

Online Teaching and Effective Practices in Digital Era in India: A Comprehensive Analysis

Dr. Delliswararao Konduru

Department of Anthropology, Pondicherry University, Puducherry, India

Abstract: The Greek philosopher Plato said that, “Education helps in the comprehensive development of every individual. It gives knowledge to take the decisions for the fulfilment of their responsibilities”. Education is helps to acquire the knowledge and helps to cultural transmission, it is essential for human’s inclusive and sustainable development. The United Nations Organisation’s- (UNOs) Sustainable Development Goal-(SDGs) number four; is explaining that, the "quality education" is necessary to every individual on earth. But; due to the various factors, it is not reached to the all the people across the world. The emergence of online teaching has revolutionized education worldwide, including India. With the rapid advancement of technology and increased internet accessibility, online teaching has become an integral part of the Indian education system. The online education and teaching is bridging the geographical and economical barriers, in developing countries like India. Here some of the challenges are escalated with the online teaching and education, like mental stress and technological glitches. However, the present study is used a Secondary Data Resources, and it is analysis as a Methodology, the data was collected from the different sources, including government, non-governmental reports and scholarly articles. Primary Objective of the paper is, to understanding the online education and it is theoretical concepts. Second aim of the present paper is, to talk about the weakness and strategies of the online education in India. Final objective of the study is, to talk about the effective measures for better online education in India.

Keywords: Online Education; Quality of Education; Sustainable Development Goals; Learning Management Systems.

Introduction:

The word “Education” is derived from Latin word “Educare”, which means “to lead out or bring forth”. According to Plato, “Education helps in the comprehensive development of every individual. It gives knowledge to take the decisions for the fulfilment of their responsibilities”. According to Radden, education is the process

through which a more experienced individual has a positive, long-lasting impact on less experience individuals.

Education is the transmission of knowledge and skills, from peers or skilled persons, to learners or a group of interested people, whom to acquire the knowledge. Basically the education is divided into two categories, like formal and informal education. The formal education is a structured and organised. Whereas, the informal education, is semi structured and knowledge attained through the experience. At present, education is the basic requirement and it is basic fundamental right of every citizen. According to the United National Organisation-(UNO), it is a human right, which also enables people to access other types of rights. Education helps to build a character and personality of every Individual. Education is helps to acquire the knowledge and helps to cultural transmission, it is essential for human's inclusive and sustainable development.

. The United Nations Organisation's-(UNOs) Sustainable Development Goal-(SDGs) number four; is explaining that, the "quality education" is necessary to every individual on earth. But; due to the various factors, it is not reached to the all the people across the world. However, this objective can only be attained if other socioeconomic objectives, like SDGs 1 to 6 and 17, are also met (UNDP, 2022). Whereas, the "Universal elementary education-(UEE)" is not a new concept, it is a one of the component of the Millennium Development Goal-(MDGs) established by the United Nations in late 1990's. Here we need to understand that, the education assist, to the accomplishment of a range of individual and social objectives, if it is of a desirable standard. The United Nations Education and Socio-Cultural Organisation-(UNESCO's), and it is allied institute, the Institute of Education (UIE) 2004) said that, Education consists of qualitatively defined processes and outcomes. Focus on education quality became popular on a global scale in the 1990s, when the 'World Declaration on Education for All' stated that education should become universally affordable and significantly upgraded, (UNDP, 2015).Whereas, Delliswararao said that, Illiteracy or Lack of Education to the women and the girl child increases the gender disparities in the developing countries like India, (Delliswararao, 2021). The emergence of online teaching has revolutionized education worldwide, including India. With the rapid advancement of technology and increased internet accessibility, online teaching has become an integral part of the Indian education system. Online teaching has emerged as a transformative force in education, enabling learners to access quality education beyond the limitations of physical classrooms. In India, where geographical barriers and limited resources pose challenges to education, online teaching has played a pivotal role in bridging gaps and providing inclusive learning opportunities. Online teaching has witnessed a significant surge in recent years, especially in the wake of the COVID-19 pandemic.

India, with its vast population and diverse educational landscape, has experienced a rapid adoption of online teaching methods. In recent years, online

teaching has the offering of unprecedented opportunities for students and educators alike. The widespread adoption of technology has opened up new avenues for learning, breaking down geographical barriers and promoting inclusive education. However, the effectiveness of online teaching relies on employing proven practices that optimize engagement, interactivity, and student achievement. This article explores the effective practices of online teaching in India, highlighting key theories and challenges, and strategies. Moreover, the suggestions are drawing, on current research and best practices.

Theoretical framework:

Constructivism Learning Theory-(CLT):

The Constructivism Learning Theory-(CLT) is proposed by Jean Piaget, and it emphasizes active learning, where learners construct knowledge through interaction and engagement. He also describes that, Educators in India are increasingly embracing student-centred approaches that promote critical thinking, creativity, and collaboration. Moreover, online teaching platforms in India often employ adaptive learning technologies, which tailor educational content to individual students' needs and progress. These technologies employ algorithms to analyze student performance, identify learning gaps, and provide personalized recommendations. This Theory emphasizes the significance of individualized learning experiences, enabling students to construct knowledge actively. Online teaching platforms enable educators to deliver personalized instruction, ensuring effective learning outcomes for every student, (Piaget, 1977). Besides that, L Vygotsky, stressed that, the active learning, collaboration, and learner-centred approaches. Online teaching in India has leveraged constructivist principles by encouraging student engagement, peer interaction, and the use of multimedia resources to promote effective learning experiences, (Vygotsky, 1978). Whereas, Jonassen said that, the online teaching platforms offer opportunities for interactive discussions, collaborative projects, and simulations, enabling students to actively participate in their learning process. This theory highlights the importance of learner-centred approaches in online teaching platforms, (Jonassen, 1999).

Technology Acceptance Model-(TAM)

Technology Acceptance Model (TAM) is proposed by Davis (1989), according to him, the effective online teaching in India begins with the integration of technology tools and platforms. The use of Learning Management Systems-(LMS), video conferencing applications, and multimedia resources can enhance student engagement and interaction. Davis suggests that, the perceived usefulness and ease of use of technology, is greatly influence adoption. In addition, the educators must choose user-friendly platforms and provide technical support to ensure a seamless online learning experience, (Davis, 1989).

Multilingual Support Theory-(MST):

Multilingual Support Theory-(MST) is propounded by Sharma and Barrett, in the recent years. It explains the Vernacularization Approach. As per the Sharma and Barrett, India is a linguistically diverse country with numerous regional languages. To ensure inclusivity and effective learning, online teaching platforms in India must offer multilingual support. Incorporating machine translation tools or providing course materials in multiple languages can break language barriers and enable better comprehension for students from diverse linguistic backgrounds. Moreover, the Vernacularization Approach emphasizes the importance of using local languages in education to enhance accessibility and engagement, (Sharma & Barrett, 2008). The above all theories are showing a significant impact on online education system in India, and rest of the world.

Methodology:

The methodology of the present study is a secondary data resources, the data was collected from the different sources, including government, non-governmental reports and scholar's articles. Primary Objective of the paper is, to understand the online education and the theoretical concepts. Second aim of the present paper is, to talk about the weakness and strategies of the online education in India. Final objective of the study is, to talk about the effective measures for better online education in India.

Discussion:

Online education has emerged as a prominent mode of learning, offering flexibility, accessibility, and convenience to learners worldwide. As this form of education continues to evolve, several theories and effective measures have been proposed to enhance its effectiveness and maximize learning outcomes. However, to ensure successful online learning experiences, educators must employ effective practices that engage and support students in their virtual learning journeys. Establishing a supportive online learning environment creates a welcoming and inclusive online learning environment which is crucial for student engagement and success. Educators should introduce themselves, establish clear expectations, and promote a positive classroom culture. Encouraging interaction among students and providing regular feedback fosters a sense of belonging and motivation. Besides that, the Design engaging, and interactive learning experiencing, through online teaching. It offers numerous opportunities to incorporate interactive elements into lessons. Implementing multimedia resources, discussion forums, virtual simulations, and real-world applications can enhance student engagement and promote active learning. Varied instructional strategies, such as case studies, group projects, and virtual experiments, help cater to diverse learning styles and maintain student interest. According to the Delliswararao K; education is one of the key factors to the women

empowerment, due to the Covid and post Covid-19 trauma, the online education helps to acquire the knowledge from home. Moreover, online education assures to the girl child education, and their safety. It is reducing the stress on the parents and their kins, (Delliswararao, 2018). In another article Delliswararao said that, online education helps to minimise the usage of paper products, and it indirectly helps to save the environment, (Delliswararao, 2023).

Lemay and other researchers said, with their research study, the students overall reported, and the optimistic educational results through online education. In addition, Lemay and others said that, the students believe that, the increased stress and anxiety and difficulties on concentrating for long hours. They are suggesting that, the obstacles in the online learning, was not only Technical issues but also the Social challenges like, isolation, social distancing, mental stress and others also faced by the students. Lemay and others told that, in the particular perspective, the Covid-19 pandemic and after the trauma severely disturbed the normal teaching and learning activities. Meanwhile, the students are commonly taking as a positive manner during this transition period. But sometimes the students are showing the unwillingness to the online education, and they feel stress and heavy workload.

Besides that, the technical and pedagogical dimensions; the students are much more interested to online learning, it is only teacher's need. The Lemay and others concludes that, the teachers and technical experts in education sector, to support the students with advanced and affordable technologies for better studies, they always remember the student's socio-economic conditions, (Lemay, Bazelais, & Doleck, 2021). Structuring clear and well-organized content, organizing course materials and instructions in a clear and accessible manner is essential for online teaching. Educators should provide a structured syllabus, detailed instructions, and well-organized learning modules. Breaking down content into manageable unit is and providing a timeline helps students plan their learning effectively. In additionally, the Leveraging technology and digital tools helps to utilizing for online teaching. Learning management systems-(LMS) offer features for content delivery, assessments, and communication. Video conferencing tools enable synchronous interactions, while collaboration tools facilitate group work. Teachers should select tools that align with the learning objectives and offer user-friendly interfaces to ensure seamless learning experiences. Meanwhile, Incorporating active learning and formative assessments, are promoting active learning. Through online discussions, case studies, and problem-solving activities encourages critical thinking and deeper understanding. Formative assessments, such as quizzes, polls, and online assignments, provide immediate feedback and help track student progress. Continuous assessment allows educators to identify learning gaps and personalize instruction accordingly. Moreover, the effective communication, between educators and students is vital in an online learning environment. Regular communication through email, discussion boards, or chat platforms helps address student queries, provide clarifications, and offer support.

Encouraging collaborative learning through group projects, peer feedback, and virtual teamwork enhances engagement and social interaction. However, the Laptin Jr explaining, the socio-economic constrains in online education system. Laptin and his colleagues said that, lack of computers / laptops or other gadgets, power interruptions, lack of quiet and isolated rooms for studies, family responsibilities are the constrains to the online education. They also noted that; availability of Internet and its speed differ from place to place, it is more impact on student's attendance and accessibility of study material during the academic periods, (Laptin & et. al., 2021). Some other challenges of the online education system, and the strategies for outcome the challenges are briefly discussed below.

Challenges and Strategies of the online education system:

Infrastructure and Connectivity:

In India, inadequate internet connectivity and access to digital devices pose challenges to online teaching. To overcome these hurdles, the government and educational institutions are working towards providing better infrastructure and connectivity options, especially in remote areas. Offline accessibility options, mobile learning applications, and low-bandwidth solutions have been implemented to ensure wider access to online education.

Digital Literacy and Training:

Enhancing digital literacy skills among teachers and students is critical for effective online teaching. Professional development programs, workshops, and training sessions have been conducted across India to familiarize educators with online teaching tools and strategies. Initiatives promoting digital literacy are being undertaken to bridge the digital divide and ensure equal opportunities for all learners.

Mental Health and Well-being:

Extended screen time and isolation in online learning can impact students' mental health. To address this, online teaching platforms in India promote well-being by incorporating mindfulness activities, virtual counselling services, and encouraging social interactions. Educators are encouraged to provide emotional support, maintain work-life balance, and foster a positive learning environment. For the success of the online education system in India, the effective practices are briefly discussed below.

Effective Practices for successful online education system:

Engage With Content Delivery:

To enhance student engagement, online teaching platforms in India employ diverse content delivery methods such as multimedia presentations, videos, interactive quizzes, and gamification. Those approaches promote inquiry-focused teaching and keep students actively involved through virtual meetings.

Synchronous and Asynchronous Learning:

Online education in India makes use of both asynchronous and synchronous approaches. Instructors and students may have real-time conversations in synchronous sessions, allowing for instant feedback and clarification. By using previously recorded lectures, learning tools, and discussion forums, asynchronous learning provides students with flexibility and accommodates different learning styles.

Mutual Learning:

In India, online education platforms use collaborative learning strategies, including collaborative assignments, virtual breakout rooms, and discussion boards. These types of exercises contribute to a warm and interesting classroom setting by fostering student-teacher communication, conceptualization, and the airing of other points of view.

Personalized Assessment:

Individualised assessment methods are given a lot of weight in successful Indian online teaching tactics. Formative assessments, such as online quizzes, self-evaluation tools, and peer evaluations, provide students with regular feedback on their progress. In addition, these digital environments provide automated grading technologies that free educators to focus on their students' particular growth and the fulfilment of their specific educational needs.

Teacher-Student Communication:

Constant communication between teachers and students is crucial in online education. Email, video chat, and other messaging apps are all made available by various platforms in India. In order to foster a welcoming and flexible learning atmosphere, teachers should often engage with students, answer their queries, and provide timely advice.

Suggestions:

- Invest in improving internet connectivity and digital infrastructure across the country to ensure smooth online teaching experiences for both teachers and students. This includes expanding broadband access, strengthening network connectivity, and providing necessary hardware and software support.
- Conduct regular training programs for teachers to enhance their digital literacy skills, online teaching methodologies, and effective use of educational technology tools. This will enable them to deliver engaging and interactive online classes.
- Develop user-friendly and accessible online learning platforms that cater to the diverse educational needs and languages prevalent in India. These platforms

should provide a seamless learning experience, with features like real-time interaction, multimedia content, and adaptive assessments.

- Focus on creating and curating high-quality digital educational content in regional languages, ensuring that students from different linguistic backgrounds can access and understand the material easily. This will help bridge the language barrier and promote inclusivity in online education.
- Keep students engaged and motivated in online classes by using state-of-the-art methods. Methods like online quizzes, group projects, and discussions may help get students involved. Each kid has different needs; therefore, it is important to respond quickly with criticism and help.
- Encourage close collaboration between teachers and parents by holding regular meetings between the two groups. Educating parents on the tools and methods available to them online may help them better support their children as they engage in virtual learning.
- Develop secure and fair online assessment tools that uphold the highest standards of objectivity and fairness. To accurately gauge whether or not your students are learning, use a battery of both formative and summative assessments, as well as both objective and subjective criteria.
- Facilitate communication between instructors and students by setting up dedicated email accounts, online discussion boards, or instant messaging platforms. Because of this, students may easily approach teachers with inquiries or concerns and get timely responses.
- All students, particularly those from underrepresented groups or with special needs, should have equal access to online learning opportunities. Help students who are having trouble with online learning by providing them with resources like digital gadgets and internet access. Work together with NGOs, government bodies, and businesses to eliminate the digital gap and increase access to education for all students.
- Develop methods for assessing the efficacy of online pedagogical strategies and analysing the outcomes for student learning. Enhance the standards of online learning by regularly soliciting feedback from teachers, students, and parents in order to identify problem areas and implement fixes.

Conclusion:

The introduction and theoretical frameworks are explaining about the primary objective of the study. Whereas; discussion, challenges and strategies of the article are discuss about the second objective. The effective practices, and remaining part of the study is elucidates the third objective of the paper. The ever-changing field of online teaching and learning may benefit from a wide range of theoretical perspectives and concrete methods. For instance, the constructivist theory emphasizes interactive and

collaborative learning, while the cognitive load theory emphasizes optimizing instructional design. Social presence theory promotes interaction and community building, while self-regulated learning theory empowers learners to take control of their learning journey. Finally; by considering and implementing these theories and effective measures, the online education can continue to evolve and provide high-quality learning experiences. These suggestions aim to enhance the online teaching experience in India, promoting equitable access to quality education and supporting effective teaching and learning in the digital age. Moreover, it creates the robust ecosystem that supports quality education for all, regardless of geographical location or socio-economic background.

Abbreviations:

CLT-Constructivism Learning Theory

LMS-Learning Management Systems

MDGs-Millennium Development Goal

MST-Multilingual Support Theory

SDGs-Sustainable Development Goals

TAM-Technology Acceptance Model

UEE-Universal elementary education

UIE-United Nations Institute of Education

UNDP-United Nations Development Programme

UNESCO-United Nations Education and Socio-Cultural Organisation

UNO- United Nations Organisation

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