

From Notebooks to the Web

SMEs in the Indian education sector must upgrade their teaching methodologies to include web-based technologies

IN an increasingly globalised industrial atmosphere in India, the education sector may be credited as a key factor in the country's technological development. Thanks to its huge resource pool, a considerable proportion of India's manpower has found employment across multinational firms in the last few years. To maintain this trend and ensure sustainable economic development of the country, it has become critical to consistently develop highly skilled manpower in the country.

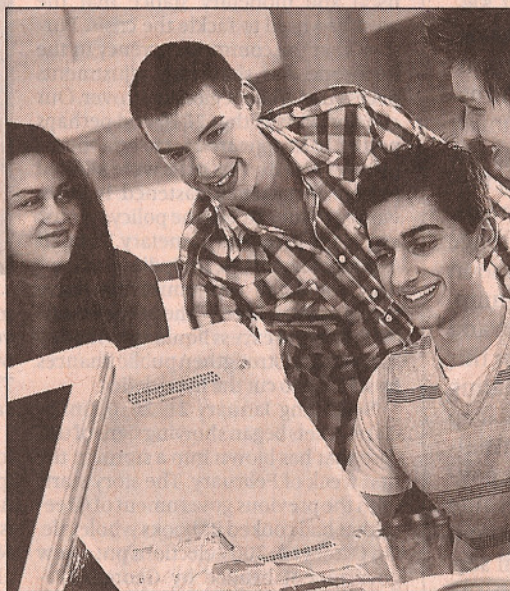
The need to support India's knowledge-driven economy has resulted in the emergence of an education industry dedicated to providing core education and education-related services such as engineering entrance exam coaching and professional training. With services provided by a considerable percentage of small and medium players, the industry consists of a large number of professional training institutes and private coaching centres created especially to provide higher education and advanced courses.

A majority of these small and medium enterprises in the education sector still use conventional teaching methodologies such as regular classroom teaching programmes, paper notes and book-based study. According to Basant Sharma, MD, Gyan Bindu Academy, "A huge number of players in the education industry still follow conventional teaching methodologies. Most of these have a presence in a select few cities, and admit a limited number of students for regular classroom contact programmes." This hampers their teaching efficiency by limiting their reach, the degree of information sharing and data management capabilities.

In the last few years, with exponential growth in the demand for high-quality education in short-term packages, such conventional teaching methodologies have become utterly obsolete. In this scenario, several IT-based technologies such as web content management and web-based learning have been explored to improve the performance of the education industry and the prospects of SMEs in the sector.

Web Content Management System (WCMS)

It is a content management software package which, when implemented as a web application, can be used to create and manage huge, dynamic data repositories in HTML format. "The software facilitates key data-associated operations like content development, content editing and web maintenance operations," says Dr R Krishnamoorthy, HOD, Department of IT, Anna University. Especially important is its suitability for SMEs in the education industry. WCMS can be effectively



used to convert hard copies of data into digital formats, thus saving considerable space and time spent on storage and retrieval.

The digital data files thus obtained can be stored and shared among the students and faculty through intranet on a real-time basis. This helps in internal coordination, while restricting access within the predefined circle. Contemporary WCMS have Enterprise Content Management (ECM) support that helps arrange and collate interrelated data according to defined workflows. This can be of major importance in preparing online study material in subject-wise categories, hence increasing its effectiveness.

To ensure data integrity and privacy over a wide area network (WAN), WCMS enables the defining of rules to

SYNOPSIS

- Synchronous web-based learning systems are gaining popularity due to secure and efficient information sharing
- WCMS has immense scope for application in the education sector
- Economical WCMS solutions are available for SMEs in education

monitor publishing of content over public websites. To quote a relevant contemporary example, ShimBi CMS is an economical WCMS package for SMEs in the Indian education industry. Developed by ShimBi Labs, the WCMS package enables interactive website development with a hosting capacity of 1,000 MB at an affordable price.

Web-based Learning

It is an umbrella term which encompasses a range of online learning technologies. Such learning technologies have resulted in the emergence of 'global classrooms' in which any number of students and teachers can interact at any moment on a real-time basis. The learning technology can enable a wide range of functionalities for SMEs in education. "Supported by the world wide web, web-based education modules can empower SMEs with capabilities such as multimedia data management, HTML programming, and networking for distance learning," says Dr BV Pawar, Professor, Department of Computer Science, North Maharashtra University.

Contemporary web-based learning systems have two types of education modules built into them—asynchronous and synchronous modules. In asynchronous systems, the educational module needs to be installed from specific websites, which can be unpacked offline on local machines. In these learning systems, there is no interaction between students and teacher.

In contrast, synchronous web-based learning systems involve online interaction between students and teacher. Such education systems are primarily based on e-learning technology, through which knowledge can be shared over the internet on a real-time basis. With the adoption of synchronous web-based learning technology, SMEs can establish an interactive environment with access to online tutors through browsers such as Mozilla Firefox and Netscape Navigator. Password-protected user accounts can be made to restrict the use of the networks in case of paid training packages.

To Summarise

Considering the level of technology penetration in India and the rising need for highly-skilled manpower across the globe, it has become critical to revitalise the education system and teaching methods in the country. For this, the huge number of SMEs catering to the country's education sector—coaching centres and professional training institutes—must adopt web-based technologies such as WCMS and e-learning solutions.