



A Perspective Review on E-Learning Promotions and Development

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ABSTRACT: In and around the world the education system has wide spectrum. The spectrum holds numerous methodologies and innumerable way to nurture the knowledge. Eventually the growth of technologies in now days replacing the traditional education to modern approach. The culture tradition and attitude are motivating the educator as well as the learner. Another dimension in both teaching and learning is named as E-learning. It had its own significance. It motivates the entire educator at least anyone their qualification may through the e-learning system. The conceptual or principle of e-learning states that a student or group of students have prior knowledge in any subjects may taught with the aid of multimedia and other technological support. This paper presents the different perspective of the researchers about e-learning and Build a new model to inherit the ideas of e-learning.

1. INTRODUCTION

The Educational Data Mining (EDM) provides a new dimension educational research .The growth of education starts form KG to Higher education; everyone needs a system to simulate the performance to predict the future trends. Now that affordable e-learning solutions [1] exist for both computers and internet, it only takes a good e-learning tool for education to be facilitated from virtually anywhere. Technology has advanced so much that the geographical gap is bridged with the use of tools that make you feel as if you are inside the classroom.

E-learning provides more facilities to share material in all kinds of formats such as videos, slideshows, word documents and PDFs. Due to internet most important developments in education have happened. Now the tremendous growth in technology



such as smart phones, text messaging and using the internet so participating in and running an online course has become a simple event. In the modern world of e-learning the available technologies support in incorporating new courses and content should be updated quickly to give students the very latest information [2]. Due to this reasons why many businesses are now offering training via e-learning and other reasons are low costs and the ability for employees to study in their own time and place. Overall, traditional learning is expensive, takes [1] a long time and the results can vary. The importance of E-learning is now a given fact and it can offer an alternative that is much faster, cheaper and potentially better.

There are so many benefits and at the same time it has its own disadvantages also.

1. It has no boundaries and limitations. – no restrictions on time and location
2. More amusing – interactive and fun through multimedia
3. Cost effective – amount of money spent on text books and school fees
4. Suitable with multilevel approach – the companies and organizations train their employees to operate and train in easy manner.

2. RELATED WORKS

In modern generation there are multiple learning platforms available on internet. This appraisal gives an initiative of framework to progress E-Learning platform.

Katrina Sin *et al.*, discussed the penetration of Big Data technologies [3] and tools into education, to process the large amount of data involved. Their study also looked into the recent applications of Big Data technologies in education and presents a review of literature available on Educational Data Mining and Learning Analytics. Priyanka

Priyanka R. Pradhan and R.B. Kullkanri *et al.*, planned to create a fully featured leaning system for the learning environment. They introduced an evaluation of E-learning through data mining techniques which is flexible for faculty and advisors, etc.

S. Lakshmi Prabha and A.R.Mohamed Shanavas *et al.*, explained [4] how the data mining tasks such as classification, prediction, and clustering can be applied to data taken from an e-learning system. The performance of sixth grade school students are taken for the analysis and present the results achieved by WEKA tool.



Ankita Chopra and Aakanksha Chopra *et al.*, made a survey of the specific application of data mining in learning management systems and a case study with university database [5]. In their research they explained how data mining tasks like clustering can be applied to the data taken from an e-learning system and also deals with E-threats and E-risks associated with it. Their focused upon ubiquity of internal cyber-attack as well as lack of proper IT policies and procedures in e-Learning systems. The performance of students on online course in digital electronics is taken for the analysis and results were achieved through WEKA tool.

Thakaa Z.Mohammad, Abeer M.Mahmoud, M. El-Sayed, and M. Bdel-Badeeh *et al.*, presented a technical analysis [6] for seven studies in the context of the application of data mining approach in e-learning. The results of our analysis supports the usage of data mining techniques for building a new generation of intelligent e-learning systems for different tasks and domains. Current research areas and promising benefits from applying data mining techniques in educational systems for educators, decision makers, and students are discussed [7] as well.

A.Nurbiha Shukora, ZaidatunTasira and HennyVan der Meijden *et al.*, determined on assessing the learning effectiveness of online collaborative learning environment based on students' log files as well as student learning achievement test scores as the primary indicator. Using data mining technique their study showed that the predominant attributes that predict students' learning outcomes. The proposed predictors generated by means of data mining technique can give out as a valuable information resource to suggestion students on knowledge effectively in an online collaborative learning environment.

3. FUTURE OF E-LEARNING

With the massive enhancement of mobile networks in the past few years and the increase in telecommunication, taking all the amazing features of e-learning on the road is a reality with smart phones and other portable devices. The social media makes a significant role in transforming the e-learning constantly. Several e-learning trends can give us a clear view on how the future of e-learning [8] and learning tools will be shaped.

Micro-learning focuses through micro-steps in digital media environments is a daily veracity for today's knowledge workers. These activities can be incorporated into a learner's daily routines. The micro-learning reduces load on the learners through push media, unlike "traditional" e-learning approaches. Micro-learning is an important paradigm shift that avoids the need to have separate learning sessions since the learning process is embedded in the daily routine of the end-user. It is also perfectly suited for mobile devices where long courses can be too much of a good thing.



E-learning [9] faculty development needs to consider the following areas such as Pedagogical, Technological, Interface Design, Evaluation, Management, Resource Support, Ethical, and Institutional which is given in Figure 1.

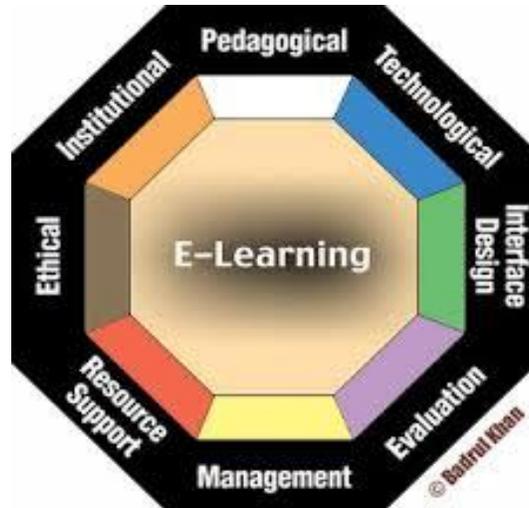


Figure 1: E-Learning Tools

4. DATA MINING METHODS IN E-LEARNING

Data mining is a multidisciplinary area of research in which several computing paradigms converge: case based reasoning, rough sets, decision tree construction, rule induction, artificial neural networks, [10] instance-based learning, Bayesian learning, logic programming, statistical algorithms, etc. It can be used to extract knowledge from E-learning systems through the analysis of the information available in the form of data generated by their users. The main goal is to turn out to be verdict the learning behaviour patterns by teachers and students and, conceivably most outstandingly, discovering the students' learning behaviour patterns. The most popular techniques used in educational data mining [11] are listed below:

4.1 Classification

Classification is the identification of the category/class to which a value belongs to, on the basis of previously categorized values. It is also called as supervised learning [12]. The two steps involved in classification such as model construction which consists of set of predetermined



classes. The model [13] is represented like classification rules, decision trees, or mathematical formulae.

4.2 Regression

Regression is used in predicting values of a dependant variable by estimating the relationship among variables using statistical analysis.

4.2 Nearest Neighbour

In this technique the values are predicted based on the predicted values of the records that are nearest to the record that needs to be predicted [14].

4.3 Clustering

Clustering is finding groups of objects such that the objects in one group [15] will be similar to one another and different from the objects in another group. Clustering can be considered the most important unsupervised learning technique. In educational data mining, clustering has been used to group the students according to their behaviour e.g. clustering can be used to distinguish active student from non-active student according to their performance in activities.

4.4 Prediction

The technique prediction is used to model continuous-valued functions, i.e., predicts unknown or missing values [14]. In this model, presume single aspect of data from some combination of other aspect of data. In educational data mining prediction can be used to detect student behaviour, predicting or understanding student educational outcomes.

5. CONCLUSION

The higher education institutions hold the power of e-learning to deliver content to students all over the world, even for free. Now all higher educational institutions are under hectic pressure to deliver education in combining with technology. The education system is slowly changing form it formal way to technological simulation. So the e-learning will bring significance among the learners. Today due to revolutionary in education and other system will provide a better system of learning in admirable way for the young generation.



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