



EXPLORING THE ASSIMILATION OF SELF-LEARNING & INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) IN HIGHER EDUCATION: COVID-19 PANDEMIC PERSPECTIVE IN INDIA

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ABSTRACT

This article delves into the evolving landscape of 'Self-learning' within the area of higher education in India. With the proliferation of technology and digital resources, 'Self-learning' has emerged as a prominent alternative or complement to traditional classroom-based education. The article reviewed and examines the drives behind the rise of self-learning, including the accessibility of online platforms, the demand for flexible learning opportunities, and the need for continuous skilling in a rapidly changing world. Furthermore, it explores the challenges and opportunities associated with self-learning in the Indian context, such as issues of digital divide, quality assurance, and recognition of self-taught skills. Now-a-days Distance mode of education (non formal education) in Higher Education is very much popular and effective in India and the Self-learning concept is very much essential for achieving the goal. This paper reviews the existing literature on the connection of self-learning and Information and Communication Technology (ICT). With the proliferation of digital tools and platforms, ICT has significantly influenced self-learning practices, enabling learners to access resources, collaborate with peers, and personalize their learning experiences. Reviewing previous empirical studies, theoretical frameworks, literatures this study is aimed on the impact of ICT on various aspects of self-learning, including accessibility, engagement, effectiveness and inclusivity. Additionally, it explores the barriers hindering effective implementation, including issues of accessibility, digital literacy, and privacy concerns. The COVID-19 pandemic has disrupted education systems worldwide, prompting a rapid shift towards remote and self-directed learning modalities. In India, where the pandemic has exacerbated existing educational inequities, self-learning has emerged as a critical strategy to ensure continuity of education. This paper also discussed the impact of the COVID-19 situation on self-learning in India, exploring the challenges faced by learners and educators, as well as the opportunities for innovation and suggestions for enhancement.

KEYWORDS: Self-learning, Higher Education, ICT, COVID-19, Online-Learning, Digital Resource, Digital divide, Distance Education

INTRODUCTION AND EMERGENCE

The traditional paradigm of higher education in India, articulated by classroom-based instruction and rigid curricular structures, is undergoing a profound transformation propelled by advancements in digital technology. In recent years, the background of higher education in India has been a notable shift towards 'self-learning' methodologies facilitated by online platforms and digital resources. This shift is driven by a confluence of factors, including the escalating require for flexible learning options, the imperative of continuous skilling in a rapidly evolving job market and the widespread accessibility of digital learning resources. 'Self-Learning' as a Process by which self responsiveness, critical thinking of learning will be shaped in the 21st century skills. It helps one's deep strategic understanding in a concept or subject and builds insight in a fundamental concept. 'Self-Learning' as a concept is not new. Terms analogous with Self-learning include, self-directed learning, self-designed

learning, self-regulated learning, lifelong learning, self-directed learning (SDL) has its roots in the concept of adult education, while self regulated learning (SRL) on the other hand, is mostly studied in the educational environment (Loyens, et. al., 2008). 'Higher education' in India refers to the education provided at colleges, universities, and other tertiary institutions beyond the secondary level. It encompasses undergraduate, postgraduate, and doctoral programs, as well as professional and vocational courses, aimed at preparing students for specialized careers and advanced research (University Grants Commission, 2008). Higher education institutions in India offer a diverse range of disciplines and fields of study, including arts, sciences, engineering, medicine, commerce, and humanities, catering to the diverse academic and career aspirations of students across the country. The dawn of 'Information and Communication Technology (ICT)' has revolutionized the way individuals engage in 'learning' activities, particularly through self-learning initiatives. ICT encompasses a wide range of digital tools and platforms,



including online courses, educational apps, social media, and collaborative learning environments. This introduction sets the stage for the review by highlighting the growing significance of ICT in self-learning contexts and outlining the objectives and scope of the paper.

Moreover, in the 'COVID-19', global pandemic and lockdown situation all over the world as well as in India had affected the 'formal education system'. Because of this 'COVID-19 pandemic situation', nearly all of the schools and colleges were closed to maintain 'social distancing' from the month of March, 2020 in India for a long time and 'formal Higher Education system' is affected and need for another remedy for the students in 'learning'. The COVID-19 pandemic has triggered the espousal of online learning, prompting educational institutions to embrace digital platforms to ensure stability of education. The shift towards online and hybrid learning models has not only reinforced the importance of self-learning but has also highlighted its potential to enhance learning outcomes and promote lifelong learning habits among students. In this study, analysed the various aspects of 'Self learning' its challenges faced by the students and teachers. As per the instructions of the Union Ministry of HRD (Human Resource Development) has made several arrangements for conducting classes for the students through the online portals and through the educational channels to continue the learning. In other hand through 'Self-learning' in 'distance Education' learning practices now are highly adapted for completion of people's further education after engaging in any profession or any other reason for incompleteness of degrees and achieving the same after a duration of time. It outlines the objectives of the paper and highlights the importance of thoughtful the 'challenges and opportunities' associated with self-learning in the current context. The growing importance of self-learning and ICT assimilation in the education system is a crucial factor for now-a-days.

Aspects of Self-Learning

Self-learning, also known as self-directed learning or autonomous learning refers to the process by which individuals take responsibility for their own learning experiences, actively seeking out and engaging with educational resources, materials, and activities without direct supervision or guidance from traditional instructors (Knowles, 1975). In self-learning, learners set their own learning goals, manage their time and resources, and monitor their progress, thereby fostering autonomy, self-motivation, and lifelong learning habits (Siemens, 2005).

Self-learning is defined as "a method of garnering information and after processing and retaining it without taking the help of another individual. It is the responsibility of the learner to learn and hold on to the knowledge without the help of another human resource. It is a modern way of learning that helps a person to teach himself skills and knowledge that will prove relevant to his daily activities" (Skilling India, 2020). The theoretical framework of 'Self-learning' is the guides of review, drawing upon theories of self-regulated learning, Social Constructivism, and technology acceptance. The framework elucidates the mechanisms through

which ICT influences self-learning processes and outcomes, providing a conceptual lens for analyzing the literature. Any knowledge getting outside of a 'formal educational' setting, like through self-study or experience, is called 'self-driven learning'. This approach can be beneficial for people who prefer learning at their own pace or who don't have sufficient time to accomplish academic courses or programmes.

Drives of Self-Learning in Higher Education

The accessibility and affordability of digital technology have played a pivotal role in the proliferation of self-learning in India. Various 'Online platforms' offer a huge range of courses and resources across an assortment of disciplines, enabling learners to achieve education at their individual pace and expediency. Additionally, the advent of 'Massive Open Online Courses (MOOCs)' has vast access to higher education, allowing individuals from 'diverse socio-economic backgrounds' and in the higher education landscape, enabling 'millions of learners to engage in learning experiences offered by prestigious institutions worldwide to acquire knowledge and skills previously beyond their reach.

The proliferation of self-learning in India can be attributed to the accessibility and affordability of digital technology, which have empowered the learners democratically to achieve knowledge at their own pace and needs. The 'COVID-19 pandemic' has triggered the adoption of online learning and to clinch digital platforms to ensure stability of education.

OBJECTIVES OF THE PRESENT STUDY

1. To comprehend the 'concept of 'Self-Learning' in education system.
2. To study the needs of 'Self-Learning' and 'information and communication technology (ICT)' in higher education.
3. To identify the issues, opportunities and challenges of Self-Learning and its assimilation with ICT in the educational institutions chiefly at time of COVID-19 pandemic situations.
4. To propose or suggests some measures for implementation of 'Self-Learning' assimilation with ICT in Higher education system in India.

METHODOLOGY

This is a descriptive qualitative study. For this study secondary data was composed. To assemble data for the study reports, books, periodicals, research papers, journals, and peer-reviewed articles were retrieved and reviewed for comprehensive and holistic analyses.

Challenges of Self-Learning and ICT assimilation in Higher Education during COVID-19

Despite its transformative potential, self-learning in the Indian context faces several challenges. The proliferation of unaccredited or substandard courses undermines the value of online education, raising concerns among posing challenges for



learners. The challenges faced by learners and educators in adopting self-learning modalities during the COVID-19 pandemic, including:

Digital Divide: One of the most significant challenges facing self-learning is the 'digital divide', which means to the disparities between individuals who have access to digital technologies and those who lack such access. This divide shows existing inequalities in access to technology and internet connectivity in education, hindering the participation of marginalized communities in self-learning initiatives (Warschauer, 2003 & UNESCO, 2020).

Lack of Structure and Guidance: Unlike traditional classroom-based instruction, self-learning often lacks the structured guidance provided by educators. Without clear learning objectives and feedback mechanisms, learners may struggle to navigate the vast array of online resources effectively (Knowles, 1975).

Motivation and Self-Discipline: Self-learning requires a high degree of self-motivation and discipline. Learners must proactively set goals, manage their time effectively, and stay motivated to complete courses or projects independently (Deci & Ryan, 2000).

Quality Assurance and Credibility: Ensuring the quality and credibility of self-learning resources and credentials remains a challenge. With the proliferation of online courses and platforms, there is a lack of standardized quality assurance mechanisms, leading to concerns about the authenticity and recognition of self-taught skills (Daniel, 2012).

Isolation and Lack of Social Interaction: Self-learning can be isolating, as learners often study alone without the social interaction and peer support typically found in traditional classroom settings. This lack of social interaction can impact motivation and engagement, particularly for learners who thrive in collaborative environments (Garrison, Anderson, & Archer, 2000).

Digital Literacy: Lack of digital literacy skills among learners and educators hinders effective utilization of ICT tools and platforms for self-learning (Hargittai, 2010).

Privacy and Security Concerns: The collection and use of learner data by ICT platforms raise privacy and security concerns, necessitating robust policies and safeguards to protect sensitive information (Selwyn, 2010).

Lack of Infrastructure: Limited access to digital devices and inadequate infrastructure in rural and remote areas pose challenges for learners and educators attempting to engage in online self-learning (Kumar & Vigil, 2012).

Pedagogical Issues: The sudden transition to self-learning modalities has highlighted pedagogical challenges, including the need for effective instructional design, learner support mechanisms, and assessment strategies (Chen et al., 2020).

However, these challenges also present opportunities for innovation and collaboration, including the development of accessible and user-friendly technologies, the promotion of digital literacy initiatives, and the establishment of partnerships between educational institutions, governments, and technology providers (Pimmer et al., 2016).

Opportunities of Self-Learning with assimilation of ICT in Higher Education & Innovation

Despite the challenges, the COVID-19 situation various opportunities afforded by the incorporation of self-learning and ICT in education for innovation and improvement in self-learning practices including:

Convenience: Digital user-friendliness features make learning materials more reachable to learners with disabilities, ensuring inclusivity and equal access to educational opportunities (Burgstahler, 2003). Self-learning offers numerous opportunities for learners to enhance their educational experiences and achieve their academic and professional goals.

Personalised Learning Experiences: ICT tools enable learners to access personalised learning materials and resources tailored to their individual needs and preferences (Picciano, 2017). With the help of adaptive learning technologies self-learning platforms can modify learning experiences to individual learner preferences, abilities, and learning styles, enhancing engagement and retention (Brusilovsky, 2001).

Flexibility: 'Self-learning' provides learners with the flexibility to convert their learning experiences according to their interests, pace, and preferences (Singh & Thurman, 2019). Learners can choose from a wide range of online courses, resources, and learning pathways adapted to their individual needs (Siemens, 2005).

Lifelong Learning and Skill Development: Self-learning promotes 'lifelong learning' habits by empowering individuals to take possession of their learning drive beyond formal education. Learners can continuously acquire new skills, update their knowledge, and adapt to evolving industry trends and technologies (Kirkwood & Price, 2014). ICT provides opportunities for continuous skill development and lifelong learning, empowering individuals to stay abreast of industry trends and pursue personal and professional growth (Dennen et al., 2007). Self Learning provides that age is no bar for learning.

worldwide Access of Education: Online platforms and digital resources ease global access to education, facilitate collaboration allowing learners from diverse geographical locations to access quality educational content and interact with experts and peers worldwide (Ally, 2004). Through online forums, group projects and collaborative assignments, learners can engage in cross-



cultural dialogue, gain new perspectives and develop intercultural competence (Kanuka & Garrison, 2004).

Cost-effectiveness: Self-learning can be a cost-effective alternative to conventional classroom-based instruction, as learners can access many online resources for free or at a fraction of the cost of traditional tuition fees (Bonk & Graham, 2006).

Diverse Learning Resources: Self-learning platforms offer admittance to a diverse range of learning resources, including multimedia content, interactive simulations, and 'Open Educational Resources' (OERs). This variety of resources enhances learning engagement and caters to different learning preferences (Conole & Alevizou, 2010). By harnessing the collective expertise of educators and learners worldwide, self-learners can access a wealth of free, high-quality educational materials and contribute to the creation of new knowledge (Wiley & Hilton, 2009). In this day and age Distance mode of education i.e. non formal education in Higher Education is very much accepted and effective in India and the Self-learning concept is very much essential for continuing this aspiration.

Immediate Feedback and Assessment: Self-learning platforms often incorporate the process of receiving feedback on their progress in real-time. This timely feedback promotes reflection and facilitates continuous improvement (Narciss, 2008).

Employability and Career Advancement: Self-learning equips learners with in-demand skills and competencies valued by employers in the job market. By acquiring relevant knowledge and skills through self-learning, individuals can enhance their employability, advance their careers, and pursue new professional opportunities (Dennen, Darabi, & Smith, 2007). Self-learning fosters learners' autonomy and empowerment in their life.

Learning for Differently-abled Individuals: Self-learning platforms can be designed to accommodate the needs of differently-abled individuals, providing convenience features for content delivery. By ensuring inclusivity and accessibility, self-learning empowers individuals with disabilities to participate in educational experiences (Burgstahler, 2003).

Collaborative Learning Communities: Online self-learning platforms facilitate collaboration and knowledge-sharing among learners and educators, fostering a sense of community and peer support (Khan, 2020).

Impact of ICT on Self-Learning

The impacts of ICT on self-learning are as follows:

Accessibility: ICT has expanded access to learning resources and opportunities, particularly for marginalized and underserved populations (Warschauer, 2003).

Engagement: Digital tools and multimedia content enhance learner engagement and motivation by catering to diverse learning styles and preferences (Picciano, 2017).

Effectiveness: Empirical studies reveal the effectiveness of ICT-enhanced self-learning interventions in improving learning outcomes and retention rates (Means et al., 2009).

Inclusivity: ICT promotes inclusivity of intensive learning by accommodating of all individuals with diverse needs and facilitating collaboration among learners from diverse backgrounds (Ally, 2004).

Suggestions for Addressing Challenges and Enhancing Self-Learning

However, amidst these challenges lie opportunities for innovation and collaboration. Public-private partnerships can play a crucial role in expanding access to digital infrastructure and promoting digital literacy initiatives in underserved communities. Additionally, the integration of emerging technologies such as 'Artificial Intelligence (AI)' and 'virtual reality' holds promise for enhancing the efficiency and engagement of self-learning experiences.

Some recommendations for addressing the challenges identified for enhancing the effectiveness and inclusivity of self-learning initiatives during the COVID-19 pandemic, including:

1. Investing in digital infrastructure and internet connectivity to bridge the digital divide and ensure equitable access to technology (Hinrichsen & Coombs, 2014).
2. Introducing digital literacy training programs for learners and educators to enhance their digital skills and competencies (Koltay, 2011).
3. Developing clear guidelines and policies for data privacy and security in educational ICT environments, ensuring compliance with relevant regulations (Greenhow & Askari, 2017).
4. Implementing quality assurance mechanisms to evaluate the credibility and effectiveness of online learning resources and platforms (Conole & Alevizou, 2010).
5. Governments and educational institutions should come forward to develop digital infrastructure and connectivity to ensure reasonable access to 'self-learning' opportunities for all learners.
6. Providing teachers with training and professional development opportunities in online pedagogy and technology assimilation is essential for enhancing the quality of self-learning experiences (UNESCO, 2021).
7. Engaging parents, caregivers, and local communities in supporting learners' self-learning journeys can help bridge the gap between home and educational environments and promote holistic learning outcomes (Agarwal & Karpouzian, 2020).
8. 'SWAYAM', 'DIKSHA', 'e-Gyankosh' etc. online platforms should be encouraged more for proliferation and enhancing 'self-learning' to complete learners' desired courses and degrees in 'distance mode' or in 'non-formal' way of education in India.

DISCUSSION & CONCLUSION

'Self-learning' has emerged as a transformative force in higher education in India, reshaping traditional notions of teaching and



learning. While challenges such as the digital divide and quality assurance persist, the opportunities presented by self-learning are vast and promising. By harnessing the potential of digital technology and fostering collaboration among stakeholders, India can pave the way for a more inclusive, accessible, and innovative higher education. This review highlights the transformative potential of ICT in shaping self-learning practices and experiences. By expanding access to educational resources, enhancing engagement and effectiveness, and promoting inclusivity, ICT has the power to democratise learning and empower individuals to pursue their educational aspirations. However, addressing the challenges associated with ICT integration requires concerted efforts from stakeholders across sectors. To promote lifelong learning for all the assimilation of Self-learning and ICT is very much essential. Self-learning platforms leverage open educational resources (OER) and collaborative knowledge creation tools to promote the sharing and dissemination of knowledge (Wiley & Hilton, 2009). Self-learning, while offering numerous benefits, also presents several challenges, particularly within the context of higher education. Conceptualising and addressing these challenges are crucial for ensuring the effectiveness and inclusivity of self-learning initiatives.

In conclusion, it can be emphasised that, the assimilation of self-learning and ICT presents both opportunities and challenges for the education system. By implementing targeted interventions and policies, stakeholders can tie together the transformative power of ICT to enhance self-learning outcomes and uphold impartial admittance to education for all. The 'COVID-19 pandemic' has accelerated the adoption of self-learning modalities in India, presenting both challenges and opportunities for the education sector. By addressing the challenges of digital divide, infrastructure limitations and pedagogical issues India can construct a more resilient and 'inclusive education' system that empowers learners to thrive in the 'digital age' in the arena of 'self-learning' initiatives.

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44. WEB LINKS

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