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# MIGRATING NON BYOD COURSES TO BYOD PLATFORMS: BENEFITS AND CHALLENGES A REVIEW

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***Abstract:***

Running and Managing education system in any nation is very important task and. The most important sector to be taken care as progress of any nation is based on how string their educational policies are planned and implemented. Across the globe, there is always much stress is paid to bring the education under the reach of common man and government always supports and spend good amount of budget on their education sectors. Today higher education sector in India is undergoing drastic changes and trends of Learning and Teaching is reshaping every moment. Skill based Teaching, ICT based Teaching, Virtual Labs, Massive open online courses and virtual Teaching and Learning modes has brought good opportunities for Learners. In this paper, we are presenting a review of BYOD based practises in higher learning in India and their scope in higher learning.

**Keywords**: MooCs,Virtual Teaching and Learning, BYOD, Cloud Platforms.

## Introduction

BYOD concept quickly getting popular in many educational institutions globally. BYOD with respect to schools. Higher educations is students bringing their own devices like tabs, notebook, cellphone or any other similar device in classes for learning. Letting students to bring their personal technology. BYOD learning is one of the best method as teachers and faculty can pay more attention on managing the learning processesinstead of looking for resources. As per the survey we have not seen any framework for implementation of BYOD modes in higher educationand moreover very less adoption of BYOT has been seen in school education in Europe and us and it has observed that teachers in different age group behave differently to this self-initiative. Young Faculty have shown their keen interest in adopting BYOD as compared toSenior Faculty in any technology and initiatives.If the Government or. Some. Agencies. Come forward and provide training and awareness of the platform, proper

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usage of the framework and availability of desired pedagogy based e- content may help this BYOD mode to a success. No doubt allowing learners to bring their personal technology to organisations can help in enhancing more learning power and easiness in adopting new courses and new. Tools.

BYOD based Teaching & Learning can act as a interface between formal and informal learning and for better success of this framework ,there is a need of framing policy and which should allow Learners to bring their own computing devices, such as smartphones, laptops, e-readers, tablets or other mobile gadgets to their respective organisationand must use organisation's network. The benefit of a personal device is that it is usually customized more efficiently for the user than the ones provided by the schools. Students will be more familiar with their own equipment. Students will be more likely to integrate technology into their own learning. They will have the same equipment at more than they used in the classroom. Moreover BYOD program will save the schoolsmoneywhile giving more students internet access.This synopsis will describe various works and efforts being made by researchers. The articles and literatures available in the present scenario form basis and future scope of our research. At last, we would highlight the research gaps found in our literature survey.

Since personal devices coming into the schools are broad and diverse. So, there is a challenge for institutions to carefully device their BYOD policies and BYOD management systems. BYOD has small investment cost but long time operational cost. According to the survey for educational institutes in US and UK, 85% of institutes allow students and staff top access the school network.This introduction gives various advantages and issues involved in general.Moreover the devices processed Moreover the devices processed by individuals are vary in type, technology and lot of other factors depending on users own comfort in using a device. Accordingly institutional technical infrastructure must be sound enough to support this diversity. Privacy is another issue which have to be addressed properly. When the personal device connected to the organizations server then the date is accessible to institution. This privacy of such data must be maintained.

Thus an institution adopting BYOD must have a sound policy. Survey also shows the lack of efficient BYOD policy is an issue in academia .

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## Review of Literature

Bring your own device based concept permits, learners and faculty to bringtheir personal devices in organisation for usage in class room for lab work and connected withcampus wireless network. With adoption of BYOD based Teaching-Learning, organisation can more easily stay up-to-date with technology and this is again an effective way to save budgets to be spend on technology and no doubt by usage of this mode of learning, learners are more likely to continue learning outside of college timings and connectivity with faculty is 24 by 7 also.

It provide learners limitless access to information and resources [1]. Bringing your technology is very encouraging and a welcome shift towards self-directed learning in collaboration with peers. [2].As stated above, there should be some policies and framework that evaluate the impact of BYOD on learner's behaviour.The BYOD based framework supports institutions to create learning environments which enable learner more smart and engaged [3].Researcher has proposed a naturalistic approachesfor investigating the effects of improper usage of the computing devices [4].In a study conducted in 2012, it has been reported that mostly students actively involved in the survey, access to networked devices at college and at home. Although the outcome do not identify any major impact on digital divide [5]. EIFA based system can be used as assessment tools for learner [6][7]. The results identifies impact of EIFA which are mentioned by students states that the immediate feedback is very helpful. however too much electronic assessment usually leads to distraction from the importance of exams [8]. BYOD is steps towards green computing[9]. Usage of technology can bring more innovations and effectiveness [10]. When information and ICT is incorporated in learning environments, it leads to enhancement of learner's academic and social development [11]. Not providing proper pedagogical support to teachers for integrating ICTs into classrooms,a sense of isolation with lack of familiarity in using ICTs[12]. The chain effect of digital divide from equity in access to ICTs to usage and skills (capability) divide, then as learning become more intensive, it further leads to outcomes divide. Factors leading to digital access divide includes the usage of ICT in academia [13].Digital capability divide is influences by learning activities. These activities can be contextualized based on digital literacy of learners in performing different types of computing tasks, nature of technology usage by learners influence learning outcomes[14]. BYOD implementation in schools are getting popular day by day and stakeholders believe that BYOD implementation with e-learning tools such as digital curriculum content and virtual learning environment has

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an impact on student achievement[15]. Effective BYOD policy must clearly state objectives and constraints related to the usage of institutional, Mobile Application Management (MAM), Mobile Information Management (MIM). Some legal issues with BYOD are maintaining and securing data, student privacy, remote wiping, secure destruction of institutional data. Cloud services are also used for effective implementation [16].BYOD enforcement with acceptable use in the long term can be incorporated [17].Behaviour has been defined as " an attempt to either effect a change from one state of affairs to another or to maintain a currently existing one"[18].It depends upon various factors including the individual's identity, aspirations, knowledge and skills[19]. It has been observed that higher learning educators recognizes the positive impact of BYOD initiatives [20], student participation[21], understanding of educational content[22] and customization[23].

**Scope of Research in Learning Analytics**

There is huge potentials of the proposed practise and as stressed we need governmental guidelines in regulating the use of BYOD strategies in work environments in the educational organisations and framework yet to be a part in place to be standardized. There is no framework for implementing BYOD model in higher learning. Moreover how to post and evaluate the courses on BYOD framework has not discovered yet. Methods and approaches to evaluate leaners behaviour has not described. Most surveys has been conducted on countries other than India. So, there is a need of designing ,implementing and evaluating a framework for BYOD based Teaching/Learning in higher education.

**Benefits of importing your course in BYOD Mode:**

Importing courses in BYOD mode has significant benefits for all sections of Education and we are quoting an example of LPU as an higher educational institute in India which has taken lead in this case and presently 150+courses are in BYOD mode and which has on average 20-40 students and totalling in approx. 6000 students. Following benefits encourages to import BYOD mode.

a) **Cost Savings**

One of the most encouraging benefit is in cost saving which saves huge money of organisation as per data quoted above for 6000 students, there may need of at least 100 labs, 3000 systems, desired software for systems and courses, Network devices cost furniture cost, lab assistant costs, Annual maintenance cost, Electricity cost etc.

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Organisation need not to bother about this huge investment and can invest the amount in other Academic purpose.

**b) Promotion of Green Computing**

BYOD would be a great step towards reduction of e-waste and leads to green computing as students will be carrying their laptops. BYOD is green computing teaching environment and will address various government policies and environmental issues.

**c) Reduction in power consumption**

BYOD mode will also help in less use of power as students will carry their machines so it will also reduce power usage.

**d) Active Participation of Learner's**

BYOD mode involves much participation of Learners and Teachers and is more active in terms of evaluation practices.

**e) Promotion of Open sources Software**

BYOD mode courses can be framed with open source software thereby reducing the software costs and promoting usage of open source tools and software.

**Challenges in BYOD Mode**

There are many challenges in BYOD mode at various level of its governance and implementation in government and private organisations in higher education.

**a) Policy framework in Public Educational Institutions**

We have almost more than 39000 institution of higher Learning comprising of public and private organisations. There is no as such a policy for encouraging or demanding Learners to bring their devices and Institutions are maintaining their own resources and no attempts to avail the benefits sated above as there is no policy by UGC/AICTE governing agencies which is preventing them to adopt the same.

**b) Evaluation Framework**

If BYOD mode is running in the class room, evaluation of Learners may be difficult one if no any framework is adopted by Teachers. But with use of ICT based framework things

can be very easy.

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**Conclusion:**

This paper presents concept of BYOD mode of Teaching in higher education and scope of BYOD in many aspects. Very less organisations have adopted this mode but it has very good advantages if introduced in higher learning. There is tremendous scope of research in this mode in higher learning. The impact of BYOD based teachings can be analysed using machine learning approaches and more analytics can be drawn for better utilisation of the approach.

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