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OF ADVANCED RESEARCH****RESEARCH ARTICLE****REFLECTION ON VIRTUAL CLASSES: SPIRIT OF THE TIME.****Dr. Garima Yadav.**

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Manuscript Info**Abstract****Manuscript History:**

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Key words:***Corresponding Author****Dr. Garima Yadav***Copy Right, IJAR, 2016,. All rights reserved.***Introduction:-**

Traditionally the school has been the place where teachers and pupils meet each other. It has been the setting where the institutional teaching/learning process takes place. However, various forms of computer-mediated communication are adding interesting new dimensions to regular school learning.

Use of the Internet and Web are leading to significant changes in educational models. Effective exploitation of these changes requires adequate attention to understanding the technology, the educational processes and issues, student's characteristics, etc.

As this use of Internet is increasing, a traditional classroom has shifted to E-Learning. While advancements in communication tools were easily adapted to learning methods, it was the introduction of the personal computer and the development of the Internet that would create the most radical transformation in higher education. Learning by computer can be as easy as communicating with your professor and fellow classmates via email, student utilizing an interactive CD-ROM.

Thus, E-Learning can be defined an approach to facilitate and enhance learning by means of personal computers, CD-ROMs, and the Internet. It may be as simple as that teachers may simply post their material on Internet, students can read it online or can download it for further access. Since student won't be in a classroom with professor and classmates, he will need to be capable of independent learning. Instructor will provide him with a syllabus, course documents, and required readings. The interaction between the professor and the student will happen via e-mail, discussion board, forums etc. Since the class doesn't meet in a physical space at a scheduled time, the student will have to learn independently. He will be responsible for keeping up with the assigned reading and completing assignments according to the timeline on the syllabus.

The growing popularity of E-Learning has introduced new terms to education, as Virtual Classroom, where student will be present with his professor and fellow learners in a classroom. They will not be present physically in the classroom but connected to the classroom via Internet.

CDAC's Virtual classroom aims to simulate the experience of attending a class over the web. So everyone is able to see other participant virtually.

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The Internet offers such advantages as flexible access and new ways of communicating and assessing for students and teachers. The Internet also has some disadvantages such as reliance of information service providers, viruses and low speed of connections. However, for the teacher, creating Internet resources that are stimulating, appealing, easy to use and educationally sound is time consuming. The VLEs allow teachers to create resources quickly and without the need to develop technical skills. VLEs provide an integrated set of Internet tools, allow easy upload of materials and offer a consistent look and feel that can be customized by the user.

Purpose:-

Our society is changing. A new paradigm of education is developing, one that integrates the technology of computers and the Internet in education. We do not only learn from books. We have many technological tools available to us. The use of computers, and especially the Internet, opens a new world of potential. With the use of technology, education can surpass the physical boundaries of the classroom and provide students the opportunity to experience more.

Since Gutenberg, the Internet represents the largest transfer of information to occur in history. According to Robert B. Cummings, Director Learning Resources Center, SHRP-SON at University of Alabama at Birmingham market research indicates that we can make the following assumptions:

50% of learning will continue to be "in person", involving things only available in person, although most of this activity will be facilitation 50% of learning will take place on the Internet, which is a better vehicle for cognitive learning due to the extent of information, low cost, and convenience

Employers will expect to hire people who know how to learn on-line .Education will become more student oriented (convenient), rather than faculty oriented Internet will dominate teleconferencing, because it's cheaper (lower technological investment) than video codecs, offers universal access, and has a high level of interactivity Personal computers will be ubiquitous

The Internet is a huge resource, which is made more overwhelming by its disorganized state; however, it offers so many significant learning opportunities which are delivered in a sensory way that is appealing and exciting to most students. Teachers who have delayed their training in this medium are now finding that their students have overtaken them in expertise and attitude toward the Internet from a very early age, and the teachers are finding it difficult to fit their own training and learning into an already busy time frame.

One of the most important contributions of the Internet to teachers is the opportunity for global cooperation and International teaching and learning. By using the internet tools, students from different parts of the world, learning together, reading each other's ideas and views, discussing common concerns and understanding the differences in their attitudes.

The purpose of this paper is to discuss the advantages and disadvantages of using computers and the Internet in education and also to discuss the role of teachers in Internet education.

Synchronous Virtual Classrooms:-

Virtual classrooms allow 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 and

express emotion using emoticons. Synchronous virtual classrooms provide the instructors with the ability to poll students instantly and afford the students the chance to participate in group activities in the breakout rooms, while having the feeling that they can still interact as if they were face-to-face .

The features available in the synchronous virtual classroom play an important role in maintaining interaction. Most of the virtual classroom technologies have a content frame to share the instructor's PowerPoints, an eboard where an instructor can write, breakout rooms for group activities, text chat so the instructor and other students in the class can interact using words and emoticons, and audio chat to talk via microphone or telephone with the instructor and other students. Instructors can administer student polls, share their desktop, or have the students share their own desktops through application sharing. Web sites can be displayed for students, and with a stable Internet bandwidth webcams can be used so students and instructors can see each other.

There are different types of interactions which help the students. here is a diagram by Ally regarding interaction.

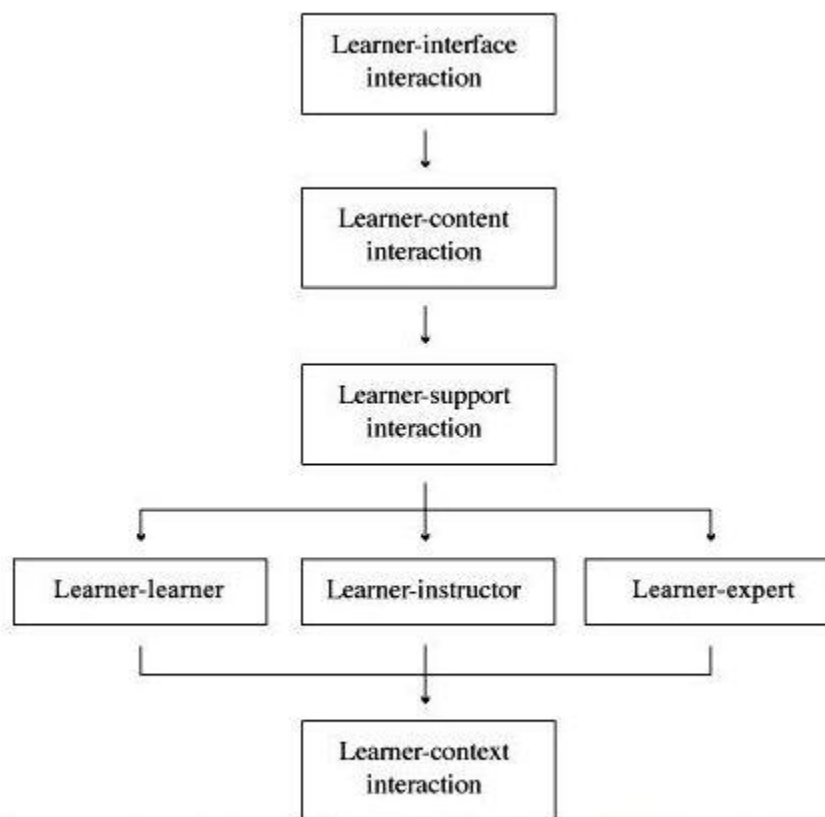


Figure 1. Ally's levels of interaction in online learning (*Theory and Practice of Online Learning*, 2004, p. 21). Reprinted with permission.

It is important that all the types of interaction (learner-learner, learner-instructor, learner-content, and learner-interface) occur so that they enhance academic, social, and technical communication.

The purpose of the study was to understand the interaction capability of the synchronous virtual classroom. The research questions that are answered are as follows:

1. What perceptions do students have about learner-learner, learner-instructor, learner-content, and learner-interface interaction within the virtual classroom?
2. What strategies and tools can an instructor use to enhance learner-learner, learner-instructor, learner-content, and learner-interface interaction in the virtual classroom?

Advantages of Virtual Classroom:-

The use of the Internet in education is a topic that has received extensive attention. There are some obvious advantages when compared to traditional in-class education. The advantages affect the students and teachers in different ways. The students are the people enrolled in the learning course. The teacher/instructor is the person who will be in charge of teaching the class. The teacher will send out materials, e-mail's, ect, instructing the students of what they need to be doing. The discussion that follows lists some of the advantages that have been found in previous research.

Several advantages for using the Internet have been found. One significant advantage is that the virtual classroom can help with instructor organization. Areas for course documents, assignments, class notes and other information can be readily categorized. The creation of a "virtual notebook" can make locating documents easier for both instructor and student. Having this information on the Internet can provide faculty with a method for quickly updating and revising course content.

Following are some of the advantages of Virtual classroom over traditional classroom model:

1. Removal of geographical barriers (Anywhere learning)
2. 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.
3. Sessions can be recorded If learners miss a traditional classroom-based training session, they have very little opportunity to engage in the learning experience that took place.
4. 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.

Quicker to organize:-

Training can be organized more quickly than traditional classroom-based training. Classrooms and projectors do not need to be reserved, materials do not need to be distributed. The sessions are easier to schedule or reschedule since attendees will not be traveling to the venue of the session.

One to one communication:-

In a virtual classroom environment, learners can talk to the teacher and to each other, and although this communication is not as rich in a traditional classroom, it still can help learners, since it is one to one.

Limitations of Virtual Classroom:-

Following are some of the limitations of Virtual classroom over.

1. Traditional classroom:
2. Teachers and students need to become familiar with the tools.
3. Teachers and students are familiar with the workings of a traditional classroom, that is, they understand the concepts of hand raising, the whiteboard, assignments, and so forth.
4. With a virtual classroom, all attendees must become familiar with the way the virtual classroom works before virtual classroombased training starts.
5. Time dependency for Live Sessions.
6. Attending virtual classroom training is restricted to a certain scheduled time.
7. Infrastructure for the participants PC needs to be prepared.
8. Virtual classroom sessions need to be scheduled, teachers need to be invited, and participants' PCs need to be prepared.

Technical Limitations:-

Technical issues such as bandwidth, speed of the connection or power failure may create problem while presentation is going on.

A case study was done in order to evaluate the use of virtual classroom in 2001. According to Jason (2001), students view the use of the virtual classroom as an ease of accessibility. It is much easier with the information posted on the Web because it is available 24 hours a day. Distance learning courses can be done anywhere and at any time. Students can view this information without having to contact the instructor.

Of the educational advantages of the virtual classroom, the notion of distance acting as an actual aid to the teaching and learning is central and perhaps surprising. Instead of the technology solely acting as a barrier, it simultaneously seemed to force the users to be pragmatic in their actions and alter their behavior accordingly. Teachers and pupils who normally had difficulties in controlling their teaching and studying acts gradually found that the new learning environment required them to develop novel ways of teaching and learning. They found that they patiently had to wait their turn, speak more clearly, moderate their accents and plan more carefully what they were going to present. Both teachers and pupils had to adapt to the mediated interactions that required everyone to present their points quickly, precisely and audibly for the benefit of everyone and not just for the local classroom .

A second educational advantage lies in the intellectual and social partnership created by technology of the virtual classroom. Pupils using the equipment engaged additional social skills when they spontaneously took leadership roles in relation to other pupils . The technology used increased group cohesion and mutual support especially in the remote classroom. Its suitability for small-group work and its interactive mode both contributed to the development of skills using information and communication technologies. The virtual classroom also developed a range of communication and social skills that allowed the pupils to overcome their relative isolation by communicating with pupils in similar situations.

Cost is also considered to be an advantage. Students save money by not having to commute to class thus saving time, gasoline, childcare and travel expenses. Another advantage of the virtual classroom is time. Students who are motivated and/or quick learners may be permitted to move ahead at a faster rate than in a normal in-class setting. Communication is considered a benefit because most contact with instructors will be done via email, messages can be sent at any time day or night.

To the teacher the fact of everything being digital is an advantage. Since all work is sent over e-mail, instructions are able to deal with students work in an easy manner. Since everything is typed the teacher no longer is faced with the challenge of deciphering handwriting. Another advantage found to be considered by teachers is reusability. Teachers can reuse their own material or easily get material from others.

The Internet is a very unique and powerful tool that has a huge effect on all the teaching and learning activities that are done in the classroom. Not only that the Internet is enabling international teaching and learning, it gives the teaching and learning a new dimension by adding the opportunities to the various types of communication with partners to the teaching and the learning from far away on the Globe. The communication that can be done by Internet tools such as e-mail, IRC, and WWW pages writing (HTML) and searching for information.

The Internet can play a major role in education reform. Reform efforts center on authentic tasks, with students taking more responsibility for their own learning. Teachers need to adapt themselves to a changing technological society to prepare productive citizens. Traditional methods of teaching are no longer valid for the next century. New times demand new ways of learning (Jones, Valdez, 1995)

Steve Floyd (1991), author of the IBM Multimedia Handbook, said that multimedia allows students to learn in the way that they learn best, whether that be by reading the material, by visualizing the material, by hearing it, or by being actively engaged. Engaged learners are ones who are responsible for their learning, and because they are responsible they are energized by learning. Teachers responding the survey agreed that there is a strong consensus that the use of technology in the curriculum can promote engaged learning.

Teachers and students are learning to use the Internet in a variety of ways to enhance their teaching and learning experiences. The WWW represents the latest in communication technology, and much like the printing press's beginning days, it can be threatening to both students and teachers in the manner that it makes new demands and changes to expectations associated with traditional models. The Internet provides an immediacy and global awareness that has been unavailable to students. Students and teachers are able to have interactions not only in other parts of the country, but also around the world. From this they can learn about the life and issues that impact on other people. Many teachers can get access to relevant discussions hosted by the Internet. Educators can use these discussions and the ability to share experiences with other educators for professional development and to combat the sense of professional isolation.

In the future, colleges will no longer choose between audio or video systems, between interactive or independent systems, or between one-way or two-way systems . A single wire will provide everything by connecting the classroom, the library, the workplace, and the home. The challenge will be to choose the most practical combination of learning experiences based on a trade-off between the costs and capabilities of a vast array of media options. In this environment, the focus of educational organizations will shift from teaching to learning. Adapting to this shift will require educational organizations to adopt new approaches for defining faculty work and securing funds for new technology. Despite the changes and lingering uncertainties, distance education is key to dissolving learning boundaries.

References:-

1. IBM Software - IBM Lotus Virtual Classroom.
www.ibm.com/lotus/virtualclassroom
2. Virtual Classroom—Instructor-led web-based training.
<http://www.cadence.com/support/virtual-classroom.aspx>
3. Designing for the Virtual Interactive Classroom.
<http://www.campus-technology.com/article.asp?id=11046>
4. Virtual Teaching in Higher Education.
<http://www.csun.edu/sociology/virexp.htm>
5. Live eLearning Solution & Collaboration Solution Software.
<https://www.illuminate.com/>
6. Murray Turoff March 7-10, 1995-Designing a Virtual Classroom.
<http://web.njit.edu/~turoff/Papers/DesigningVirtualClassroom>
7. PostgreSQL: Manuals: SQL Commands:
<http://www.postgresql.org/docs/7.3/interactive/sqlcommands.html>
8. Using large Objects.
<http://www.redhat.com/docs/manuals/database/RHDB-2.1-Manual/prog/jdbc-lo.html>
9. PostgreSQL: Storing large Data.
<http://www.postgresql.org/docs/7.4/static/jdbc-binary-data.html>
10. Happy Coding- java Programming Code Examples.
http://www.java.happycodings.com/Java_Swing/index.html
11. Absolute java FAQ: All Java Resources.
<http://javafaq.nu/java/free-swing-book/free-swing-bookchapter14.shtml> CDAC's Virtual Classroom Page 72
12. Code Examples from Java Swing.
<http://examples.oreilly.com/jswing2/code/>
13. Java examples (examples sources code).
<http://www.java2s.com/>
14. Overview of Java programming resources.
<http://schmidt.devlib.org/java/index.html>
15. Java RMI Tutorial.
http://www.ccs.neu.edu/home/kenb/com3337/rmi_tut.html
16. Custom RMI Socket Factory.
<http://java.sun.com/j2se/1.4.2/docs/guide/rmi/socketfactory/index.html>

Books:-

1. Using IBM Lotus Virtual Classroom: A Best Practices Guide to e- Learning.
<http://www.redbooks.ibm.com/abstracts/sg246842.html>
2. Software Engineering – A Practitioner's Approach [5/e (2001) – Pressman].
3. [Designing Flexible Object-Oriented Systems with UML [Charles.