

BLENDED ACQUISITION LEARNING MODULE (BALM): A POST- PANDEMIC VIRTUAL AUGMENTED REALITY

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ABSTRACT

In early 2020, world found itself into the grip of global pandemic, which resulted in bringing the life standstill. Then onwards, an entire 360 degree rotation in the affairs. which were routine in nature earlier are found to be combatting with the search of newer ways of action. In this struggle of mankind, technology played a vital role. On the immediate announcement of COVID-19 wave in India, in March-2020, and subsequent nation-wide lockdown, the life of people altered in more than several ways. Be it business, production, manufacturing, trading, healthcare or education sector, transformation is recorded in almost every nature of functions and operations. In the current paper, higher education and its transition is studied, whereby, not only the interest of students but their anxiety, depression, uncertainty etc are underlined. Shifting of the class room into the respective home, where students are locked during ongoing lockdown in nation, unquestionably bring gigantic impact on their physical and mental health. They have more than one objective before them, i.e. doing well in higher education, career and also to be accomplished sound health, safeguarding themselves from this deadly virus. In this dire need, Information, Communication and Technology (ICT) have capacitated the education sector in India with its online platforms to operate its teaching-learning pursuits extensively. In this paper, with due illustrations, instances and specimen, the upcoming post-pandemic panorama in Indian higher education sector is appraised. Novice, BALM - Blended Acquisition Learning Module, an illustrious approach during the pandemic in higher education in the Colleges & Universities via MOOC, SWAYAM etc is assessed, whether to continue, in post pandemic landscape in Indian Higher Education sector. Holding Virtual Augmented Reality the centre stage, is needed tremendous planning by the educators, researchers and psychologists for youngsters careers and wellbeing.

Keywords: *Blended Learning, Virtual Reality, Augmented Reality, Education-Sector.*

Introduction

Balm - Acquisition of Blended Learning

Early 2020, came with unexpected turn of economy with the outburst of coronavirus crisis, consequent nationwide lockdown has imposed drastic changes in work-culture and corporate behaviour simultaneously with the transformation of steep insertion of technology and digitalisation, in almost all economic sector, be it production, manufacturing, trading, marketings of products and services. Amid pandemic all meetings, learnings and training sessions went on to virtual mode efficiently performing, with little or no room for physical contacts. This scenario gives ample reason to the academicians, thinkers and researchers to deliberate upon the future of economic activities when Artificial Intelligence, cyber security and such digital terms are around predominantly.

Education is the vital component for the economic growth of the nation. This core functionality works to maintain the balance in the economic activities, working in tandem with key groups of functionalities such as delivering class lectures, exchange of notes, blackboard-learning and library in the educational institutions. Historically, education functions through school, universities, and distance mode of learning. But as the pandemic took its toll, the education sector transformed through online mode, while staying at home via smart devices.

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Genesis of Virtual Schools

Digital gurukuls with teachers and trainers who have a passion for teaching, can create opportunities to learn for those who share the same passion, and need proper guidance. The COVID situation has strongly impacted the education sector. Schools are closed, exams are being either cancelled or conducted via online mode, and there has been a major shift and disruption in the entire conventional system. As per NEP-2020, India has about 25 crore school going children, out of which as estimated 6.2 crore children between the ages of 6 to 15 years were out of school in 2016. The average attendance of students enrolled in secondary school is only about 45%, out of which only 30 - 35 % students actually go beyond class X. The probable causes for such a large number of students dropouts from regular schooling are cited as follows-

- Students find themselves failing increasingly behind in school as time passes by
- Access to Secondary schools remains a serious issue. A report of 2015 - 16 states that every 100 primary schools in India, only 50 upper primary, 20 secondary and only about ten higher secondary schools.
- Inadequate Infrastructure and lack of safety to girl students
- Socio-cultural and economic issues also play a significant role in dropout rates.
- preconceived roles of gender, caste or child labour and pressure on children to work and earn or even because of social evil practices like child marriages etc contributed to this cause.

Despite best collective efforts from NGOs, Government agencies, school Principals and teachers, over the years to get these students back to school, especially the ones who want to study but are not able to go to school, yet the result hasn't been encouraging. This is where affordable e-learning comes into the picture.

Research - Gap, Design and Objectives

The subject of the paper is contemporary and quintessential to discuss for the academic benefits of all stakeholders amidst pandemic as the scenario of the teaching-learning is moving through the virtual pendulum. It is assessed to measure the amount of learning through e-mode, as a substitute, whether it is here to stay even in the post-pandemic phase.

Objectives of Study

- To know more about the combination of learning i.e. online and offline, blended To assess the future of Education with the insertion of virtual augmented Reality
- The study is based on the information from the academic websites, Times of India - a National Newspaper and several other online modes while staying at home amidst pandemic. Participation from the students and other stakeholders is acknowledged. Telephonic discussion and observation played a major role in concluding the said study.

Smart School-System with Smart Devices

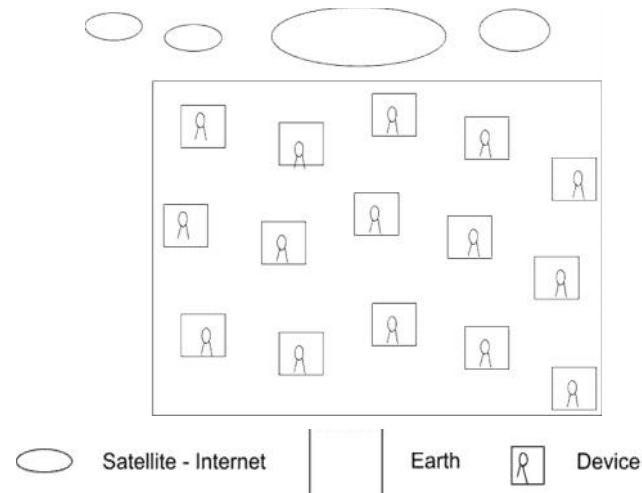
Though the shift from traditional learning to digital was happening even earlier but at a very slow pace. COVID-19 has given online education a huge boost. Availability of devices and cheap access to the internet is also playing a major role in the proliferation of online education. The penetration was earlier limited by access to computers, but now it has been boosted by smartphones. Drawing inspiration from gurukuls with teachers, mentors and trainers who have a passion for their art and skill and love of teaching, can teach those who share the same passion and need proper guidance and skill training. Digital education caters to one of the most important needs of the human race-freedom. Freedom from years of trotting unwillingly to the school, to choose the teacher and finally and most importantly, the freedom to study the subjects of choice. Online learning offers equality of educational opportunity that makes children, even in the remote areas, get the same quality of education as children in metros. Now, no one has an excuse for not studying in the presence and prevalence of choices through online mode.

Current Shift on Technology for Conducting Classes

Young students experience a unique kind of education system during this ongoing pandemic when their phones and laptops are converted into virtual class-rooms. During this time, these devices gain all the more prominence in educating the youngsters and honing their skills. Now, technology is responsible for transforming class-room into a fun and personalised experience and managing the attention span of young children.

Post Pandemic Education Sector Layout

In the Delhi Government Budget, NCTD- 21 it was proposed to establish the virtual school and university for better learning with focus on skill based learning and entrepreneurship in the mainstream. Focus on vocational courses and developing mindset and interest is laid upon. Curiosity among early learners has been encouraged with the best tools and means in hybrid and blended mode for youngsters. Accessibility of best practices worldwide have been promised to for learners and enrolment is also based on measuring students interest, talent and mindset for entrepreneurship which are new in India but not unpopular abroad.



The Tenet from Tele-Communication to Teleportation

Udemy's data (source <https://www.udemy.com/>) finds that Redis, the in-memory data structure store, saw the biggest rise among learners in India. In 2019, Google declared quantum supremacy by developing a 53 qubit quantum computer. This quantum computer performs a complex mathematical operation in 200 seconds which our fastest supercomputers would solve in 10000 years. Now imagine what would happen if we could double the number of qubits in quantum computers every year. Quantum computing will dramatically change the world we live in. Drug discoveries will then be the matter of minutes rather than years. Material science could find us a superconducting material which can transmit solar power from the Sahara desert to the entire world. We could discover molecules to develop fertilisers very cheaply and ultimately end world hunger also. RSA encryption would become useless but better still we could develop unbreakable private keys for encrypting sensitive information. Lastly, teleportation would become a science of facts and not science of fiction. The upcoming decade may be uncertain for quantum computing but is certainly exciting.

Virtual Augmented Reality

Extensive use of technology and smart devices allows users to not only see but to explain systematically with several tools backing the concept. Continuing with the same in classroom teaching makes the subject possible as well as interesting to impart to the learners. This technological based operational learning and creating the technology-based classroom exist during the nationwide lockdown after the sudden announcement of pandemic. This technological transformation was earlier seen as a role-reversal between student and teacher. As teachers were not so efficient and comfortable while handling the virtual classroom. Millennials and Gen Z students set a precedence in this need to shoulder with their teachers in conducting virtual classes.

Most of the learning applications today have a balanced approach. They are made to perfectly align with the limited human focus. Several modules are innovatively made to make learning easy and fun for children.

Virtual classrooms around the world testify to the dependence of technology as most students fidget and fumble when it comes to concentrating while learning to manage the students attention spans.

ML- Machine Learning for students is more relevant than ever before as it supports and assists these traditional teaching methods. The education sector is one of the most thriving sectors in India. While the pandemic brought with it various challenges for conducting the newly digitised system of

education efficiently, it also helped in digital adoption across all businesses. This trend was especially witnessed in the education sector. To ensure that educational firms and edtech platforms extend the best of the knowledgeable sessions to their students, they need to be armed with the state-of-the-art technology. The key technological advancement that brought about a transformation in learning for the students, is machine learning (ML). Having this technology in place enables efficient and swift processing of big data thereby extending superior quality education to the students.

Benefits of Virtual Classroom in Modern Day Learning to Learners

An extension of artificial intelligence (AI), ML assists the ability of the IT systems to interpret data at their end and self-educate based on the experience gained. Its primary objective is to grab hold of the required data, analyse it and accordingly create a problem and solution algorithm.

Customisation and personalisation, ML algorithms analyse the mannerism by which students explore information they are provided with.

Upgradation of content, ML helps to upscale the e-learning process by upgrading the content and tailoring it as per the present requirement.

Ensures higher ROI, when ML is applied, students get personalised services. Additionally, ML provides real-time benefits to the students thereby leading to their increased adoption in the education system. The process of predictive analysis further helps keep track of the progress of every student.

Provides instant solutions, ML enables the platforms for instant solutions to the queries of the students. The benefit of machine learning makes it increasingly accepted by the educational and edtech platform.

Helps save time of students by automating admin-related jobs. This makes the students empowered to perform other similar activities of their interest.

ML has become increasingly relevant for students more than before by offering personalisation, customisation and enabling the use of virtual assistants. While it cannot replace the teacher, it is used in a system to support and assist the traditional teaching methods. Since, digitisation is present and proliferating, with it, the technological advancements will amplify too.

Youngsters Careers and Well-Being

The progress of any nation depends on the education and healthcare sector, where all the population symbolically participates in the economic growth. Especially youngsters are the foundation of development of the nation. They must be healthy and happy in order to contribute their best in the economy for growth and development. Healthy students are expected to do well in studies and sports in the country. Their well-being are the parameters to measure the competence of the nation. Education is quintessential for the youngsters to make their career in the area of their interest, willingness and choice. Skill enhancement courses empower them to take up the vocation of their choice and hence contribute significantly in the economic development of the nation. They may pursue their interest abroad as several opportunities and online courses enable them to do so. They may earn a good name and fame for their parents, families and nation. Only a healthy mind is capable of grasping the concept and contributing effectively for national development.

Illustration (Citation and Instance Amidst Pandemic)

- **Cyboard:** The Online School is included in this study as a revolution in Indian Education sector and Online Schooling, with no boundary but fun-learning environment for kids with features like Child-Centric Approach - where focus will be laid on the educational system for holistic learning and playful growth of child
- **India's Best Teaching Talent:** It claims to engage the best and brilliant teachers who are committed to deliver the education with brilliance.
- **Hybrid Delivery:** Live online classes with conducive physical distribution of study material and books.
- **Assessment & Remedial Session:** Digital techniques, Data Analysis and Artificial Intelligence in order to identify and address the learning gaps and meditative practices
- **Re-Imagined Curriculum:** CBSE syllabus with modernised audio-video clippings and gamifications at just a click.
- **Personalised Roadmap:** Individual attention and identifying interest and mindset of learner to empower his developmental discussion.

- **Access from Anywhere:** No boundaries and walls allow learner to access the chapters from anywhere with no hurdles and limitations
- **Cost Effective:** Pocket friendly fee structure for the desirous parents who primarily belong to the middle or low income group and wish for competitive education for their wards
- **Anywhere from the Country:** Stakeholders may get enrolled from any of the Indian state and/or to come together to teach students well designed online educational curriculum
- **Emphasis on the previous Learning/classes:** It missed or lack of clarity may be seriously addressed by the educators

The Road Ahead - The Future of Devices

Technological advancements are going to incorporate new features in the devices in the times to come like:

- wireless charging, even charging through radio frequency and quite a distance
- camera of these devices will be so much empowered and carry high resolution quality to make clear vision of pictures far better and clarity and understanding will be better, used for several purposes
- bulky phones and devices are going to replace with foldable features, easy to carry and hide
- sustainable technology soon going to make it possible the eco-friendly and unbreakable devices for environment
- health benefit from devices are useful in cautioning the user on time, like sleep quality, breathing cycle, heart rate and hours of deep sleep etc

India is leading in building NetApp's flagship data management software on the basis of its talent, deep competence in managing storage and ably translating it into an agile software-defined, cloud-like world of how our infrastructure is progressing.

Summary

After the outbreak of the pandemic in 2020, education witnessed considerable change. Owing to subsequent lockdowns, traditional classrooms were transformed into virtual with smartphones, and laptops becoming the intermediaries. Today, mobile learning applications are helping students in managing attention through their interactive contents. Virtual learning is fast catching up in various domains.

Technology in education has the potential to widen the imagination and enhance the learning abilities of young students. It can help them grasp better with its dynamic content and interactive sessions. Institutions around the world are integrating technology to make education seamless and accessible to every student.

Although this is a practice seen over the last few years, but since the emerge of pandemic there has been increased focus on emerging technologies like cloud computing, internet of Things (IoT), Artificial Intelligence (AI), Machine Learning (ML), and blockchain and the COVID-19 further accelerated the pace of adoption of these emerging technologies. As the pandemic reshapes the education and academic landscape, there continues to be greater reliance on technology and digital solutions for connecting and transacting teaching-learning practices.

Learning while doing requires carefully blending information supply and activity based learning personalised small group learning, e-classroom. This is easier said than done. It requires students with aptitude, quality teachers, and continuous reflection. Being selective becomes essential, even if student and faculty intake is restricted in the interest of quality.

The pandemic has forced students to spend extended hours on digital media which makes them distracted. When they open on screen for an online class, there are few others that are claiming their attention. Through Yoga, they can be taught to focus their energies and attention for better concentration. With the world endorsing Yoga, we have no reasons to be apologetic about the inclusion in our curriculum and wellness programmes.

While the education system is centered on building the intellectual side of an individual, there remains paucity in directing the power of education to create better humans. And this is where yoga steps in. Yoga is all about improving the quality of life and when integrated into the curriculum, can teach life skills.

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