effective even in remote areas.

Some rural areas also do not have enough funds to make arrangement for virtual classrooms. Therefore students of those areas could not get the benefit of such classrooms.

Also there is a lack of qualified well- trained instructor in rural areas to help the students. Some teachers do not even know how to use computers. Pupils of such places also do not have much knowledge about internet. Therefore they are deprived from various advantages of using virtual materials.

Obj. 5: To know the role of teachers to improve the virtual classroom system.

The traditional course of teaching in a classroom requires a board for the teacher to demonstrate. In virtual classrooms the teacher has the choice of using number of aids to make the lessons livelier. Here the teacher uses various audio-visual aids to gain attention of the learners. This platform allows the teacher to use various graphic tools which helps demonstrate in a manner that speaks more than "just words". In a matter of seconds numbers can be depicted in different kinds of charts and graphs. Colour coding encourages retention by providing a visual stimulation in the form of colour.

Two-way interaction is made possible in real time as most of the virtual classroom sessions are web-based. Debates can be conducted as various other forms of interactive learning tools like role playing. There may be a number of appropriate options available to the students for interacting with their teachers through online chatting, email, audio or video conferencing as permitted by the organizational system of a virtual classroom or campus. The teachers may also make use of these interaction opportunities for seeking active participation of students in the instructional process, asking questions for testing their comprehension and evaluating their progress besides giving them freedom for removing their doubts and upgrading their knowledge.

Role playing within the virtual classroom is another way of creating awareness and interests on various issues. The rules of the role play are laid out and a demo is run to show how it works. The audience is then asked to participate in a similar task. The art of negotiation is taught when the classroom is split into the management, the union and workers. Roles are interchanged for different sessions to understand the process of each role, its demands and limitations. Another skill that can be taught through role playing is that of business communication. The class is split into different groups of people who communicate within an organization and a dialogue is run among them. The tone and format of communicate between teachers and taught is thus experienced within the boundaries of organizational hierarchy.

Through Virtual Classroom System teachers can evaluate the progress of the students. After uploading the needed materials from website the students are asked to complete their assignments and send it back for required checking, feedback and evaluation on the part of the teachers.

Obj. 6: To know the advantages and disadvantages of virtual classroom system.***Advantages of Virtual Classrooms***

- (i) Virtual classrooms are purpose-built:** This gives faster results and scientific application of knowledge, saving time and shortening ramp up.
- (ii) Virtual classrooms have enhanced playback repeatability:** This provides for immediate dissemination and reuse of collaborative materials. Faster dissemination of knowledge allows learning to be applied in a more fruitful way saving both time and money.
- (iii) Virtual classrooms are fully mobile device compatible:** Students can also enjoy the facility of virtual classrooms through mobile. By using different kinds of apps they download different study materials anywhere and at any time.
- (iv) Virtual classrooms are designed for interactive engagement:** Virtual classrooms built interactive engagement in mind allow customized learning tools specific to the content being taught, further increasing communication, knowledge retention and allowing more immediate application of learning through peer interaction. Increased engagement is directly tied to increased performance.
- (v) Virtual classrooms offer comprehensive feedback measurements:** In virtual classrooms teacher can evaluate the progress of learners through feedback. It helps a teacher to know how much students has attained the learning objectives.
- (vi) Accessible:** A virtual classroom is accessible to anyone who has a computer, tablet or smart phone. It doesn't matter whether the students are geographically separated or they are suffering from health or mobility issues. Anyone, anywhere and at any time will be able to log in if they have the above device.
- (vii) Affordable:** The costs involved in setting up a virtual classroom is much favorable comparable to a physical classroom. It reduces travel costs, cost of other materials, accessories and everything. Students don't have to buy expensive books, they can learn by downloading materials from web. Thus it is much affordable to poor students who are deprived from higher education due to financial constraint.
- (viii) Effective:** The tools and resources that can be offered from within a virtual classroom have been proven to be much effective. Teaching materials can be presented in an interesting way allowing students to have greater control over how and when they access them, meaning they can take full control of their own learning experience and increase their chance of success.
- (ix) Popular:** The course of virtual learning has become much popular nowadays as it serves needs, interests and purposes of the students. It may also help to reduce drop-outs rates.
- (x) Removal of geographical barriers (Anywhere learning):** A virtual classroom allows learners and teachers to attend a single live training session from any place in the world, provided they have a computer and Internet connection. Thus it help to remove geographical barriers.
- (xi) Sessions can be recorded:** If students miss a class they have very little chance to engage in the learning experience that took place. A virtual classroom has a facility to record the session, so learners or teachers can replay it afterwards. Teachers too get an opportunity to review their own or their colleagues' performance. Thus both teachers and students can evaluate the performance of each other.
- (xii) Quicker to organize:** Virtual classrooms has the advantages of organize training more quickly than conventional classroom training. Study materials do not need to be distributed. It is not necessary to reserve projectors and other things. The sessions are easier to schedule or reschedule since attendees will not be traveling to the venue of the session.

6. DISADVANTAGES OF VIRTUAL CLASSROOMS:

- (i) Some people may consider impersonal:** There are people who may prefer conventional learning than digital learning. Some teachers and students may be uncomfortable with the idea of either delivering or engaging with a course that is provided in a virtual classroom.
- (ii) Some tutors and students may need extra training:** Most virtual classrooms are designed to be used intuitively. Though most people enjoy teaching in a virtual classroom but some tutors and students may need extra training and additional support for using the technique fruitfully.
- (iii) Lack of Socialization:** School is the important agency of socialization. Love sympathy, tolerance, friendship, interaction, cooperation all takes place through school which is not possible in a virtual environment. Virtual Classroom lacks such socialization as there is no face to face interaction between peer and peer and teacher and taught.
- (iv) Technology Issues:** Virtual Classroom is totally technology specific. Everything is good as long as technology works but if there are technological problems then it becomes much difficult both for teach and students to continue the course.
- (v) No Hands-On Learning:** Hands- training are the best training. Everything cannot be taught theoretically besides some practical experience is necessary. For experimental subjects students cannot get the whole idea until they

conduct the experiment themselves. Many subjects cannot be taught well through virtual classroom as practical training cannot be provided on those subjects.

(vi) Difficult Interaction: Virtual classroom does not provide opportunity for face to face interaction between teacher and students. If any student has difficulty regarding understanding the subject matter, they cannot discuss openly with the teacher unlike conventional classroom. Thus doubts could not be cleared. Many people learn most effectively in a group, which is partly why group assignments are common at all levels of education. Virtual environment lacks all these facilities.

7. CONCLUSION:

Virtual Classroom with online education serves as a resource that has potentials to overcome the difficulties of traditional classroom by meeting the needs of every sections of the community rich, poor, rural, urban, literate and illiterate. Students from lower socio-economic background can satisfy his thirst of knowledge with click of a mouse. Through virtual learning students, teachers, administrators, employers came to know the modern use of technologies and their applications in real life. Virtual classroom brings various types of classroom activities at the doorstep of students rather than expecting from them to move and avail these facilities. Students enjoy flexibility of learning new courses through online and thus in this way it saves their time and energy. Virtual classrooms offer teachers and students an independent environment, a classroom culture of collaborative learning where they make an effort to know each other and share their virtual classroom experiences which could be hardly imagine in a conventional classroom. In fact virtual classroom is class without walls where students and teacher meet with each other at “Cyberspace”.

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