# NEP-2020: OER and M-learning in Higher Education

**Shiv Shankar Jha and Raj Kishor Kampa**

*The purpose of the study is to critically examine the importance of digital learning, particularly mobile learning, and its policy matters. Contextual analysis is conducted to explore the scope and gaps in the present M-Leaning system and the use of OERs. Our findings support the argument that M-learning is among the essential and alternative learning modes for current and next-generation students. UNESCO is in the continuous development and upgrades policies of OER. This study facilitates the policymakers to understand the current trends in digital learning and provides the gaps in m-learning to be upgraded in the future.*

**Introduction**

Sustainable development is the requirement of the contemporary world. "United Nations Educational, Scientific, and Cultural Organization (UNESCO) is leading and coordinating the Education 2030 programme, where 17 Sustainable Developmental Goals (SDGs) to transform our world are envisaged. Goal four is devoted to quality education. It "ensures inclusive and equitable quality education and promotes lifelong learning opportunities for all." There are ten targets to be achieved by 2030. These are to ensure 1) that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and Goal-4 effective learning outcomes; 2) that all girls and boys have access to quality early childhood development, care and preprimary education so that they are ready for primary education; 3) that equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university; 4) that substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship; 5) that gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations; 6) that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy; 7) that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development; 8) that build and upgrade education facilities that are child, disability and gender sensitive and provide safe, nonviolent, inclusive and effective learning environments for all; 9) that substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries; and 10) that substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing states.

Significant progress has been made in access to education, specifically at the primary school level, for both boys and girls. The number of out-of-school children has almost halved from 112 million in 1997 to 60 million in 2014. In terms of progress, global participation in tertiary education reached 224 million in 2018, equivalent to a gross enrollment ratio of 38%.

To make education accessible at global levels, digital learning has become significant. Digital technology, like e-learning, plays a vital role in the dissemination of knowledge all over the world. The concept of e-learning is now quite old. Now mobile devices such as mobile phones, laptops, tabs, etc. which have eased portability, are increasingly being used for learning. M-learning is a tool used for new-era learning; this may be due to its manageable handling, new-age applications that are easy to run on these devices, and their cost-effectiveness. One of the most important reasons for thriving m-learning is its ability to use at anytime, anywhere. The concept of m-learning is gradually overtaken by ubiquitous learning, as this is not about using a single type of device. M-learning is an ecosystem of digital learning formed by the pervasive use of four or five digital devices.

The delivery of equitable and quality education to all through the traditional education system is a huge task. This milestone can be achieved by implementing an innovative education delivery system like m-learning and Open Educational Resources. The OERs are open to all, free for all, can be modified by all, and are reusable, subject to license. There was a time when these resources were in hard copy and physically distributed among all distant learners, but as technology progressed, these resources were converted into digital format. It would be correct to say changes in the mode of dissemination in methods of learning and making quality OERs available at the global level is at rapid speed all over the world (Chakroun, Borhene, Keevy, and James, 2018).

In line with UNESCO's SDGs and keeping the national development and educational requirements, the Govt. of India approved its National Education Policy 2020 on July 29, 2020. The policy is a comprehensive framework for elementary education, higher education, and vocational training in rural and urban India. It intends to transform the education system in India by 2040. Access, equity, quality, affordability, and accountability are the primary goals of this vision document. The NEP is a plan for sustainable development of the education system in India targeted to transform education according to the requirement of the contemporary world. The present work is a conceptual study of the living situation of education in India in comparison to the world. The present study analyzes NEP, digital objectives for transformation, and how it will transform m-learning in India through Open Educational Resources.

## 2. Literature Review

In the recent past, during and after COVID-19, m-learning and digital learning practices have become a trending research topic. This learning mode is the only hope for humankind to share knowledge during the pandemic period (Bacolod, 2022). This has become the new normal almost in every country in the world. Organizations like UNESCO provided various policies related to the development of mobile learning. UNESCO

introduced Youth-Mobile Initiatives in 2018, a proactive scheme that teaches young youth to create mobile apps for sustainable development. This initiative helps many youths understand the requirement of mobile applications and their significance during economic uncertainty. Kim (2020) has explored reconceptualising and repositioning the role of mobile learning for sustainable development in the economy. The study conducted a qualitative case study of an m-learning project called e-ICPON world contest. In this context, many youths have participated in this research, and finally, the study recommended three areas of integration of m-learning to achieve sustainability. One M-learning procedure is predominant to access education better, second is the quality of education can be improved by m-learning, and m-learning is the best practice to develop a collaborative partnership. Nurutdinova, et. al. (2022) analysed the effectiveness of m-learning and compared it with face-to-face learning and distance learning technology. They reported that m-learning provides various advantages for building a digital economy and digital education for various countries. The framework provided a potential sustainable strategy for long-term mainstream m-learning integration in the higher education system for Nigerian universities. Cóndor-Herrera et. al. (2021) conducted an interesting study on m-learning to understand the preference of higher education students. They experimented with 16 students between the ages of 9 to 12 years, 37% were female, and 63% of males participated. They resulted in students being positively willing to complete learning activities using mobile technologies. Nacheva et. al. (2022) studied the impact of m-learning on a sustainable information society. This study introduces a conceptual model of an m-learning system and integrates the view of stakeholders like teachers, students, university management, etc.

Some research addressed m-learning from the perspective of librarians and educators (McBride and Abramovich, 2022). Librarians play a vital role in adopting OER technologies for both students and educators. The quality of OER practices in the intuition required to access, validate and report the development in the adoption of the system. Bass et al. 2022 have reported the results of a qualitative analysis conducted for teachers who assessed OER on contents, design, usability, engagement, and readability. They recommended teachers should involve OER practices during curriculum reforms and provide training for their development. There are various ethical issues in the OER system, which were studied by Mncube and Mthethwa (2022). The study aimed to identify the ethical procedures and peer-review process associated with adopting and developing the OER system. They reported three major causalities of this OER ethical problem, one is non-compliance to openness and the next is related to the transactional purchase of OER, and finally analysed the non-incentives for developers. A review of the OER and UNESCO policies has motivated this study to explore the existing system of m-learning. Context analysis reports the significance of m-learning in higher education in this study.

## 3. Contextual Analysis

### 3.1 National Education Policy (NEP) - 2020

National Education Policy (NEP) 2020 was approved by the Indian Government on July 29, 2020. The last education policy was in force since 1986, which is quite an extended period, so the government needs to

develop a new policy to fulfill the national educational goals and aspirations. The policy has been written in four parts; the first part is dedicated to school education, the second to higher education, the third to other key areas, and the last part explains this policy's implementation.

The concerning part of NEP for this paper is part three, which concentrates on promoting Indian languages and online education and its working. Informal learning gradually gained popularity last decade, but the pandemic made a total shift from formal, face-to-face education into an online mode within no time. During the lockdown period, the whole education system underwent a cumbersome process for which the existing systems were compelled by the circumstances to adopt. This new policy has a reprisal element for these issues. The main aim of the policy is to provide; access, equity, quality, and affordability. These goals can be achieved through the improved education system, including mobile learning and open educational resources. Ubiquitous learning is forming an environment of learning by combining a number of computer devices, either mobile or handheld devices. NEP 2020 considers the following provisions to provide access, equity, and the best quality and affordable education to all students.

### 3.1.1 National Educational Alliance for Technology (NEAT)

This will form by the government to work based on a public-private partnership. This regulatory body will check technological problems and come up with the best technological solution. This body will work to personalise the learning through artificial intelligence, upgrade the content of e-learning, and hence the outcomes for learners.

### 3.1.2 National Educational Technology Forum (NETF)

This will be an autonomous body set up by the government to form a platform where exchanging of ideas can take place. This multi-way communication will definitely enhance the learning experience. The central government, state government, and several institutions will also be a part of this ecosystem, making it more comprehensive.

### 3.1.3 Unit for Digital Education

A dedicated unit for digital education will form under the Ministry of Education, which will take care of digital learning in secondary and tertiary education. Experts from the field of education, educational technology, administration, e-governance, digital pedagogy, and IT will be members of this unit. These members will take on problems, suggest the best solutions in digital education, and work on enhancing digital education.

### 3.1.4 Virtual classrooms and e-content

Virtual classrooms mean learning through videoconferencing but with rules to attend online classes. This needs some setups and infrastructure. The government in future will set up virtual classrooms to make

education accessible to every student, even in remote areas where quality education is not accessible contemporarily. Discussion with peers and webinars will give all students a better exposure level. Besides these things, virtual classrooms and e-content will also better prepare nations to handle emergencies/ pandemics.

### 3.1.5 Virtual labs

The main aspect of virtual labs is to provide practical education on subjects like engineering, technology, and others through simulation. SWAYAM, DIKSHA, etc., like e-learning platforms, have been tasked with establishing virtual labs for students to gain practical and theoretical knowledge through the three-dimensional view. This three-dimensional view can be generated by augmented reality, virtual reality, or simulation.

### 3.1.6 Edtech

The introduction of tools in the study is generally termed as Edtech. Several provisions are inculcated in NEP for the growth of these tools and techniques. The vision document of the Indian education system explains the significance of Edtech in disseminating education.

### 3.1.7 Open Education Resources

NEP talks about education through gamification of learning, virtual reality, augmented reality, and simulation, which are accessible to all students in remote areas, Divyang, underprivileged girls, and adults who, for any reason not able to get education previously. Our primary concern is open education resources in the context of the National Education Policy-2020 through digital learning; therefore, our next section is dedicated to OER in detail.

## 3.2 Open Educational Resources (OERs)

Open education is a contemporary form of distance learning. In India, distance learning was envisaged in 1962, when correspondence courses as a pilot project started. This project later merged with the University of Delhi and was named the University of Delhi School of Correspondence and Continuing Education. Those days' educational resources were served in hard physical format. Massachusetts Institute of Technology (MIT) introduced the first digital open educational resources in 2001 and announced that all of its course material would be freely available; this project, named MIT Open Course Ware (OCW), later culminated in MOOC. In India, OER in digital form was started in 2003 with the launch of the National Programme on Technology Enhanced Learning (NPTEL). This joint venture of IITs and IISc was financed by the then MHRD, Government of India. In the beginning, NPTEL offered education and educational resources to all engineering aspirants in the country, but from March 2014, it started open online courses accessible to everyone other than the IIT fraternity. Other than NPTEL, some important pioneering OER in India were eGyan Kosh of IGNOU, which is still in existence, Vidyanidhi – a digital library and e-scholarship portal for

theses and dissertations. Vidyanidhi is the University of Mysore's national digital library initiative, but this portal is now unavailable. National Mission for Education through Information and Communication Technology (NME-ICT), in association with IIT Bombay, took the Open Source Courseware Animations Repository (OSCAR) initiative, which is a repository of web-based, interactive animations for teaching various concepts and technologies.

UNESCO gave the term Open Educational Resources (OER) in 2002. OERs are learning, teaching, and research materials in any format and medium that reside in the public domain or are under the copyright that has been released under an open license, that permits no-cost access, re-use, re-purpose, adaptation and redistribution by others". According to the given definition, an educational resource can be said an open educational resource when it fulfils four requisites, i.e. open access- means content should be accessible for everyone; open license, which depicts that OER content must be free from copyright infringement; an open format that is e-content should be in the form that should be openable to all and the software used should also be open source software. Open licensing given here is the permission for OER in five ways and commonly called as 5Rs concept given by David Wiley for free licensing as shown below:

- Retain –This is the right to make and own copies of OER content and can also control these copies of the content. This means a person can download, duplicate, store and manage the OER content.
- Reuse – This right gives freedom to use the content in numerous ways, such as in a class, in a study group, for teaching, learning, self-study, etc.
- Revise –According to this right, one can adapt, adjust, modify, or alter the content. Translation of one language into another is a good example of exercising this right.
- Remix –Adding new content to the existing one can be called a remix of the content. Digital content which allows remix can turn into OER content.
- Redistribute – This is the redistribution of existing OER content. For valid OER content, this must be redistributable.

### 3.2.1 Advantages and disadvantages of OER

The most significant advantage of OER is its wide accessibility among users anywhere and anytime. These contents are open to modification, which helps design the content according to coerce requirements, making searching easy and less time-consuming. OER contents are in digital format, so the content can also be enriched with images and videos. Dissemination of digital content is very fast with great ease. Besides all these positive things, cost-effectiveness plays a significant role in glorifying OERs.

The real challenge in OER content is its quality and reliability, as these contents are open to all at any time and can be modified so the content's accuracy can be tempered. The person who creates content has legal

rights over his content under Intellectual Property Rights, that is, copyright, so the permission to grant use his work is all up to him. Few researchers are worried about the impact of cyber imperialism due to the globalisation of education (Ebo, 2001). Some researchers like Robert Rhoads and his UCLA colleagues thought OER would lead to economic neoliberalism, which means that developed countries will have the upper hand on content; therefore, these countries may influence information according to their wishes (Rhoads, Berdan and Tovan-Lindsey, 2013).

The next section of this paper will discuss the significance and impact of OER in digital form on global education. The objectives and requirements of NEP in association with global education will also be explained through the study and analysis of data from various authentic resources.

## 4. Discussion

### Significance and Impact of OERs and M-learning on the education system

Globalization today is strikingly impacting all sectors of our society, and education is no exception. New knowledge is being added every second, and the existing ones are being modified or revised. One must continually update his or her knowledge as per these changes and advancements being made in their respective fields to keep themselves at par with the standards of the global society. This is possible only if there is a vast pool of resources from which people can access, use and reuse the desired knowledge without any prohibitions, terms and conditions. Digitization of learning materials is definitely helping to a great extent in this regard. Learners can access the materials anytime and anywhere.

It is a considered fact that the nation's overall growth is directly connected to a qualified workforce. As per the Census-2011, India's undergraduate and above degree holder population is 6,82,88971 and it is gradually growing. Statista reported during 2019, 6.65 million undergraduate degrees were awarded in India. Around 3.5 million female students were awarded their undergraduate degrees during the academic year 2018-2019 (Statista 2019). This shows a steady growth of qualified workforce is surging in India. However, due to COVID-19 disruption, the census-2021 by the Government of India (GoI) report is not available. Many economists in India have provided a positive report on the growth of degree holders, which will help the county enrich the qualified workforce. Further, a report published by Statista indicated that there is a talent shortage (Figure 1) and it is due to COVID-19 disruption. Overcoming this problem and enriching the education system required technological support. Recently, India has launched a 5G service is also a big step in India's telecom journey which minimizes connectivity issues and increases the speed of digital connectivity. Recently Prime Minister of India informed during 2014 only 6 crores of citizens of India avails of the internet, currently increased to 80 crores (PM launches 5G Services, 2022). This evidence shows the development of digital learning and enriches the growth of m-learning. M-learning will be a better complementary alternative to overcome the workforce shortage in India. The m-learning system will achieve huge benefits to increase the number of knowledgeable personnel and minimize the workforce shortage in the country.

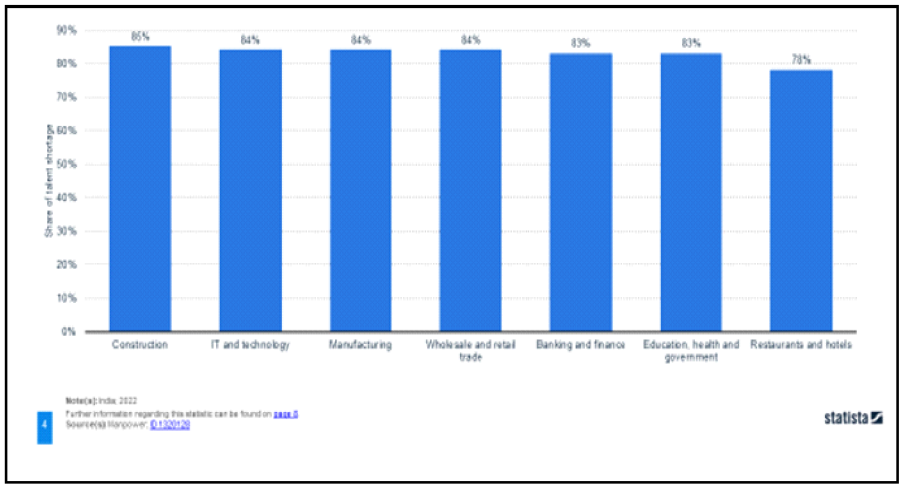


**Figure: 1 Talent shortage in India (Source: Statista 2022)**

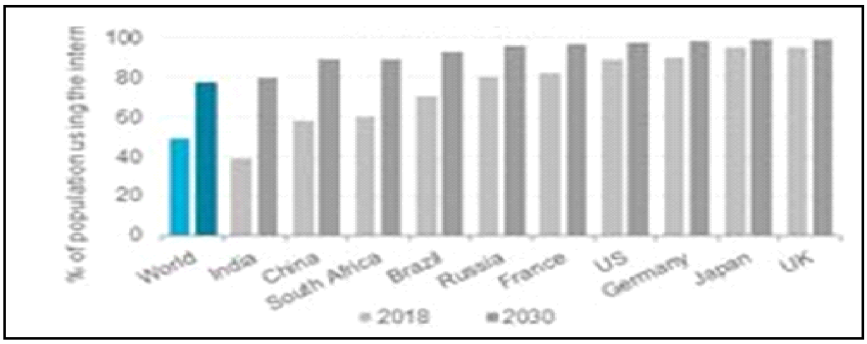


**Figure : 2a. 77% of the world population will use the Internet by 2030**

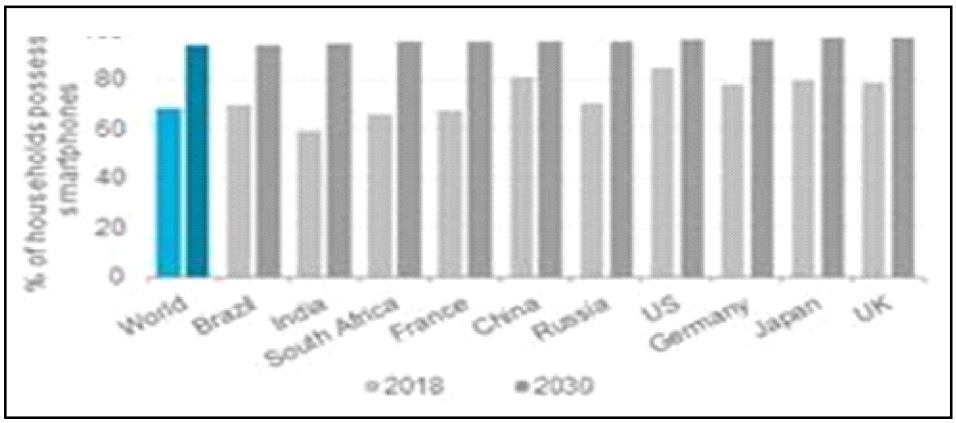


**Figure: 2b. 94% of households will process smartphones by 2030**

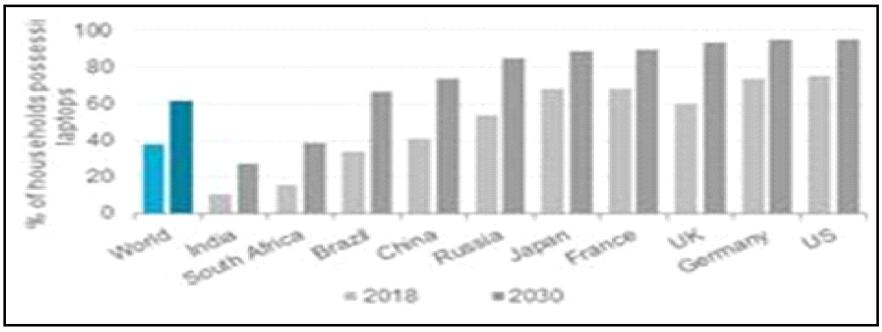


**Figure : 2c. 61% of households will process laptops by 2030**

The National Education Policy (NEP) - 2020, based on a strong foundation of access, equity, quality, affordability, and accountability, is a step taken in the right direction. Among others, increasing the ratio in higher education, including vocational education, to 50% by 2035 is one of the notable targets of NEP-2020. Further, the Policy promotes online education and distance education. This will ensure preparedness with alternative modes of quality education whenever and wherever traditional and in-person modes of education are not possible (as is the case now due to the Covid-19 pandemic). As per the 15th Finance Commission Recommendations, Govt. has allocated Rs.1133 crore in the FY-2020-22 for online learning & development of professional courses in regional languages (Matribhasha) for higher education (www.indiastate.com, Lok Shabha starred question No.5, dated 19.07.2021). India is going to be the most populous country & also has the highest illiterate population. Educational institutions in India are facing infrastructure shortage issues, high student-teacher ratios, dropouts, overcrowded schools, colleges in urban areas, etc.

Information and communication technologies are supporting the growing demand for online supported distance learning, increasing needs to develop digital skills, better access to learning materials, including open educational resources, m-learning, and a more engaging learning process. Over 70% of youth (15-24 years) globally are using the internet. The number of internet users is rapidly growing in India. As per the Statista Dossier, the digital population of India till February 2022 is 658 million active internet users, including 467 million active social media users in India. Over 96% of internet users between 16 to 64 years owned a mobile phone across India. The number of active internet users will increase to 1134.04 million by 2025. It is a positive indicator for using OERs and m-learning to produce a technically qualified and skilful workforce (Source: Euromonitor). The active internet users have grown gradually as recently GoI has revealed the growth reached 800 million in September 2022 (PM launches 5G Services, 2022).

Indian educational institutions are increasingly investing in broadband internet and digital tools. In 2015, the Government launched the Digital India campaign, which included various initiatives to leverage the potential of ICT in education, such as the National Mission of Education through Information and Communication Technology (NMEICT). The latest education technologies are increasingly enhancing learning in the traditional education system as teachers and students have better access to high-quality

commercial and open educational resources. The ICT tools and by-products enable people to join free online /commercial courses to upskill and reskill themselves at their own pace and time. As per the Euromonitor forecast 'over the period to 2030, the number of individuals using the internet surpassed 6.5 billion (Figure 2a). India and China are set to witness the most significant growth in internet users in absolute terms. Over 2018-2030, possession of smartphones is expected to sour in both developed and developing countries and reach 96% and 93% of total households (Figures 2b and 2c), which is a positive indicator that the use of OERs and m-learning will be increasingly and extensively adopted for upskilling, reskilling and learning.

## 5. Conclusion

Open Educational Resources (OERs) and m-learning are considered to be significant revolutionary movements in the field of education. It provides a lot of scope for digital learning by providing access to ample learning materials from across the world. Even though the term Open Educational Resource was introduced in 2002, till now, it has not gained significant momentum and acceptance in many places because of the lack of awareness among the users on OER. It is, therefore, essential to first make people understand OER and promote its awareness. If this is done, users will automatically start developing and using OER at its best. Learners today are expected to meet the escalating standards of our global society, and for this, they need to develop international skills. Digitization of learning materials is helping everyone in this regard to a great extent. And one such significant step put forward is the OER movement. Suppose the potential of open educational resources is utilized in the best possible ways. In that case, we will definitely be able to cope with the global standards of education and thus bring a significant transformation in the higher education system of our country. Jha and Kampa (2022) reaffirmed that acceptance of m-learning is increasingly growing due to its advantages, like anywhere, anytime learning at the users' own pace. OERs and m-learning can complement the existing education system by imparting online education and training and producing a technically qualified and skilful workforce.

## References

1. Allen, Jennifer Van and Katz, Stacy. (2020). Teaching with OER during pandemics and beyond. Journal for Multicultural Education, 14(3/4), 209-218.
2. Baas, M., van der Rijst, R., Huizinga, T., van den Berg, E., & Admiraal, W. (2022). Would you use them? A qualitative study on teachers' assessments of open educational resources in higher education. The Internet and Higher Education, 54, 1-14.
3. Bacolod, D. B. (2022). Mobile Learning as a Solution for Restricted Learning during the COVID-19 Pandemic. J. Digit. Educ. Technol, 2(1), 1-7.
4. Das, Anup Kumar, (2011). Emergence of open educational resources (OER) in India and its impact on lifelong learning. Library Hi Tech News, 28(5), 10-15.

5. Faqihi, B., Daoudi, N., & Ajhoun, R. (2018). Design of an Intelligent Educational Resource Production System. International Journal of Emerging Technologies in Learning (iJET), 13(12), pp. 4–18.

6. Kim, J. (2020). Voices of youth in reconceptualising and repositioning the role of mobile learning for sustainable development. Information Technology for Development, 26(4), 711-727.

7. Lytras Militiadas, Hassan Mathkour, Abdalla Hassan, Al-Halabi Wadee, Yanez-Marquez Cornelio, Siqueira Sean Wolfgand Matsui. (2015). An emerging – Social and emerging computing enabled philosophical paradigm for collaborative learning systems: Toward high effective next generation learning systems for the knowledge society. Computers in Human Behavior, 51(B), 557-561.

8. McBride, M., & Abramovich, S. (2022). Crossing the boundaries through OER adoption: Considering open educational resources (OER) as boundary objects in higher education. Library & Information Science Research, 44(2), 1-8.

9. Mncube, L. S., & Mthethwa, L. C. (2022). Potential ethical problems in the creation of open educational resources through virtual spaces in academia. Heliyon, 8(6), 1-8.

10. Okai-Ugbaje, S., Ardzejewska, K., & Imran, A. (2022). A mobile learning framework for higher education in resource constrained environments. Education and Information Technologies, 1-23.

11. Rhoads R., Berdan J., and Toven-Lindsey, B. (2013). The open courseware movement in higher education: Unmasking power and raising questions about the movement's democratic potential. Educational Theory, 63(1), 87-110.

12. Weiland Steven. (2015). Open educational resources: American ideals, global questions. Global Education Review, 2 (3). 4-22.

13. Xiao Jun, Wang Minjuan, Jiang Bingqian, and Li Junli. (2017). A personalized recommendation system with combinational algorithm for online learning. Journal of Ambient Intelligence and Humanized Computing, 9, 667-677.

14. Ministry of Education, Govt. of India (2020). National education policy 2020.

15. Indiastat. Education. Available at https://www.indiastat.com/cl/6370/data/economy/education (Accessed on 01.08.2022).

16. Statista 2019. https://www.statista.com/statistics/783998/undergraduate-degree-completion-number-in-india/

17. Statista. Share of talent shortage across India in 2022, by industry.

18. Available at https://www.statista.com/statistics/1320128/india-share-of-talent-shortage-by-industry/ (Accessed on 01.08.2022).

19. Ueromonitor. Global overview of education industry 2022. Available at https:// www.portal.euromonitor.com/portal/Analysis/Tab# (Accessed on 01.08.2022).

20. UGC. Growth of higher education in India. Available at https://www.ugc.ac.in/stats.aspx (Accessed on 01.08.2022).

21. UNESCO. Unesco and sustainable development goals. Available at https://en.unesco.org/sustainabledevelopmentgoals (Accessed on 01.08.2022).

22. UNESCO. Youth mobile: Teaching young people to create mobile apps for sustainable development.

23. Available at https://en.unesco.org/sites/default/files/youthmobile_2018_brochure-min.pdf (Accessed on 01.08.2022).

24. Cóndor-Herrera, O., Bolaños-Pasquel, M., & Ramos-Galarza, C. (2021, July). E-learning and M-learning Benefits in the Learning Process. In International Conference on Applied Human Factors and Ergonomics. p (331-336). Switzerland: pringer, Cham, 2021.

25. Nacheva, R., Sulov, V., & Czaplewski, M. (2022). The Impact of M-learning on Sustainable Information Society. 8th (Eds). International Conference on Electronic Governance and Open Society: Challenges in Eurasia, Saint Petersburg, November 24-25, 2021, EGOSE 2021. p. (244-262). Switzerland: Springer, Cham, 2021.

26. Nurutdinova, A., Shakirova, D., Ismagilova, G., Fazlyeva, Z., Panfilova, E., Sheinina, D. & Ilminbetova, S. (2022). The Integrating Face-to-Face Learning, Distance Learning Technologies and M-learning Technologies: Effectiveness. In Interactive Mobile Communication, Technologies and Learning. p. (478-486). Switzerland: Springer, Cham.

27. PM Launches 5G service (2022) Available at https://www.pmindia.gov.in/en/news_updates/pm-launches-5g-services/#:~:text=%E2%80%9CToday%2C%20130%20crore%20Indians%20are,this.%E2%80%9D%2C%20he%20added (Accessed on 02.10.2022).

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## About Authors

**Mr. Shiv Shankar Jha**
Research Scholar
Department of Library and Information Science, Berhampur University, Odisha
Email:shivsjha@iimsirmaur.ac.in

**Dr. Raj Kishor Kampa**
Assistant Professor
Department of Library and Information Science, Berhampur University, Odisha
Email: rajkampa@gmail.com