Effectiveness of online teaching & learning during Covid 19 Pandemic – A case study of Engineering Education in Karnataka

Mrs. Veena M
Assistant Professor, Dept. of CSE
Alva's Institute of Engg and Tech, Moodbidi

Dr. Manjunath Kotari
Professor, Dept. of CSE
AIET, Moodbidri

Dr. Kiran B. Malagi
Associate Professor, Dept. of ISE
AIET, Moodbidri

Abstract

Due to the rise of pandemic situation education system has disrupted. This disruption will affect the students education. Considering this situation educational institutions are asked to follow a new kind of teaching practice: Online Teaching and Learning. Online teaching and learning was completely new to many of the students, where some students found interesting and for some it was not. A survey is done to collect the information regarding the interestingness of students and to analyse the factors influencing the effectiveness of online teaching and learning. Under Educational Data Mining we try to explore the factors influencing the online teaching and learning process with a framework of education. Survey question were framed to mine the information regarding infrastructure, pedagogy and interestingness of students with respect to data acquaintance through which we can discover the interestingness of the students. The findings from the survey is been discussed.

Keywords: EDM, Online teaching, Engineering Education

I. Introduction

Data mining is the process to extract new aspects and patterns from a large data set using the methods at the crossing of machine learning, statistics, and database systems. It is also a field of knowledge discovery in databases (KDD), which is the area of discovering the distinct and potentially beneficial information from large amounts of data set. Educational Data mining is an integrated approach of data mining, Machine Learning and data analytics in order to fetch the various patters prevailing in education field. For this purpose we need to create datasets which will really lead us to get fruitful results. It has become a crucial issue to collect data in education sector. In certain situations where the intention of the research is to explore/recommend/evaluate the state of the art practices and the human behaviour in education system, we encounter lot of qualitative data. In this paper we restrict our discussion on collecting such qualitative data to measure the effectiveness of Online Teaching and Learning, which was a major step taken by all educational institutions during this pandemic situation of Covid 19.

With the outbreak of this Covid 19 Pandemic, educational institutes have made themselves to rethink on the way they used to run earlier. As whole country was under lockdown, every sector of the society was in stand still mode. More focus was given on survival than the livelihood of the individual. As the situation prolonged for more than six months, maintaining the mental health of every one was of major concern. The

H. O. D.
Dept. Of Information Science & Engineering
Alva's Institute of Engg. & Technology
Mijar, MOODBIDRI - 574 225

A quantitative approach for attainment of CO & PO through laboratory for affiliated Institutes

Dr. Kiran B. Malagi [1], Mrs. Veena M. [2], Dr. Manjunath Kothari [3]

[1]Associate Professor, Department of ISE, AIET, Moodbidri,

[2]Asst Professor, Department of CSE, AIET, Moodbidri,

[3]Professor and Head, Department of CSE, AIET, Moodbidri.

Abstract:

With the growing need for quality education engineering institution are adopting Outcome Based Education (OBE). The quality of teaching and learning has to increase in a way, where students are able to achieve greater extent of Knowledge, Skills and Attitude (KSA Factor) in their professional career. This is measured by the attainment of the outcomes set for a particular course that a student is learning. By data analytics techniques one can alnalyse the patterns of students' learning through laboratory also. Both, theory as well as practical/Laboratory sessions will assist a faculty to measure the learning outcomes. In this paper, a quantitative approach to measure Course Outcome and Program Outcome attainment through Laboratory is proposed. The process involves two steps. The first step is to get the attainment through Continuous evaluation Sheets and the second is getting attainment through Lab Internal Assessment Tests.

Key words: Outcome Based Education (OBE), National Board of Accreditation (NBA), Course outcomes (CO), Program Outcomes (PO), Continuous Evaluation Sheet.

1.0 Introduction:

The Engineering Educators are toiling towards Outcome Based Education for various reasons, but ultimately it should support to develop the society. An agency governing the process of accreditation is NBA, which sets some standards to be met by engineering educators. There is a lot of work being done in planning and conduction of the various elements related to OBE. But many are not clear about assessment phase of the OBE. NBA has given guidelines for the same such as; every course should have some learning outcomes which are supposed to be learnt and exhibited by an individual learner in solving real world applications. These Outcomes have to be measured and the success of that course depends on

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Alva's Institute of Engg. & Technology
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A study on need and application of Data Mining and Analytical Techniques in Music Therapy

Naveen Kulkarni *[1], Dr.KiranB.Malagi [2] and Mrs.Veena M [3]

[1]*Assistant Professor, Department of Information Science and Engineering, S.K.S.V.M.A.C.E.T., Lakshmeshwar.*

[2]*Associate Professor, Department of Information Science and Engineering, A.I.E.T., Moodubidire.,*

[3]*Assistant Professor, Department of Computer Science and Engineering, A.I.E.T., Moodubidire,*

[1]naveen.ise@agadiengcollege.com, [2]malagikiran@aiet.org.in

[2]veenam@aiet.org.in

Abstract

Music plays a vital role in peoples' life at large. From dates of civilization (from time immemorial) man has been using music in different occasions namely rituals, ceremonies, social gatherings to name a few. Listening music will bear an impact on mood of an individual. With music, one can sense almost all emotions that one encounters in life. There are innumerable types of music varying based on the culture and social context. Types of music are classical, folk, hip-hop, jazz, metal, rap, rock etc. The Indian classical music itself comprises Hindustani and Carnatic music with innumerable ragas. All these types of music and ragas have different impact on human emotions thereby on human mind and body. Music Therapy has become clinically proven method as a complementary medicine from last century. But it has not been able to determine appropriate methods and techniques for documenting results of music therapy with classification and selection of right therapeutic music from large, complex database of music therapy. Data Mining and Analytics make it possible to extract required patterns from large data set, which can improve the efficiency of musical treatment. By integrating "Music" - an art, "Therapy"- a clinical science and "Data Mining and Analysis"– a combination of technologies, music therapy can be more efficiently used and documented in more statistical terms to strengthen healing for mankind. This paper deals with the state of the art survey of the recent work carried outin this regard.

Keywords: Music Therapy, Data Mining and Analytics, Hindustani Music, Carnatic Music.

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Dept. Of Information Science & Engineering
Alva's Institute of Engg. & Technology
Mijar, MOODBIDRI - 574 225

Need of Multi-Cloud Environment and Related Issues: A Survey

Sudheer Shetty
Associate Professor, Department of CSE, Sahyadri College of Engineering & Management, Mangaluru, Affiliated to Visvesvaraya Technological University, Belagavi, Karnataka, India
sudheershetty06@gmail.com

A P Manu
Professor, Department of CSE, PES Institute of Technology & Management, Shivamogga, Affiliated to Visvesvaraya Technological University, Belagavi, Karnataka, India
apmanu@gmail.com

Pavan Kumar V
Associate Professor, Department of IT, MLR Institute of Technology, Hyderabad, Autonomous under Jawaharlal Nehru Technological University, Hyderabad, Telangana, India
sadgurupavan@gmail.com

Chanchal Antony
Assistant Professor, Department of CSE, A. J. Institute of Engineering & Technology, Mangaluru, Affiliated to Visvesvaraya Technological University, Belagavi, Karnataka, India
antonychanchal@gmail.com

Abstract - The cloud computing provides virtualized resources to the users on the basis of demand. The user need not setup an expensive computing environment in his premises, but obtains the services from the cloud service providers which are cost-effective in nature. Organizations and users have begun moving their files, software and services to cloud storage due to the availability of many services and scalability features. But, this transformation from local computing to remote computing brought many issues and challenges for both consumer and provider. The purpose of this paper is to provide a glimpse of cloud computing and the various issues faced by it. To overcome the various problems of cloud computing, multi-cloud collaboration is suggested in this paper. Further, few challenges related to security of multi-clouds such as trust, policy and privacy are discussed. The paper helps the reader understand the problems of cloud computing, how multi-clouds could resolve some of these issues and inspire multi-cloud platform building by looking into the security aspects of it.

Keywords – Cloud Computing, Data Centers, Virtual Machines, Multi-Cloud, Interoperability.

I. INTRODUCTION

Cloud computing is a distributed computing model developed in the year 2008 where computing is treated as a utility. Here, the customers can chose the resources like software, platforms, memory, CPUs, bandwidth, hardware load, security policies on the basis of pay-as-you-go manner similar to traditional public utility services such as water, electricity etc. This new technology enables the user to get the complete IT infrastructure in a completely virtualized manner from a remote place based on the demand. As a result, the industries started moving their computing resources from premises based data centers to public cloud computing environments.

The National Institute of Standards and Technology (NIST) defines cloud computing as a "model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction" [1]. This cloud model is composed of five essential characteristics, three service models and four deployment models. The essential characteristics are on-demand self service, broad network access, resource pooling, rapid elasticity and measured service as defined by NIST. Cloud provides three service deployment models which are Software-as-a-Service (SaaS), Platform-as-a-Service (PaaS)

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Dept. Of Information Science & Engineering
Alva's Institute of Engg. & Technology
Mijar, MOODBIDRI - 574 225