Online Performance Learning on E- Learning Systems

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Annotation: Education is generally perceived as the method whereby we have the student deliver lessons from within the classroom to the Teacher, but with the facilitating information technology over the Internet, learning can now be achieved without a significant qualifying teacher in the eyes of the student. E-learning is one of the tools that emerge from information technology and have been integrated into many university educational programs, a change from the traditional approach to education in an electronic environment in which the student can receive and use information anywhere and anytime. The aim of an e-learning management system is to streamline the existing manual circuit with computerized hardware and full-fledged computer software that suits their requirements, so that their valuable data / information can be stored from a long era with easy access and manipulation of the same. The required software and hardware is easy to obtain and easy to operate. An e-learning management system, as described above, can lead to free, secure, consistent and fast management classification. He can support the user to discuss their other actions moderately, to think about checking the accounting. Thus, it resolves to help the organization improve the use of resources. The organization can keep computerized records without unnecessary records. This means that you do not need to be distracted by information that is not relevant to the case, but at the same time be able to reach the information. It can help to collect perfect control in particulars. In a very short time, the assortment will be noticeable, simple and reasonable. This will help the person to understand the management of the past year absolutely and vividly. It also helps with the ongoing work related to the eLearning management system. The cost of accumulating management and collection practices will also be reduced.

Key words: data mining, evolutionary model, architecture, accessibility, interoperability, requirements, naive Bayesian.

INTRODUCTION

Learning is one of the extremely basic human activities that require concentration, mixed with interactivity, obviously, and a clear understanding of facts said or discussed, communication skills and high technique, cute quality of learning, such as colorful visual presentations on information among others. [1] However, the entire non-learning process is considered successful. Effective could be assumed to be achieved if approximately one hundred percent (100%) of to the population with lectures assimilate into knowledge and / or ideas through; it is quite a different matter when the population is particularly high and there are certain unfavorable learning conditions such as noise, poor ventilation and extreme temperatures. [2] Successful learning depends on many factors. In most cases, these factors come from teachers, students, teaching and learning environment or

equipment, as well as from the learning environment with its structures [3]. To illustrate, if the teacher lacks communication skills and methods, then students will find it difficult to understand if these necessary media or materials required for teaching and learning are not provided, or if the condition is insufficient, understanding of the subject topic or the topic being discussed anxiety can be relieved. [4] In addition, the duration for teaching and learning, the speed of understanding and individualized learning style is the consequence of the assimilation of knowledge on the part of students; and can affect teacher coverage of the teaching format. [5] These factors will have a positive impact on effective teaching and learning on the part of the teacher and students, respectively.

One of the most important challenges facing educational activities is to increase the dropout rate. Student dropout can be a difficult task in academic performance and is reflected in the reporting that for one fourth of academics was born in faculty when their first year. Student dropout has already become familiar in educational performance and input management. [6] Recent research results indicate that program intervention will have important implications for dropout rates, in particular for the primary year. To make effective use of those limited supportive resources for intervention programs, it is interesting to notice the student ahead of the World Health Organization tends to want the support the most. In this article, we aim to illustrate the experiments as well as the results of the information mining method for scientists to help the code exception program in the field. [7] Use a machine learning formula to explore and extract information from existing student knowledge to define a predictive model.

Defining the problem

Significantly, computer science students are required to have both practical and theoretical knowledge to face the challenges they face in the job market. Unfortunately, most computer science students cannot achieve the expected results before they are sent to the job market. Often times, students are set to be a high set of clients patronizing most of the "computer training institute" side and, in turn, cannot get the value of the services they are requesting. [8] This situation has been recognized by numerous claims, in most cases, was made by both students and teachers on the pattern of teaching and learning, respectively, for example, students claim that a larger percentage of those teachers have poor learning communication skills, and so however, teachers are responsible for inadequate educational institutions and / or infrastructure as the cause of ineffective learning [9]. Thus, the problem centers on an effective teaching and learning process for the squeeze and progression of students' speculative and practical knowledge.

The proposed system

This project uses a combination of multimedia features, small artificial intelligence features, and human-computer interaction principles to develop a website for interactive and offline e-learning. Mutual e-learning is being considered for taking computer science courses at the beginner level. [10] The proposed e-learning aids deviate from traditional teaching and learning systems and, as a result, have great significance in the following ways:

1. Effective teaching on a topic topic for those students in the conventional classroom method has a high tendency to respond to numerous factors that influence the implementation of teaching (see table 1 in the appendix for more information). But with the introduction of e-learning, these factors may exist with little or no impact on the learner. [11] Therefore, this project will focus on the growth of e-learning demand, which will be astounding through the presence of heterogeneous teaching platforms and skillful use of multimedia, which will lead to an increase in effective teaching and reduce teacher teaching workload.

2. The cost of training materials - can be significantly reduced compared to the cost of conventional training resources or the cost of a traditional training organization. It is, however, talented in this project, providing the user with free access with a limited price of the content. Reducing the duration of teaching and learning, and strengthening the teaching effort, according to some studies, teaching time can be reduced by up to sixty percent (60%), along with the traditional classroom method using e-learning products.

3. This, in turn, increases the speed of learning and allows teachers to focus additional efforts on other areas where these students are lacking. This is mainly achieved in this project in employing convinced technological features such as in multimedia functions.

METHODOLOGY

E-learning is learning using the Internet, the web, or a stand-alone computer. E-learning is essentially a web-based expression of skills and knowledge. E-learning refers to the use of electronic presentation and learning process. E-learning encompasses all forms of e-learning and teaching. [12] Information and communication systems, whether networked learning or not, serve as ad hoc means for realizing learning progress. This often involves technology-assisted learning of extracurricular activities and classroom activities, even though progress remains on devices and curriculum. E-Learning is a workstation and network with support for rebasing of skills and knowledge. E-learning and progress applications include web-based learning, computer-based learning, virtual learning opportunities, and digital collaboration. Content is distributed via the Internet, intranet / extranet, audio or videotape, satellite TV and CD-ROM. [13] That is, e-learning systems include a learning management system and a course management system. It can be self-contained or instructor-led and includes multimedia elements in the form of text, images, animation, streaming video and audio. It is often thought that innovative technologies can significantly change education. [14] At a young age especially, children can use the immense interactivity of new media, and increase their skills, knowledge, and perception in the world, under their parents' monitor, of course.
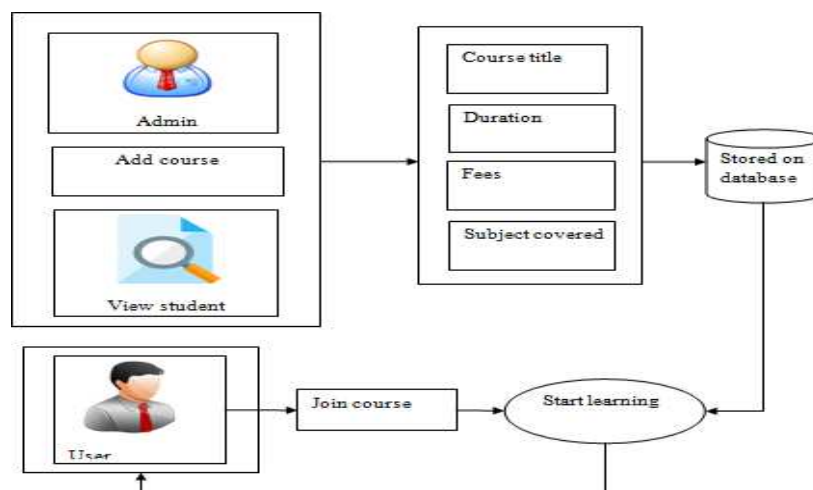
Architecture

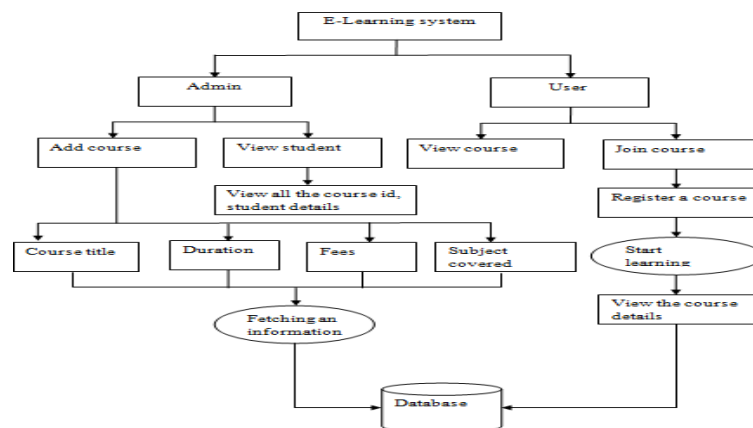**Figure Architecture.**

Data flow diagram

Figure Data flow diagram.

Modules
➢ Login
➢ Course
➢ Feedback

Description of modules

Login

Student needs to be logged in with a valid username and password. They are needed to enroll in a course they would like to study.

Course

The online computer programming route was delivered as a sequence of 10 modules. Students were required to absolute one module at a time, with modules ready in sequential order. As shown in the table, the first component limited the preamble to the route, modules 2–5 introduced students to basic arithmetic operations, vectors, and matrix analysis. Modules 6-9 contain additional advanced programming that integrates if statements, loops, and user-defined functions. In module 10, students were asked to reflect on the many ethical examples presented, and they were required to post their reflections on a blog.

Feedback

The student can view their profile and can give their feedback on the material and timings. These reviews will be shared with the professionals who created the extensive electronic content.

Naive Bayes

Naive Bayes uses the concept of Bayes' theorem, which assumes independence between predictors. In fact, Naive Bayes imagines that the presence of one characteristic does not affect the presence of any other characteristic. It is very easy to create and modify large datasets with a naive Bayesian model. [15] Basically Bayes' theorem is used to calculate subsequent probabilities. The analysis and results from application in the algorithm show as the area ROC from 0.978 and the root mean square error as 0.2369 depicted. For a rough estimate of missing data and to ensure correctness in the absence of a large amount of data. The results show an ROC region of 1.0, which is 2.2%, 6.3% more than Naïve Bayes and C4.5, respectively, and the root mean square error is reduced by about 58%, by about 50%. respectively. [16] After applying algorithms J48, Naive Bayes and Random Forest.

The naive Bayesian method is the main practice for classifier constructors: the models that assign class labels to instances of complexity are vectors of characteristic values, where class labels are selected from a different finite set [17]. There is no single algorithm for managing such classifiers, but there is a relationship of algorithms based on a general principle: all naive Bayesian classifiers assume that the value of a certain characteristic is independent of the value of several other characteristics, given the class variable. For example, a fruit can be measured as an apple if it is red, round and about 10 cm in diameter. [18] correlations including characteristics of color, roundness and diameter. For some types of probabilistic models, naive Bayesian classifiers can be trained extremely efficiently in a supervised learning environment. [19] In many reasonable applications, the estimation of the parameters of naive Bayesian models uses a maximum likelihood process; in other words, you can work with a naive Bayesian model without taking Bayesian probability or using multiple Bayesian techniques.

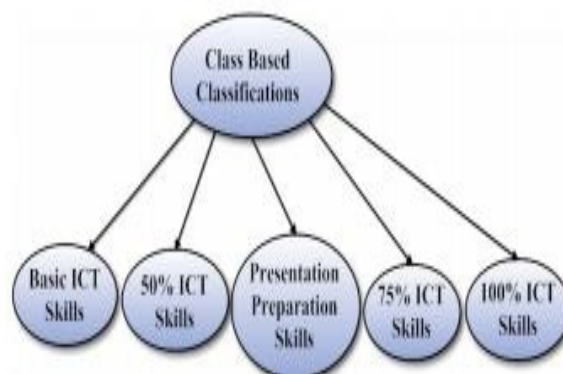**Naive Bayesian Classifier**

Figure Naive Bayesian classifier.

A Naive Bayesian classification algorithm is used to construct and implement in data in order to identify and summarize the information needed for forecasting. A data mining algorithm is useful for generating and implementing a method that finds information and a template for an ICT skills test. A data mining classifier is used in this work to determine the level of ICT proficiency over teachers in e-learning centers [20]. The results of the classifiers are used to determine teachers' ICT skills and professional development. The QTS Proficiency Test and Online Teacher Test scores are used to measure the percentage of teachers' ICT skills and learning ability. The information found is useful for teachers to improve their e-learning system and process. Figure. shows a naive class-based Bayesian classifier.

RESULT AND DISCUSSION

The methodology of our research is based on the knowledge of the detection process. Data mining techniques are used on a large dataset to develop patterns that are useful in forecasting. These techniques are used to extract meaningful knowledge from a large dataset. The technique consists of many steps. First, the raw data collected from various resources, and the second step is to select some data of your own interest from this raw data. The third step involves preprocessing the data and then converting the data. At the end of the data mining methods will be applied on the transformed data, and then knowledge is extraction based on the results that are achieved.
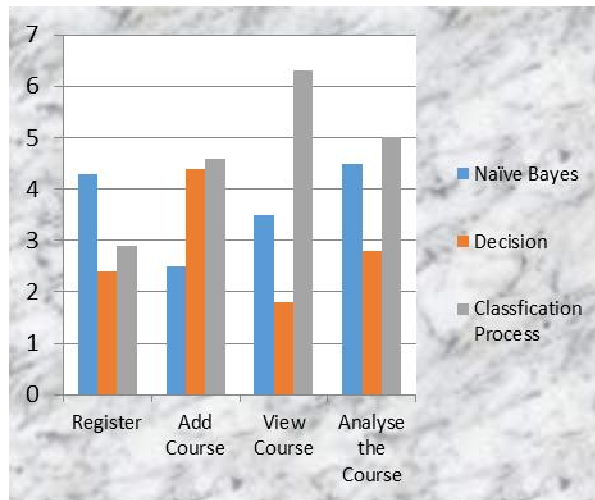
Various studies done in terms of the application. The examiner varies as the subject matter knowledge differs from institution to institution and researcher. Also, the factors and algorithms taken into account are heterogeneous. Solution Trees are widely used for rejection and dropout prediction, while other methods have found variety for other purposes.

OUTPUT RESULT

CONCLUSION

Learning computer programming online can be challenging. Online learners are those who are committed to completing a course, those who start their work early, ask for help as needed, and do not wait for the last thumbnail to complete the work. In an online course, students are accountable for their own learning. Better technology will be needed to maintain student participation in the process and to maintain a social environment that is usually experienced in the classroom. The quality of the organization is also important to ensure that one is content with an online course similar to what is taught in the classroom. As you can see from the evaluation of this manuscript, leveraging our Learning Management Framework capabilities removes geographic barriers, opening up greater scope for administration and learning. The system can facilitate personalized content release based on object knowledge and learning preferences of learners. It will provide members with an extensive list of summaries of related resources that they may choose to read or archive for future reference. We offered middleware for uniform access to all dissertation resources belonging to different areas of administration.

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