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INSTRUCTORY PROFESSION USING A-VIEW SOFTWARE

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Abstract

The goal of this study is to assess the strengths and weaknesses of both conventional and technology-enhanced approaches to education, and to provide concrete strategies for enhancing the quality of the teaching and learning process. The potential of technology-enhanced classrooms to provide an imaginative learning environment is explored in this research. The use of technology in the classroom has the potential to enhance the educational experience for both teachers and students. In this work, we use A-view as a metaphor for a technologically advanced classroom. In this article, we'll look at what makes A-view so beneficial. A-view is an easy-to-use video conferencing program that expands a teacher's ability to give live, interactive instruction to students in different places. In this article, we explore many facets of A-view lecture halls in higher education. The many pedagogical characteristics of technology-enhanced classrooms are discussed in the paper's final section.

Key Words: *Creative Pedagogy, Student-Centered Instruction, Tech-Rich Classrooms, an Alternative Perspective on the University Level.*

Introduction

Education is a beacon that shows people the way forward. The goal of education is not only to produce literate citizens; rather, it is to foster critical thinking, independent action, and autonomy. There is always room for improvement when people are open to new ideas and methods. Students and educators alike may reap the rewards of cultivating and encouraging creative thought and action. A society's development and advancement are driven by its educational system. Education creates human capital, which in turn spawns, propels, and establishes the technical innovation and economic progress for which it is accountable. In the modern world, information and knowledge are the most essential resources for success and development. The purpose of education should not be limited to societal betterment; rather, it should be seen as the driving force behind technological progress in the modern information age.

Making educated, skilled, and knowledgeable educators is ultimately the job of the education system for instructors. It raises the bar for educator competence and places premium on familiarizing educators with cutting-edge tech to produce more up-to-date classroom instructors. Teachers need to be prepared to deal with rapidly evolving technology material and to serve as role models for improved educational tools and approaches. A teacher's dedication and effectiveness in the classroom may be strengthened by participation in professional development programs that help educators maintain and expand their knowledge and skills. A teacher who is technically savvy must also possess the "will to do" and "ability to do" in order to be considered a true professional. That is to say, the field of education needs a clearly articulated code of ethics.

Traditional Teaching Method – An Evaluation

- The instructor was the sender or source, the curriculum was the information or message, and the student

was the receiver in the pre-technology era of education. Overhead projector (OHP) transparencies and the old-fashioned "chalk-and-talk" approach are two options for the teacher's medium of instruction. This approach of directed instruction is based on the principles of the behavioral learning perspective (Skinner, 1938) and has been widely employed as a teaching method in schools for many years. The instructor is in charge of the classroom, the students get the same information at the same time, and an emphasis is placed on memorizing facts. That is to say, the lecturer presents the material and the students take notes. As a result, students seldom take an active role in their education (Orlich et al., 1998). The traditional lecture method has been determined to have low efficacy in both teaching and learning by many educators and students at today's colleges. In such a lecture, the students sit passively and lose interest after around 15 minutes. Traditional methods of instruction may have drawbacks like as Teaching in classroom using chalk teachers may speak for an hour straight without ever stopping to gauge student reaction and feedback since conversation is a "one way flow" of information. Lecture notes and textbooks are the sole sources used for this presentation.

- Learning and instruction emphasize the "plug and play" approach rather than more realistic concerns.
- • The lecturer's handwriting determines the course's outcome.
- • There is a lack of teacher-student dialogue.
- • Theoretical discussions have taken precedence over ones that address real-world applications.
- Memorization-based learning leads to a lack of comprehension.
- Marks rather than result oriented.

In order to overcome these limitations in traditional teaching, we introduce technology enhanced teaching to support instructional approaches and to improve teaching learning process.

The New Technology as Teaching-learning Resources

It is already predictable that the use of technology in education is enriching in many ways. Yet there are voices arguing that is time consuming, costly to implement, and with benefits that remain unclear or dubious. The way we understand the need of implementing the use of new technologies in educational process depends on many factors, such as:

- Our overall understanding about quality teaching and learning, educational goals and values.
 - The learning objectives we target
 - The methods and teaching style
 - The social context and personal issues
1. Our whole way of life has been altered by technological advancements. Today's youngsters are used to a world in which they may quickly and easily access almost any resource. Our educational system is scrambling to keep up with these student demographics by introducing tech-enhanced classrooms. In an attempt to change education, several schools have successfully incorporated technology into their classrooms. This has allowed for more creative teaching methods and enhanced cooperation (Schrum & Levin, 2010). Tantatsanawong, Kawtrakul, & Lertwipatrakul (2011) point out that despite the widespread availability of technological advancements and the rising interest of students in high-tech devices, traditional classrooms have altered little over the last several decades. This poor progress in closing the digital achievement gap in our schools may be attributable to a lack of good role models. Furthermore, in any envisioned future classroom, educators would need to be given broad authority to adapt their teaching capacity.
 - 2.
 3. Learning today, according to a modern educational psychologist, is not about filling "passive empty vessels" with information. As of 2011 (Richtel). The ways in which students develop their own unique knowledge, mediated but not entirely given by the instructor, are influenced by the students' past experiences, knowledge, and beliefs (DeFreitas et al., 2010). According to the same specialist in educational psychology, schools should "foster constructivist activities and communities of practice" and "center on the needs of the students." Therefore, future learning environments (Brown, 2005) must be flexible in design to accommodate a variety of instructional approaches.
 4. The use of specific ICTs that allow for flexibility in time, place, and pace in learning and teaching is widely accepted across the international Higher Education sector as the driving force behind e-Learning (Turney, Robinson, Lee, & Soutar, 2009). An early entrance of eLearning in higher education settings was marketed as having the ability to allow student-centered learning via the fulfillment of constructivist teaching concepts, which was seen as having 'benefits' for both students and professors. Instead, a 'transfer pedagogy' (Salmon, 2005) developed in which traditional methods of teaching and learning in higher education were adapted for use in the digital realm, with Learning Management Systems (LMS) serving as a primary medium for disseminating course materials to students. Uses of technology that replicated pre-existing ideas about knowledge and practices of knowing were examples of transfer pedagogy. The

lecture format maintained the role of the lecturer as the "expert," disseminating knowledge to pupils; tutorials were utilized as a forum for student and instructor interaction. Lectures "delivered online in the form of text, audio, and or video" (Alexander and Boud, 2002) were some examples of the eLearning versions of these activities, as were so-called "discussions" held on online message boards.

5. New technological developments provide unique difficulties and possibilities for the educational process. High-performance computers and communications are essential to the systemic transformation because they facilitate the remaking of institutions. However, there are significant obstacles to efficient technology usage due to factors such as the high price of technology, its fast innovation, and the specialized knowledge and skills needed of its users.
6. The following are some ideas that educators may apply to better anticipate and address possible obstacles in the development of technology-enhanced learning environments.
7. Determine what is feasible within current conceptions of what comprises teaching and curriculum in order to get insight into the scope of potential for innovation in curriculum development.
8. Second, a teacher's ability to use all three modes of education (tutor, tool, and tutee) depends on the resources at her disposal, her level of expertise, and the breadth of options she is given.
9. While planning for a technology-based lesson it is necessary to conduct reconnaissance to find out what facilities, items, and people are available for support and how to access these resources. It is also important to gauge the level of teacher and student technology competence.
10. To accomplish an effective and successful technology enhanced learning experience requires a plan that addresses the elements like, what is the topic of the lesson? What content will be covered? What are the content-knowledge and skill objectives? Etc.

One of the main strengths of the computer is that it has the capacity to appeal to a wide variety of ability levels and learning styles. The same can be said regarding a teacher's strengths. To operate an institution system that limits teachers' capacities and their use of technology to only those items that fit well in a standardized, test-driven, accountability-based curriculum is an injustice that should be challenged. Using technology innovatively and demonstrating through alternative assessment that there are better ways to approach teaching and learning is a positive way to help students succeed and to offer an alternative vision for twenty-first century education. The curriculum should drive the technology. Teachers, relying on and dedicated to high standards, should drive the curriculum.

Rethinking Pedagogy

Educators and institutions are gradually coming to terms with the fact that the ethos and philosophy of the Web 2.0 world in which we live are profoundly at odds with the control culture of education, which places a premium on teacher-designed material and syllabi. Individuals in the modern world are expected to switch careers often and undergo deskilling at different points in their lives, both contributing to their social mobility and the diversity of their life trajectories. With this in mind, it's clear that traditional pedagogical models need to be rethought so that students aren't viewed as passive recipients of information but rather as active contributors to and co-creators of their own educational experiences (Brown & Adler, 2008). Teachers and students alike must shift away from a focus on memorization and toward a more collaborative and social approach to learning. As a critic of the current status of universities, Siemens (2007) writes that educational institutions "need to change" due to the "increasing complexity of society and globalization." Schools and colleges serve a dual purpose: they must adapt to each individual student's preferred learning style while also developing them into well-rounded citizens ready to take on the challenges of an ever-changing world.

Students' individual tastes, requirements, social habits, and technological inclinations are additional forces in motion. Tertiary student profiles show that many students today have multiple jobs, require constant access to the Internet and web-based services, and consider social networking apps indispensable to their daily functioning (Windham, 2005). Students "have high expectations of how they should learn," write Conole and Creanor (2007), "selecting the technologies and learning environments that best meet their needs with a sophisticated understanding of how to manipulate these to their advantage" (Page 11). Web 2.0 is collaborative and participatory, allowing users to connect with people and communities all over the world. This has the unintended consequence of widening the gap between the informal interactions that take place in classrooms and the ways in which young people actually learn, socialize, and communicate. Specifically, in the prevalent model of higher education, students are given materials developed by instructors or course creators and are then required to show that they have understood the material by performing assessment tasks that focus on memorization rather than analysis, application, or original thought.

Educators confront a wide range of difficulties, including the need to help students acquire general abilities and the ability to think

critically and independently via the use of appropriate technology that facilitate individualized learning experiences. The necessary shift in pedagogy necessitates not just the adoption of effective instructional methods, but also an understanding of the student perspective and the significance of appreciating and building upon students' current knowledge and abilities. Recognizing that user and learner generated content has a central place in a curriculum that fosters self regulated learning is essential to addressing the need to rethink and reposition pedagogy for the new learning landscape of the 21st century, which necessitates students' active involvement in defining their learning goals and selecting both ICT tools and strategies for learning. There is a delicate balancing act to be performed when designing learning experiences that encourage learner control, knowledge creation, agency, and autonomy through a variety of options and a sense of choice, while also providing guidance and structure when necessary and enriching the learning process through individualization and adaptation.

The most effective solution to the problems in educational opportunities is IT-enabled learning with efficient tools. It allows for independent study with possible teacher guidance. Creating an inspiring learning environment and the testing methods to support it is the primary obstacle to achieving these objectives. New methods of education and training have emerged as a result of the rapid development of computing technology and the expansion of the Internet.

summarized under the term IT enabled Learning. An attempt is made in this paper to illustrate a technology enhanced classroom by using A-view as an interface.

A Demand for techno –Competent teacher

The Present age of information explosion necessitates the teachers to be multifaceted personalities. It is the teacher, who not only generates the knowledge base from theoretical understanding and field experiments but also identifies relevant knowledge transaction strategies and converts the tacit knowledge in to explicit knowledge. There is a need to refresh professional as well as academic knowledge of teachers and to encourage them to break new ground in content areas ,teaching methods and administrative procedures, which leads to professional competencies of teachers. To survive in the rapid information explosion environment, the teacher needs to know not only how to retrieve the information but also the mode of evaluating, organizing, analyzing and applying information so that it becomes knowledge. Knowledge in turn leads to their empowerment, making teachers in engaging and sharing experiences and having consensus necessary for informed actions by utilizing relevant local technology skills in accessing, analyzing, evaluating, synthesizing and use of information.

In this era of rapid technological advancement, role of the teacher is expected to be quite different from the conventional classroom teaching. No more, he is going to be the main source of knowledge and besides transferring the knowledge to be multidimensional. The key point of instruction is not the fusion of information but the construction of knowledge, cultivation of abilities and illumination of wisdom.

A-View in Empowering Teacher

A-VIEW (Amrita Virtual Interactive e-Learning World) is an award winning indigenously built multi-modal, multimedia e-learning platform that provides an immersive e-learning experience that is almost as good as a real classroom experience developed by Amrita e-Learning Research Lab. It is a simple, user friendly video conferencing software which provides greater opportunity to a teacher to teach in a live interactive mode to various geographical locations. It is a real time collaborative multimedia e-learning platform which allows an instructor to teach live a large number of distant classrooms. Since 2004 Amrita e-learning research lab (Amrita University) has been actually engaged in developing the A-View platform and delivering lectures. A-View classroom provides various tool for the live interaction between teachers and students Even though they are geographically separated from each other. It is currently used at hundreds of universities, colleges and organizations across India.

Equipment required to run A-View

- Computer/Laptop with internet connection
- Head set/ microphone and speaker
- Web camera/Video camera
- Display board like TV screen/Projector

Features of A-View Classroom

1. Recorded Classes: A-VIEW records live classes for future use by teachers and students.
2. Sharing of animation and YouTube videos: A-VIEW has the capability of sharing content such as animations and YouTube videos to users. This could work as great material for teaching.
3. Adaptive Bandwidth: A-VIEW works well with fast and slow internet connections. For fast connections, video and

audio would be streamed at high quality. It has the ability to detect slow connections and stream audio and video as per the bandwidth available.

4. Multi-Modal interaction: Teachers and students can interact with each other through various methods such as Audio, Video, Text Chat, and interactive whiteboard.
5. Document Sharing: It is possible to share PowerPoint slides, pdf, Word documents, Excel worksheets, JPEGs, etc. in A-VIEW.
6. Multi-Device Compatible Whiteboard: A-VIEW comes with a digital whiteboard which works similar to a real life whiteboard. It is possible to connect this whiteboard to various devices such as iBall Take Note, U-Board etc. for a more comprehensive experience.
7. Acoustic Echo Cancellation (AEC) helps the user to have a clear conversation without echo during a live class.
8. Hardware Pre-Testing: The system checks the hardware at the client machine and alerts the user if a device is not connected properly.
9. Question Interface enables the users to post their doubts in the question view and other users can vote for the same, this helps the instructor to easily find and focus on the top priority questions.
10. Quiz helps the presenter to conduct live quiz to assess the progress of the students

Various Aspects of A-view in teacher education

A-view classrooms will change the nature of teaching on campus, making it more engaging and efficient. The traditional model of instruction, where students go to class to listen to lectures and then head off on their own to complete assignments, will be inverted. Students will listen to lectures and review other explanatory material alone on their computers and then they'll gather in classrooms to explore the subject matter more deeply—through discussions with professors, say, or through lab exercises. In theory, will allocate teaching time more rationally, enriching the experience of both professor and student.

In order including basic knowledge and understanding to match contemporary demands for competencies, professional skills as well as personal qualities such as flexibility, creativity, independence, responsibility, service orientation etc. there is a need for a new concept of learning covering the development and acquisition of all such competencies (Illeris, 2001). Stolovich (2006) mentioned that many graduate programs are producing instructional designers, who increasingly are being employed by industry and universities to create materials for distance education programs. These professionals often employ e-learning tools, which provide distance learners the opportunity to interact with instructors and experts in the field, even if they are not located physically close to each other. More recently a new form of Instructional technology known as human performance technology has evolved.

In teacher education especially, the increasing tendency is to create a Virtual Learning environment (VLE), which is sometimes combined with a Management Information System (MIS) to create a Managed learning environment, in which all aspects of a course are handled through a consistent user interface standard throughout the institution. A growing number of physical universities, as well as newer online-only colleges, have begun to offer a select set of academic degree and certificate e programs via the Internet at a wide range of levels and in a wide range of disciplines. While some programs require students to attend some campus classes or orientations, many are delivered completely online. In addition, several universities offer online student support services, such as online advising and registration, e-counseling, online textbook purchase, student governments and student newspapers. At the same time, e-Learning refers to educational web sites such as those offering learning scenarios, worksheets and interactive exercises for children.

Conclusion

Across the world, information technology is dramatically altering the way students; faculty and staff learn and work. Internet-ready phones, handheld computers, digital cameras, and MP3 players are revolutionizing the college life. As the demand for technology continues to rise, colleges and universities are moving all sorts of student services, from laundry monitoring to snack delivery online Technology is also changing the classroom experience. The classrooms are wired with cameras for photographing whiteboards, so students can receive the images as digital files. In addition, tablet PCs, Compact computers that allow you to write notes directly on to the screen with a special pen, replace the archaic projector. With the tablet technology allow professors to make notes on charts and spreadsheets and send them directly to their students' PCs and he will get a feedback from each student.

From the above, we can make out that the Information and communication technology has made many innovations in the field of teaching and also made a drastic change from the old paradigm of teaching and learning. In the new paradigm of learning, the role of student is more important than teachers. The concepts of paperless and pen less classroom are emerging as

an alternative to the old teaching learning method. Nowadays there is democratization of knowledge and the role of the teacher is changing to that of facilitator. We need to have interactive teaching and this Changing role of education is inevitable with the introduction of multimedia technology.

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