BLENDED LEARNING AND INSTRUCTIONAL DESIGN: INCULCATING TECHNOLOGY DRIVEN PRACTICES IN HEIS AS ENVISIONED IN NATIONAL EDUCATION POLICY, 2020

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Abstract

The education sector has undergone many changes over the years, with technology being one component that has transformed teaching and learning. As India's education landscape continues to change and evolve, it is important that all stakeholders deliberate upon how best to meet these challenges. National Education Policy 2020 provides an effective roadmap to achieve the vision of making India a knowledge society. The Policy thrusts upon the adoption of advanced technology in the classrooms considering the needs, preferences, and pedagogical challenges of educating 21st-century learners. Digital Education will remain at the heart of the entire teaching-learning process, especially for Higher Education Institutions [HEIs]. Such technological interface also aligns with the United Nations Sustainable Development Goal 4 which emphasizes Quality Education for all and encourages citizens to be lifelong learners. The policy provides provisions for inculcating MOOC courses and academic credit transfer facilities along with substantial investments in creating the digital infrastructure for blended learning in classrooms for better learning outcomes among other unique initiatives and guidelines. In today's online learning environment, blended learning unlocks a new dimension of teaching and learning. It is an approach to integrating both face-to-face and online components of the curriculum so that students may dive deeper into the subject matter. The paper includes discussions on how technology and instruction can complement each other as part of blended learning approaches and practices. It also discusses how blending online and offline educational resources creates unique opportunities for students. It would provide a guide on how to create effective blended learning courses and guidelines for how to plan, design and implement effective instruction plans for the new age learners to accomplish their learning goals and develop skills.

Keywords: Blended Learning, Instructional Design, National Education Policy 2020, Learning outcomes

Introduction

India’s higher education is huge and diverse with a variety of stakeholders including universities, stand-alone colleges, and institutions of national importance, faculties, education administrators, policymakers, and students themselves. Even in the case of universities, there are many distinctions and each of them is governed by varied norms and regulations such as

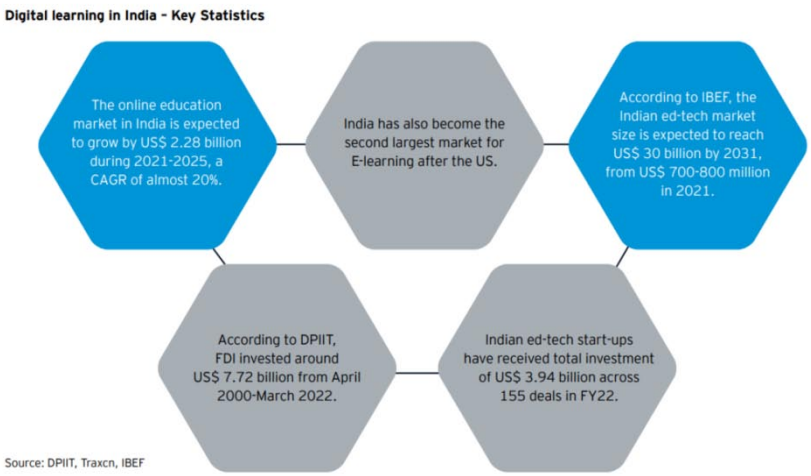
government universities (Central and State Universities), private universities, and deemed universities. After the United States and China, India's Higher Education is the third largest system in the world.

India's higher education system has evolved in a multifaceted manner since its independence and proliferated in terms of the number of universities and colleges, student enrolment ratios, diversity of courses available for students to explore, and along with the capacity for research and innovation. However, the technology interface is changing the dynamics of the teaching-learning process in higher education, especially after the COVID-19 pandemic which made online learning – a necessity to continue academic activities during the national lockdowns and closure of university campuses for around two years. From a distant dream, Digital education became a household reality in India. However, even after the opening of the campus, there is an increasing thrust on utilizing technology inside classrooms for better engagement and learning outcomes.

National Education Policy, 2020 and Impetus to Digital Education

India's latest education policy i.e., National Education Policy, 2020 realizes the importance of unlocking the potential of Digital Education and thereby provides provisions that encourage the adoption of such practices in the pedagogical processes. The Policy thrusts upon the adoption of advanced technology in the classrooms considering the needs, preferences, and pedagogical challenges of educating 21st-century learners. The National Education Policy, 2020 envisages the creation of a National Educational Technology Forum, the development of e-courses in regional languages to facilitate and cater to those learners who may not be proficient in the English language, the development of virtual labs, and investments in digital infrastructure from education perspectives. The policy also aims to train the teachers and faculty members in making meaningful technological interventions in planning, learning, teaching, and assessment processes.

The government of India's initiatives for harnessing the potential of ICT (Information and Communication Technology) tools go back to 2009 when they launched the National Mission on Education through ICT (NMEICT) whereas the SWAYAM platform was launched in 2016 to offer free online MOOCs (Massive Open Online Courses) to the learners. As per UGC (University Grants Commission), earlier students could complete 20 % of their degrees online and claim credits for it, however, the norm was revised in 2020 and now students can complete 40% of their degree programmes through MOOCs courses and claim credits for it. By 2021, UGC has approved full-fledged online degree courses for 38 universities, and in 2022, there were around 350 approved online courses for students in higher education to enhance their knowledge and skills.



In today's online learning environment, blended learning unlocks a new dimension of teaching and learning. It is an approach to integrating both face-to-face and online components of the curriculum so that students may dive deeper into the subject matter. The paper includes discussions on how technology and instruction can complement each other as part of blended learning approaches and practices. It also discusses how blending online and offline educational resources creates unique opportunities for students. It would provide a guide on how to create effective blended learning courses and guidelines for how to plan, design and implement effective instruction plans for the new age learners to accomplish their learning goals and develop skills.

Blended Learning: Understanding the Meaning and Key Dimensions

Hrastinski (2019) believes that Blended Learning is an ‘umbrella’ term. He believes that it blends many approaches and elements and not just the binary of the two worlds i.e., online, and offline teaching. According to him, blended learning coming together and judicious use of thevarious instructional methods, pedagogical approaches, and Web 2.0 tools. Whereas Oliver and Trigwell (2005) believe that blended learning has become a common terminology yet, there is not much clarity over what the term meant. They believe that it is a mixing of two elements. Whereas Driscoll (2002) believes it is an amalgamation of different pedagogical approaches, technological interfaces and web technologies, and instructional practices, it also acknowledges that the term may have different meanings and interpretations for different individuals.

Though the term Blended Learning was coined in the late 1990s (EPIC Learning 2013), it is termed as 'pre-paradigmatic' by scholars thereby being devoid of a commonly accepted definition and characteristics. Graham (2006) believes that the approach is about the integration of classroom or offline teaching and learning processes with the computer-mediated environment and tools. Garrison and Kanuka (2004) consider the juxta positioning of online interactions and online engagement in a 'thoughtful' manner.

Many scholars believe that it is tough to define the new phenomenon or approach to teaching but Sloan Consortium believes that not just the blend of online and offline aspects is important but it should comprise two important elements which are that it should be 'planned' and 'pedagogically valuable'. However, other scholars believe that blended learning is about leveraging the strengths of both mediums. There is no consensus on the fact that what constitutes 'pedagogically valuable' for different educators. However, the essence of the debate is that both the online and offline mediums should complement each other and should be focused on improving the learning process instead of trying to supplement or replace each other. To cite an example, a professor who just uploads a video lecture on a particular internet platform may not be referred to as Blended learning has to be dynamic and customizable in nature as each learner has diverse needs, preferences, and learning styles.

Wikipedia defines Blended Learning as

"Blended learning, also known as hybrid learning, is an approach to education that combines online educational materials and opportunities for interaction online with traditional place-based classroom methods."

However, many researchers believe that traditional classroom integration with an online environment may not be possible for all learners especially if we discuss the role of Blended Learning for Corporate training purposes or reskilling the workforce for Industrial Revolution 4.0. It may also not be possible for students enrolled in online degree programmes to live at a distance from the institutions and universities offering the course due to financial and geographical constraints. There could be barriers to attending physical classrooms which may be socio-cultural in nature such as women not being alone to travel to far-off states or cities where the host institutions are located. Thus, the integration of webinars or online classes where they could interact with the instructors, teachers and peers, or colleagues may be a feasible solution to the issue.

Allen and Seaman (2010) conducted a study and gave the definition of Blended Learning which believed that a significant portion of the curriculum should be delivered through online modes and even interactions and engagements with the learners should be through online mediums like discussion forums, and typically bringing a reduction in the traditional classroom-based face-to-face meetings. They suggest that Blended Learning should consist of 30% to 79% of the course content to be taught online.

There could be varied and multiple ways to include blended learning and its design and execution may vary from course to course or educational institutions. In some cases, online lectures could be the dominant learning delivery model for most of the syllabus whereas in other cases, students may be working on a live project where the faculty member or instructors may be guiding them on each step or facing difficulty however, the students are leading the projects independently. There may be instances of flipped learning-based

classrooms where the students are provided with the supporting learning materials for the subject before the class and they then critically analyze the concept or issue at hand with the teacher in a traditional classroom setup.

Some of the critical elements of Blended Learning are:

1. It could utilize the Flipped Learning model, where the educational materials (e-text, video lectures, open education resources) are given out to students before the class. In the classroom, students engage in learning, discussion, critical thinking, and problem-solving activities under the supervision of the instructor or the faculty members. Such activities have clear learning objectives and outcomes and are planned.
2. In Blended Learning, the student controls the pace of learning and in most cases, it is self-paced learning. He or she also controls the paths and way he or she decides to engage with the content provided by the instructors.
3. Blended Learning must include instructor-led learning with there is continuous engagement and supervision of the learning activities as well as the environment by the faculty member. It should cater to the needs of diverse learners who embrace varied learning styles to understand, grasp and apply the knowledge and skills sets. It may also include interactions and engagements to map out the challenges faced by the learners which may pertain to the subject doubts to digital skills to digital access and other emotional concerns as well.
4. Both the online and offline elements must be integrated in a manner where they complement each other creating a dynamic, enjoyable, and integrated learning environment. It should be a scalable learning model that works for a variety of learners and suits their learning styles. It should not be a duplication of the course content which is delivered through online mode but rather a clever and clear integration of technologies to suit that creates a symbiotic balance between learning needs and learning outcomes.

Blended Learning and Instructional Design

"Whereas physicians engineer health and architects engineer space, instruction designers engineer human performance"

Van Patten,1989

According to Patten (1989), instructional design helps to foster and achieve learning outcomes in varied learning environments. Some of the important elements derived from various scholarly works are:

a) Analysis of the Needs
b) Well Defined statement of Learning Outcomes that are required to be achieved from a particular course

c) Pathways through which instruction is to be conducted including videos, text notes, assignments, group activities, assessments including self-assessments, and graded and non-graded evaluations

Blended Learning aims to maximize learning gains using varied learning tactics. According to Mukhopadhyay (2022), studies have shown that students learn and perform through a judicial mix of both the online-offline learning environment rather than a stand-alone technique of traditional classroom set-up or a fully online course. Hence, a standalone course through a singular delivery method is not recommended.

Blended Course Design Template

Mukhopadhyay (2022) in the book Blended Learning Policy: Templates for Higher Education Institutions in Commonwealth Asia has provided a framework for the factors to be considered before developing the Instructional Design for Blended Learning in Higher Education which are:

1. **Course Choice, Course Data, and Course Faculty:** The framework believes that first there must be a decision on which component of a particular subject can be taught through Blended mode. Component here would mean specific units from the course curriculum that can be taken up for the online mode. It also considers the proficiency, skills and relevant experience of the faculty members to plan, prepare and execute the blended learning.
2. **Developing a Knowledge Map:** All knowledge in higher education is built upon certain past knowledge, cognitive structures developed, and past experiences. Thus, there is a need to map out what the students already know (based on previous learning experiences) and the new concepts and knowledge that need to be introduced. Instructional Designers should create a knowledge map that should clearly define the expected knowledge and skill acquisition upon completion of the intended course.
3. **Course Analysis:** There should be a careful course analysis that may highlight the units, course credits, description of each unit, relevance of each unit, and feedback from contemporary scholars and academicians.
4. **Course Handouts and Academic Notes**: There should be preparation content in the form of academic notes, handouts, or e-text that provides an overview of the topics discussed. Blended instructional designers can develop such text notes by utilizing open education resources and creative commons images. The content contributors should be well versed in the concepts of communication especially different models of communication to effectively communicate and engage their learners.
5. **Graphic Organiser**: It is a visual representation showcasing the interconnections between the various concepts and units that are required to be learned during the course. Many scholars use the term 'Mind Map' instead of Graphic Organiser.

6. **Statement of Learning Outcomes:** Learning outcomes have been demarcated into two main classifications i.e., higher-order (analyzing, critical thinking,generalization) and lower-order cognition (remembering, understanding, and applying). Lower-order cognition is considered to be fragile learning whereas higher order is more deep and creative in nature. Learning outcomes can be divided into domains like cognitive skills, digital skills, and social and life skills among others.
7. **Choice of Assessment Tools for the desired learning outcomes**: There are various assessment tools available for different cognition such as objective type tests for lower-order cognition and reflective essays, field surveys can aid to test higher-order cognition.
8. **Making Pedagogical Choices**: The faculty may choose different blended learning models to cover different units in a two or a four-credit course. They may choose different blended learning models for different semesters as well.
9. **Choosing Learning Resources**: Faculty must understand the strengths and challenges of each medium or format of the learning resources keeping in mind the desired learning outcomes. Learning resources may consist of video lectures, classroom notes, Open educational resources, academic research papers, textbooks, and podcasts.
10. **Choice of Blended Learning Models**: There are various blended learning models such as face-to-face driver, rotational, flex, online lab, self-blend, and online driver. The faculty must make careful and intelligent choices on the blended learning models considering the course content, digital skills, and course design.
11. **Choosing Learning Management System**: Learning Management is an integral part of blended learning as it is the repository of all information. They facilitate the faculty in a 360-degree manner as they would help to create and deliver the online content, track student engagement and participation and analyze their performances regularly, and may provide important insights into real-time learning analytics.

Conclusion

Blended learning is a transformative approach that integrates face-to-face and online curriculum components. This method opens up new possibilities for classroom instruction, allowing students to explore topics in greater depth and make full use of available learning materials. The National Education policy's emphasis on massive open online courses (MOOCs), credit transfer options, and digital infrastructure investments for blended learning demonstrates its dedication to enhancing students' educational experiences and opening doors to new possibilities.

In this study, we looked at how technology and teaching work together hand in hand in blended learning. It has explored how technological aids can be used to improve the quality of education provided to students. It has also highlighted the advantages of combining online

and offline materials, which can provide students with more opportunities for interaction and deeper understanding. This study has presented a framework for developing instructional strategies and blended learning courses that are suitable for modern students.

This study provides valuable information that teachers and policymakers in India may use to better understand and implement blended learning practises in the country's classrooms. These methods may cause a sea change in education by giving pupils the tools they need to succeed in an increasingly technological society.

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