

Innovative Pedagogical methods for Imparting Management Education to Indian Students



Anupama Raman

Associate Curriculum Architect, Software Group - Industry Solutions, IBM, India, anuprama@in.ibm.com

Abstract

The purpose of this paper is to compare and evaluate the traditional teaching methods with the other emerging multimedia based learning methods. The main objectives of any learning method should be to retain the interest of the learner throughout the learning process and to enhance retention for the learner.

This paper will be organized into three parts: the first part will focus on the traditional teaching methods . The advantages and disadvantages of the traditional teaching methods will be examined in this part.

The second part will focus on new techniques like mind maps, role plays, videos etc which can be used as an additional component with the traditional teaching methods to improve the takeaways of the learner.

The third part will focus on multimedia based learning methods like e-learning, virtual classrooms, mobile e-learning or m-learning, blended learning approaches and so on. The advantages and disadvantages of each of these approaches will be discussed and the paper will conclude by suggesting a method or approach which is most suitable for imparting business education to Asian students

Keywords : Teaching, Learning, Pedagogy, e-learning

Introduction

In the contemporary sphere of learning/teaching, there are frequent shifts in the pedagogical methods which are used to impart training to students at higher education levels. This is mainly due to two factors: the first is the change in the nature /type of students who opt for higher studies. This change in nature could be mainly attributed to the fact that now a major portion of the students who opt for higher studies especially in the field of management are not full time students instead they are full time employees of an organization and they tend to take up higher education only as a side track activity. The second factor is the change in the expectation about the learning outcomes . This could be attributed to the fact that many students who opt for higher studies especially in the field of management tend to have some kind of work experience in some organization/domain. Hence they tend to expect an outcome that would help them to excel or perform better in their job roles. This may demand a change in the pedagogical methods used to impart education to them. Those new pedagogical methods which are devised to improve the learning takeaways of the students will be the key focus area of this paper. This paper starts by examining the conventional classroom based teaching method and then moves over to the techniques which can be used to complement classroom based teaching. The last part of the paper examines the new pedagogical methods which have emerged in the teaching and learning space.

1.1 Classroom Based Teaching/Instructor Led Training(ILT)

In Classroom based teaching , the instructor is the sender or the source, the educational material is the information or message, and the student is the receiver of the information. In terms of the delivery medium, the instructor can deliver the message via the “chalk-and- talk” method , overhead projector (OHP) or LCD projector. This directed instruction model has its foundations embedded in the behavioral learning perspective (Skinner, 1938) and it is a popular technique, which has been used for decades as an educational strategy in all institutions of learning. [1]

Following are the advantages of this approach :

- Structured classes, delivery hours and well-equipped and controlled facilities provide a great learning environment. This goes double when students participate actively in class.
- ILT is like being in school that is, it uses familiar learning models and techniques. By taking professionals away from their desks and their everyday job schedules, an ILT provides real concentration and learning for the learner.
- Access to a savvy, experienced instructor permits students to apply what they learn to real-world needs by asking questions and looking for connections to the job. Because learning works best when materials are relevant, good instructors add real value.
- The best classes not only include, but also insist that students get hands-on experience with the subjects being taught..Analysis and problem-solving skills are learned best

through trial and error, with access to a helpful mentor as needed. All

- Good instructors distinguish between the information that students must master to pass exams and the information they must know to do their jobs. They can explain and illuminate such differences. This not only improves the odds of passing exams, but also helps develop genuine job skills.

Following are the downsides of this approach :

- ILT is typically expensive when compared to other forms of learning like e-learning, virtual classroom learning etc.
- Because the quality of any ILT experience rests squarely on the quality of the instructor, a bad instructor can negate all the benefits of an otherwise good ILT experience.
- Taking an ILT class means making room in your schedule and rearranging your life around training.
- ILT follows whatever pace is dictated by its training materials, by the time allotted for the class and the instructor's approach. If you don't fit the profile for a class's target audience, it can be frustrating.

1.2 Techniques /tools to improve the effectiveness of Classroom Based Training/Instructor Led training(ILT)

In this section, we will examine the techniques which can be used to improve the effectiveness of the Classroom based training /ILT.

1.2.1 Role Play and Scenario Based Analysis as effective educational tools

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. 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.

Another example where role playing is really helpful is in imparting knowledge of Lean Six Sigma. Six sigma aims to improve the quality of a process by reducing the number of errors which creep in to the process during its various phases. To clearly demonstrate this technique to the students, students can be made part of a process and then made to understand the total time taken to complete the entire process. At the later stages, students can be made to repeat the same process by implementing six sigma principles at various points and then compare the time taken to the initial time. Using this approach they will learn how to utilize each member's time effectively to produce better outputs.

1.2.2 Use of Mind Maps

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 instructors 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 instructors may try to picturize the concepts and show the same to the students.

1.2.3 Use of Videos in Classrooms

Instructors who use instructional video report that their students retain more information, understand concepts more rapidly and are more enthusiastic about what they are learning. With video as one component in a thoughtful lesson plan, students often make new connections between curriculum topics, and discover links between these topics and the world outside the classroom.

Video is uniquely suited to:

- Illustrate complex, abstract concepts through animated, 3-D images.
- Show or demonstrate lab exercises that can't be done in class.

By exploiting the medium's power to deliver lasting images, instructors can:

- Reach students with a variety of learning styles, especially visual learners, and students with a variety of information acquisition styles .
- Engage students in problem-solving and investigative activities.
- Help students practice media literacy and critical viewing skills .

1.3 Multimedia Based Learning Methods

The traditional education is made in classrooms where the instructor presents the learning material to a group of students. Regardless of the obvious advantages as a direct contact between an instructor and students and immediate feedback, the traditional classroom education has many disadvantages as mentioned above. The rapid growth of information and communication technologies and rising computer knowledge of the students has led to the usage of many innovative technologies in teaching and learning like e-learning, m-learning, Self Paced Virtual classes(SPVC), Instructor Led Online(ILO) and Virtual Classroom. In this section it is planned to compare the various multimedia approaches for learning like e-learning, m-learning, Self Paced Virtual Classroom(SPVC), Instructor Led Online(ILO) and virtual classrooms.

1.3.1 E-learning

The exponential growth of information has made it imperative for learning to happen quickly. Meeting this challenge requires new thinking about how we acquire knowledge and skills as well as how we develop learning resources that can keep up with the knowledge economy. The advent of ICT and the Internet has greatly influenced the way knowledge is transmitted. This has resulted in the development of e-learning. E-Learning is the delivery of individualized, comprehensive, dynamic learning content in real time, aiding the development of communities of knowledge, linking learners and practitioners with experts. Typically, the content for e-learning is in the electronic form and is stored either in CD ROM's or on servers. Learners access these contents directly from standalone computers or from the servers through the networked computers. The contents are typically developed to be engaging and interactive and the learners are supported "virtually" by the instructors. Recent reports indicated that the greatest growth rates for e-learning will be in the Asia Pacific region.

1.3.2 M-learning

Mobile e-learning or M-learning is a subset of e-learning and basically means the ability to learn anytime anywhere without permanent physical connection to networks using devices like cell phones, portable computers and tablet PCs. The growing popularity of mobile devices and the emergence of India as the second largest telecom market in the world throws light on the fact that m-learning can be used as an effective educational tool in India.

1.3.3 Self Paced Virtual Classes (SPVC)



Figure 1 Self Paced Virtual Classes

SPVCs are online courses that use web-based reading assignments, multimedia presentations, content support from instructors and subject matter experts, and hands on labs using the actual

product/technology . Most self-paced virtual classes enable you to practice real hands-on labs on remote machines.

Table I Classroom Training & SPVC

Classroom Training	SPVC
Fixed schedule	Flexible
Trainer and student availability	Location of student's convenience
Travel for trainer and students	No travel required
Incurs relatively high cost, infrastructure requirements and network connectivity	Lower cost for training and no additional infrastructure costs

1.3.4 Instructor Led Online (ILO)

Live virtual class delivered to your desktop over the Web using Voice over IP (VoIP) and hands-on labs. Live instruction with the same course content, class exercises and hands-on labs as classroom training without the need to travel.

1.3.5 Virtual Classrooms

Live virtual class delivered to a satellite facility or your desktop using two-way audio/video and hands-on labs. Students get an opportunity to interact face to face virtually with the instructor. But the downside of this approach is that it requires huge network bandwidth to be fully effective and functional.

1.4 Evaluation of the ILT versus Multimedia Learning Methods

Now a comparison of an ILT (It is assumed to be an ILT without any other multimedia support) vs

Multimedia learning (in ideal scenarios) .(It may be noted that this table was derived only based on self and peer experiences and there is no documentary evidence for any aspect claimed here.).For arriving at this metric for comparing ILT versus Multimedia based learning, following were the values assumed for the various levels

Sometimes present/available =0.25,

Never present = 0,

Always present/available =0.5

From the scores it is clear that multimedia learning methods far outweigh the traditional teaching methodology or Instructor Led Training methods.

However the possibility of improving the traditional classroom teaching using the techniques suggested in the paper is an area which can be explored further. That was beyond the scope of the further study and hence was not included in this paper.

Table II Multimedia learning methods versus Instructor Led Training methods

Parameters for measurement	Instructor Led Training	Multimedia Based Learning	Comments
Presence of an instructor	0.5	0.25	In case of virtual classrooms instructor is present and interactions can happen over audio and video
Presence of realistic seating for participants	0.25	0.25	There is typically some constraint on the number of participants in an ILT as well as a number of participants for multimedia learning methods
Ability to visualize complex facts/concepts	0.25	0.5	Simulations are always part of multimedia learning
Ability to perform lab exercises	0.5	0.5	Exercises are always a part of any medium of instruction
Quality time to pause and think	0.25	0.5	
Ability to perform exercises without instructor assistance	0.25	0.5	
Flexible study options	0	0.5	
Universal delivery consistency	0	0.5	
Ability to interact and check your knowledge	0.25	0.25	
Tracker for the completion of training	0.5	0.5	
Presence of Geographic dependence (in this case 0 denotes presence and 0.5 denotes absence)	0	0.5	
Cumulative Score	2.75	4.75	

Conclusion

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 instructors. Nowadays there is democratization of

knowledge as the role of the instructor/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 technology-savvy generation of youths.

References

- [1] <http://www-304.ibm.com/jct03001c/services/learning/ites.wss/us/en?pageType=page&c=a0000050>
- [2] Agnew, P. W., Kellerman, A. S. & Meyer, **Multimedia in the Classroom**, Boston: Allyn and Bacon.
- [3] Boud, D. & Feletti, G. **The Challenge of Problem-Based Learning**, (2nd Ed.), London: Kogan Page.
- [4] Hofstetter, F. T. **Multimedia Literacy**, New York: McGraw-Hill.
- [5] Jonassen, D. H., Peck, K. L., and Wilson, B. G. (1999). **Learning**.