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Quality Enrichment in Technical Education through E-Learning Methods

B. Sripala¹, G. V. Praveen²

¹Assistant Professor in English & ²Professor in Civil Engineering
Varadha Reddy College of Engineering, Warangal, India

Abstract— It is opined that, the enrichment of quality in technical education is more important rather than expanding in quantity wise. Further, in the recent years, it was observed that, the quality in technical education is markedly deteriorating due to the rapid establishment and expansion of institutions that are offering technical education. Also, it is evident that very few institutions have been maintaining the academic standards as per the academic curriculum prescribed by various universities. This may be due to the lack of resources such as requisite number of qualified faculty, quality in teaching and teaching methods and also lack of infrastructural facilities. To supplement some of these deficiencies in the current technical education system, systematic E-learning methods can be introduced at various levels during the graduation program. Adopting some of these special methods in a scientific way to enrich the quality in technical education leads to the socio-economic and industrial development of the country. Hence, there arises a dire need to strengthen the technical education system through scientific methods of teaching and reinforce the education system through E-learning processes. In the present paper an attempt is made to discuss some of the E-learning methods that can be adopted during the regular curriculum. This paper also describes some of their outcomes.

Index Terms— E-Learning Methods, Technical Education; Quality in Teaching.

I. INTRODUCTION

In the present day scenario, there is an increasing demand to pursue technical education over other types of education. It is observed that, the employment opportunities for a graduate coming out with technical qualification are highly appreciable. Further, there is a noticeable scope for a professional student both in private and public sectors. Identifying the need of the industry and systematic way of introducing modern technology such as E-learning systems in a structured way in technical education enriches the quality of education. In the recent days, technological advancement in educational aids is taking place at a faster rate. These educational facilities, in turn help for better industry–institution relation and the graduates to place them at appropriate levels. To accomplish this, several items of equipment and tools are now getting into the teaching process. But, it should be admitted that only few teachers working can access to these. Hence, the technical institutions should kindle such activities to enhance the output of the graduating students. Accordingly, the curriculum should be reformed and designed to meet these requirements, enabling the learning factors and principles in the course of the study.

II. METHODS OF E-LEARNING

Some of the E-learning methods/aids that suit to classroom teaching are discussed below.

A. Use of PowerPoint Presentations

It is obvious that lot of emphasis is required on quality of increasing professionals with regard to their ability to understand. In this connection, the PowerPoint presentations are helpful in enhancing the capabilities of students. Further, the PowerPoint presentations that are prepared by an expert can be utilized by a faculty with less experience which in turn helpful for delivering the same context. The educational attainment of professional degree can be also fulfilled as per the prescribed curriculum using PowerPoint presentations.

B. Animations/ Multimedia

One of the best ways to transfer the information through animations with the help of multimedia to professional students. This makes them more understandable regarding the concept. The efficacy of the teachers will also improved by adopting such techniques in clearly transferring the knowledge.

C. Audio/Visual Aids

The delivery mechanism can be simplified by adopting teaching method through audio- video aids to enhance the learn ability of professional students, by which the core content can be delivered in effective manner.



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D. Projector/LCD

Achieving the quality standards in teaching with the aid of projector/LCD is playing commendable job in transferring the knowledge to the students. Perplexing problems faced by the student community can be effectively dealt using these types of aids leading to brilliant technical and analytical credentials.

E. Laptop/ Desktop Computer

It is very much observed that, value is added to the content with the help of laptop/computer to orient the professional students as required by the academic curriculum. This helps in faster rate of the completion of the syllabus in an effective manner. Hence, the challenges of the forthcoming days can be overcome by adopting these aids.

F. Internet/World Wide Web

The modern technology in the form of internet/world wide web offers a sort of stimulus to the learners and hence, teaching aid help in bringing difficult concepts within easy reach of the students' comprehension.

G. Virtual Classrooms

Class room based approaches do not have access to the same opportunities as work place based approaches. Practical case studies, simulations and activities with Industry representatives can all help to address the lack of real work place. Working closely with industry contacts to design activities are even assistance in instructions can be useful ways of ensuring a high degree of relevance of activities. Further, in this regard, digital infrastructure plays a vital role in class room teaching, where the information can be shared in an effective manner. It is very flexible and addressing students will become very easy using aids like smart boards, that records the information shared by the faculty can be stored and can be retrieved whenever it is necessary. The content delivery becomes easier and it helps teaching-learning process without any difficulty. The instructor need not be present physically in the class room for delivering the content, only sometimes it requires supervision by an in-house expert to make students understandable.

H. Webinars

In the recent times, some of the institutions which are offering professional education are introducing the concept of virtual class rooms with the incorporation of Webinars. Webinars are web based seminars and considered to be very effective, wherein the expert from relevant field of expertization can share the knowledge with students without direct contact. The services of an expert can be utilized with the institutions. This method can save not only the time but also it share the knowledge. Hence, conducting Webinars can be treated as an effective way of teaching.

III. DISCUSSION ON E-LEARNING METHODS

E-learning methods must meet all criteria for the academic personnel and must offer the students a structured access and interaction with the personnel which guarantee of supply and ready access to sufficient technological resources and educational material. Aimed at equipping students with skills that will hold them good in life, E-learning is very much helpful. E-Learning involving a methodology of lectures, self-work and group tasks are aimed at improving the confidence level of students besides making them conversant with different aspects of industry expectation. E-Learning sessions should aimed at exposing students in areas most needed in varying stages of life and job, say, communication, interpersonal skills, technical skills and team building, to name some.

IV. CONCLUSION

Today, the technical education is undergoing metamorphic changes. Hence, it is desirable for the institutions offering the technical education to adopt some of the innovative methods of teaching – learning methods to enhance the quality of teaching. E-Learning techniques with appropriate content delivery are more useful for information sharing with increased interaction. E-Learning tools such as PowerPoint presentations, multimedia, audio-video aids, internet, virtual class room presentations, mobile learning etc., makes the teaching – learning process more effective. Further, these techniques may replace the traditional teaching methods, thus making the technical education more effective and provides some of the technical solutions for teaching methodologies.

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