

Innovations in classroom teaching and effectiveness of e-learning

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Teaching as a Profession: Defined The definitions of teaching are very straightforward: 1) imparting knowledge or skill,

2) an activity,

3) intended behavior to induce learning,

4) a family of activities, training, indoctrinating and conditioning .

Teaching is a very professional career where an individual is held accountable through a series of tests, assessments and tools to gauge the achievement of students and their learning. Teachers utilize their skills to convey a variety of teachable subjects to students within the classroom -- from math, science, history, social studies, to music, art, and life skills. The list of subjects that are put into the hands and creative minds of educators could go on for great lengths.

Teaching is a partnership between schools, community, and parents to help children succeed in their academic careers. Each time a teacher has exposure to a student, they have the opportunity to provide building blocks for students to take with them to new studies and plateaus.

Teaching is such a rewarding and challenging career, as teachers reach outside the box, and often outside their range of knowledge to help students overcome academic, social, and emotional challenges to ensure success. It is incredibly rewarding when individuals have worked diligently with success in reaching students and allowing them to reach their potential growth. It can be a struggle to know that we are planting seeds in the youth that we are influencing and not see cultivated change -- but know that the changes will come in the near future

INNOVATIVE TOOLS

(A) MULTIMEDIA LEARNING PROCESS

I hear and I forget.

I see and I believe.

I do and I understand. - Confucius

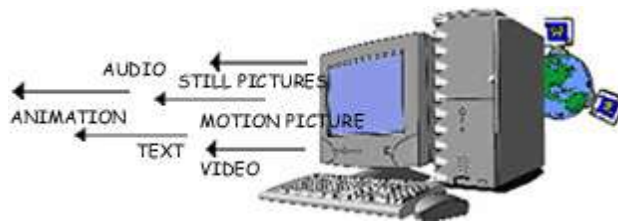
Multimedia, is the combination of various digital media types such as text, images, audio and video, into an integrated multi-sensory interactive application or presentation to convey information to an audience. Traditional educational approaches have resulted in a mismatch between what is taught to the students and what the industry needs. As such, many institutions are moving towards problembased learning as a solution to producing graduates who are creative; think critically and analytically, to solve problems. In this paper, we focus on using multimedia technology as an innovative teaching and learning strategy in a problem-based learning environment by giving the students a multimedia project to train them in this skill set.

Currently, many institutions are moving towards problem-based learning as a solution to producing graduates who are creative and can think critically, analytically, and solve problems. Since knowledge is no longer an end but a means to creating better problem solvers and encourage lifelong learning. Problem-based learning is becoming increasingly popular in educational institutions as a tool to address the inadequacies of traditional teaching. Since these traditional approaches do not encourage students to question what they have learnt or to associate with previously acquired knowledge (Teo & Wong, 2000), problem-based learning is seen as an

innovative measure to encourage students to *learn how to learn via real-life problems* (Boud & Feletti, 1999).

The teacher uses multimedia to modify the contents of the material. It will help the teacher to represent in a more meaningful way, using different media elements. These media elements can be converted into digital form, modified and customized for the final presentation. By incorporating digital media elements into the project, the students are able to learn better since they use multiple sensory modalities, which would make them more motivated to pay more attention to the information presented and retain the information better.

Chart 1 - MULTIMEDIA ELEMENTS



Creating multimedia projects is both challenging and exciting. Fortunately, there are many multimedia technologies that are available for developers to create these innovative and interactive multimedia applications (Vaughan, 1998). These technologies include *Adobe Photoshop and Premier* to create edit graphics and video files respectively, *SoundForge and 3D Studio Max* to create and/or edit sound and animation files, respectively. They can also use an authoring tool such as *Macromedia Director or Authorware* to integrate and synchronise all these media elements into one final application, add interactive features, and package the application into a distributable format for the end-user.

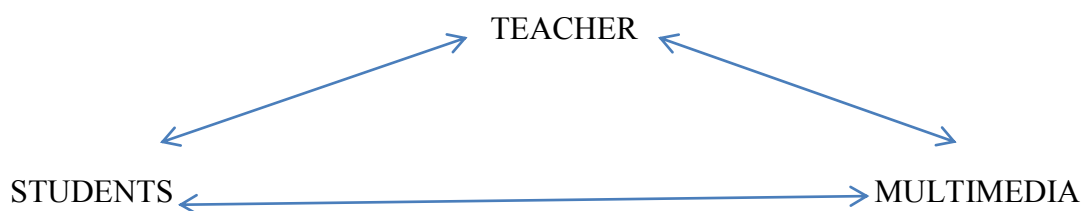
Another advantage of creating multimedia projects in the classroom setting is that when students create multimedia projects, they tend to do this in a group environment. By working in a group, the students would have to learn to work cooperatively and collaboratively, using their group skills and a variety of activities to accomplish the project's overall objectives.

TRADITIONAL AND MULTIMEDIA LEARNING THE DIFFERENCE

Chart 2 - TRADITIONAL METHOD – A ONE WAY FLOW

TEACHER → STUDENTS

Chart 3 - MULTIMEDIA LEARNING – AN INTERACTIVE LEARNING PROCESS



Various multimedia tools:

Tools	Methods	Metaphors
Mspowerpoint, Astound Graphics and Flash Slide Show Software	Easy to prepare and it can be prepared with many of the popular multimedia elements like graphs, sound and video.	Slide based
Macromedia, Flash Authorware, BPP I Learn and I Pass	Presentation is created using icons to represent different	Icon based

	media elements and placed in a flowline.	
Windows Movie Maker, Winamp, Macromedia Director	Presentation is created using moviemaking concepts of casts, sounds, pictures and scores	Movie based
Adobe Acrobat Reader	Easy to prepare and with word documents if u have Acrobat Reader 5 with many popular multimedia elements like graphs sound and charts	Book based

(B) OTHER INNOVATIVE TOOLS SUGGESTED

The researchers suggest some of the methods can very well be applied by the modern teachers. As the researchers feel that basically the core objective of teaching should never be deviated by the use of an innovative method. The following methods which are suggested are an extension to the traditional methods of teaching.

(1) MIND MAP

Mind maps were developed in the late 60s by Tony Buzan as a way of helping students make notes that used only key words and images, but mind map can be used by teachers to explain concepts in an innovative way. They are much quicker to make and much easier to remember and review because of their visual quality. The nonlinear nature of mind maps makes it easy to link and cross-reference different elements of the map.

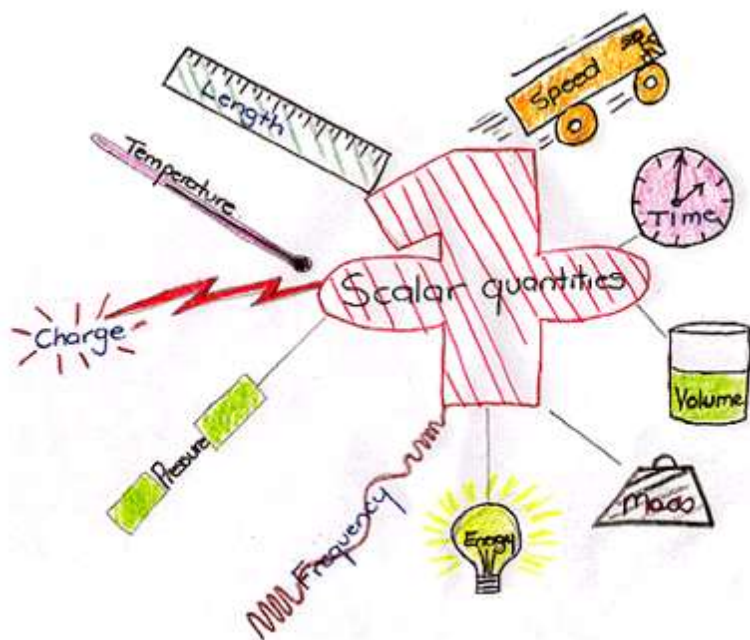
Mind Maps are also very quick to review, as it is easy to refresh information in your mind just by glancing once. Mind Maps can also be effective mnemonics and

remembering their shape and structure can provide the cues necessary to remember the information within it. They engage much more of the brain in the process of assimilating and connecting facts than conventional notes.

The key notion behind mind mapping is that we learn and remember more effectively by using the full range of visual and sensory tools at our disposal. Pictures, music, color, even touch and smell play a part in our learning armory will help to recollect information for long time. The key is to build up mind maps that make the most of these things building on our own creativity, thinking and cross linking between ideas that exist in our own minds.

As the recent research point that any particular information explained with the help of graph charts make a high impact in the minds of the people and keeping this as the core aspect the teachers may try to picturize the concepts and show the same to the students

Chart 4 - AN EXAMPLE OF MIND MAP FOR SCALAR QUANTITIES



This would bring very high impact on the minds of the students about a concept

- ✓ Creates clear understanding
- ✓ PowerPoint can be used widely.
- ✓ Innovative thinking improves

(2) TEACHING WITH SENSE OF HUMOUR – “HUMOUR AN EFFECTIVE MEDIUM OF TEACHING”

Everyone loves a teacher with an infectious sense of humor. Looking at the lighter side of life not only fosters cordial relations between professors and students, but also provides welcome relief while trying to follow a difficult lecture on a complicated subject. When there is a willingness to change, there is hope for progress in any field. Teaching is a challenge. Learning is a challenge. Combining both effectively is a challenge. Being humorous is a challenge. However, laughing is easy. We are convinced both by experience and research that using humour in teaching is a very effective tool for both the teacher and student.

Humor strengthens the relationship between student and teacher, reduces stress, makes a course more interesting and if relevant to the subject, may even enhance recall of the material. Humor has the ability to relax people, reduce tension,

and thereby create an atmosphere conducive for learning and communication. Numerous studies in the field of advertising have noted that humor is the most effective tool for enhancing recall of advertisements.

It is easy to create a humor in the classroom by reading books of jokes and to listen to professional comics. The students should be encouraged to take notes, especially to learn about the professionals' use of such techniques as exaggeration, pauses, and timing. Observe reality and exaggerate it - much humor lies in observations about real life and truthful situations. In conclusion, humor not only plays an important role in the healing process but is also very important in education.

(3) Z TO A APPROACH

This approach attempts to explain the application part of a particular concept first. The teacher should explain the application of a particular concept first and explain the effects of such applications. For example in management subject - motivation is explained in a manner that the organization get extensive benefits out of using some techniques like promotions and awards. So here the use of promotion is explained first and later students would get interest in knowing what are promotions and awards. The teacher starts explaining what is promotion and explains what motivation theory in management is. Another example we can try is that in accounting the Income statement and Balance Sheet can be explained first and later drawing their attention to double entry system of book keeping.

Strengths:

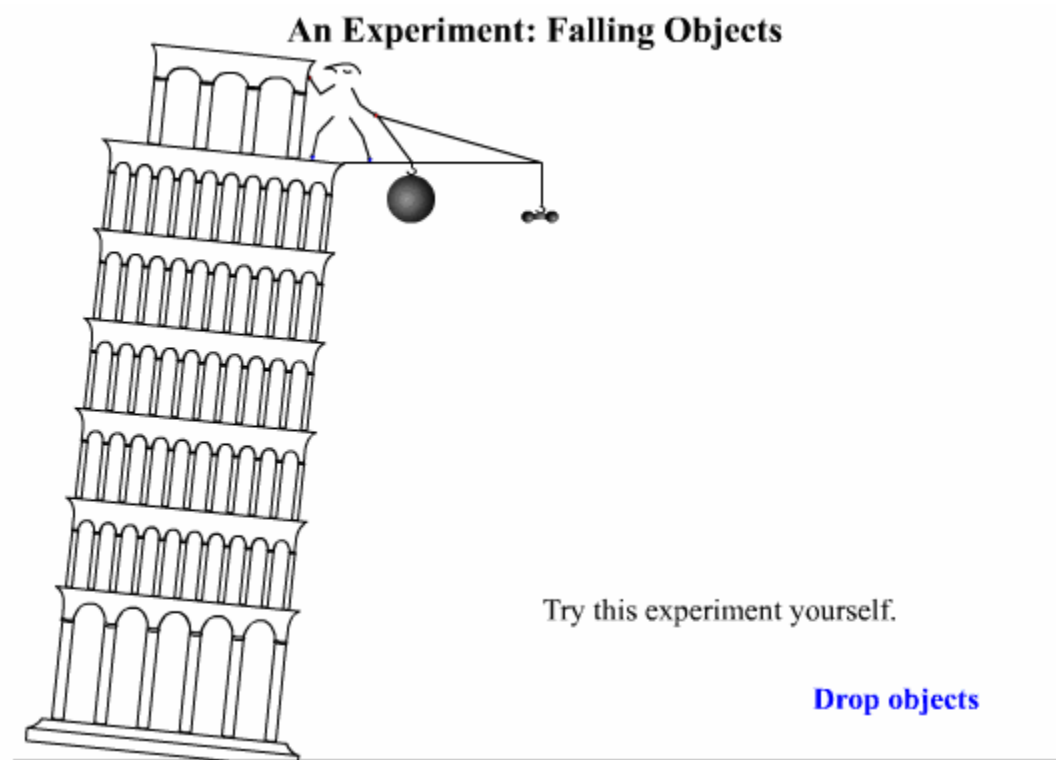
- ✓ Makes a particular concept clear
- ✓ Students develop interest to know exactly the concept.
- ✓ Creates long lasting memory/correlation of a concept.

Weaknesses:

- ✓ Take quite long time for a teacher to introduce a concept
- ✓ Initial difficulty in understanding a particular concept will be encountered.

Chart 5 - LEANING TOWER OF PISA EXPERIMENT – EXAMPLE TO Z – A

APPROACH



Source: vision learning

Z – A approach is explained in the following two charts. In the first chart a man drops cannonball and lead weight from the top of the building. Hypothesis for this experiment is both the object will fall at the same rate

In the second chart the cannon ball and lead weight have reached the ground.

Source: vision learning

Concept Simulation - reenacts Galileo's experiment of two different objects falling at the same rate.

The above chart explains the application of that Gallileo's theorem. Here the teacher explains how two objects reach the ground if they are put from a particular distance from ground level. Traditional way of teaching method will be explaining the theorem first and followed by its application. But this Z-A approach goes opposite in a manner that the proof or application is explained first and later the theory. Then it is explained that this the concept developed by Galileo. The above example of tower

depicts a (possibly mythical) experiment in which Galileo dropped two objects from the leaning tower of pisa to demonstrate their comparable rate of descent.

(4) MNEMONICS WORDS- WORDS –WORDS APPROACH

Here the teacher is not supposed to talk on a particular concept for a quite long time. But to make it clear to the students he can just go on saying mnemonics or its associated meaning in words. Here he goes on saying only words instead of sentence, and once they come to a basic understanding of the meaning of a particular concept then the teacher will explain in sentences. For example in teaching language courses this technique can be used as an effective medium by the teacher to develop word power.

- ✓ Dictionary must be used widely
- ✓ Word power increases
- ✓ Teacher also gets to know many words pertaining to a particular concept.

(5) ROLE PLAYING AND SCENARIO ANALYSIS BASED TEACHING

Role playing and scenario analysis is mostly used in organizations that try to analyze a problem pertaining to the organization, and this is also used in management institutions. But the similar kind of practice can be tried in other specialization too like science and engineering. Science and engineering courses have practical but in support of those practical if students are given a scenario and other options to solve a particular issue, then the students are exposed to decision making in a given environment.

For example, in teaching accounting the role of accountant can be explained by role playing technique. Invoice and bills can be given to students and asked them to assume the role of accountant. Here the real entries pertaining to transactions are made by the student and this is more practical approach to teaching where theory is supplemented by proper practical knowledge. Similar kind of technique can be applied in management, engineering and science courses.

VI. 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. At Columbia University, a real-time Web-based service called Laundry View lets students log on to a Web-based system to see which washing machines are free before they head to the laundry room. They can monitor their wash and can even program the service to e-mail them when their load is done.

Technology is also changing the classroom experience. The classrooms at New York University's Leonard N Stern School of Business feature all sorts of conveniences for students and teachers. For instance, the room is 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 onto 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 feed back 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 penless 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 and the spawning of a technologically-savvy generation of youths.

The analysis reveals some of the suggestions that the teaching community can practice in the classrooms. Ultimately the teaching people are satisfied when he could reach the students community with his ideas and views. So, teaching depends upon successful mode of communication and Innovation though we mean the changes that we propose to be included in our medium of communication or even inclusion of some other elements in communicating information.

The researchers recommend that the teaching would be highly effective if the teacher start to use the recent multimedia technologies like usage of computers extensively or some modifications in the conventional mode of teaching. The use of computers may be very well practiced in the environment where the use of such technology is highly possible, but there must be some sort of innovation which can also be practiced in an environment where such use of technology is on its way to growth. In those environments use of humor, role playing, words –words approach, Z-A approach are the ideas that can very well be practiced.

The researchers believe that the core objective of teaching is passing on the information or knowledge to the minds of the students. Any method using computers or modifying the existing conventional chalk-talk method are innovative if they ultimately serve the attainment of core objective of teaching.

What is E-learning.....????

E-Learning is the use of technology to enable people to learn anytime and anywhere. e-Learning can include training, the delivery of just-in-time information and guidance from experts.

Like any learning process, e-learning depends on effective communication of human knowledge, whether this occurs in a face-to-face classroom or across the Internet. The effectiveness of e-learning also depends on establishing two-way communication between teachers and learners, and among learners themselves.

What are the Advantages of E-Learning?

Flexibility, Accessibility, Convenience

Learners can proceed through a training program "at their own pace and at their own place." They can also access the e-Learning course at any time, and only as much as they need. This is also known as "Just in time and just enough."

Cross-platform Support

E-Learning courses are accessible by Web browsers on any platform: Windows, Mac, UNIX, OS/2, Amiga, etc. You can deliver your training program to any machine over the Internet or intranet without having to author a program specifically for each platform.

Browsers and Internet Connections are Widely Available

Most computer users have access to a browser, such as Netscape or Internet Explorer, and are connected to a company's intranet and/or have access to the Internet.

Inexpensive Worldwide Distribution

No separate distribution mechanism is needed. E-Learning courses are accessible from any computer anywhere in the world, which keeps delivery costs low.

Ease of Updates

After the e-Learning course is released, any changes can be made on the server hosting the program and everyone worldwide can instantly access the update. Courses can be designed to access designated current information, such as the latest new product specifications, from any other server worldwide for an on-the-fly update whenever the e-Learning course is run.

Savings in Travel Cost and Time

There are no travel costs for bringing remote employees to a centralized workshop because the Web is available from all desktops. According to some analysts, the actual time required for training by computer averages about 50% to that of instructor-led training, further saving money.

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