



Possible reforms and innovations in the education system through digitization in India

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Abstract – Education is the first step in the ladder of nation building. We cannot imagine a well-developed society and developed country without an educated person. Digitization is a powerful trend for modernization and improvement of education environment in the current context. 1 Change in the education system according to the time and necessity is an inevitable process, in the absence of which it is very important to make an environmental assessment of the role of education in multifaceted personality and social development. Tough work will be done. Education not only provides a conducive environment for the all-round development of the individual but also keeps him alive. Digitization in the education system refers to the introduction of new technological tools in the form of resources in the education system. In the twenty-first century, where we are now testing the use of extremely variable technology like 5G and 6G, we are adopting many decades old methodology in education. Especially in developing countries where there is a lack of money and resources, this system is running in the old fashion. In this paper, we will discuss about the need for digitization in education and the possible reforms that can come from it.

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Key words- Digital education, education system, digital classrooms.

Ancient Education System in India - Keeping in view the importance and need of education in the Indian society from the historical time, systematic education system was developed. The tradition of Gurukul was an important example of this system in ancient Indian society. In which the child was provided with special knowledge of all the fields like astronomy, chemistry, biology, politics etc. Education had an important place in the Gupta period, not only Indians but thousands of foreigners also took education in educational institutions like Nalanda, Taxila. However, as a result of the invasion of foreign invaders, no significant development is visible in the Indian education system over time. However, the ancient Indian education system was limited only to the upper classes of the society and there was no system of education for the lower classes, especially the Dalits. The vast reforms and changes in the Indian education system started with the rise of Buddhism. There were wide disparities in

Buddhism and Vedic education system, Buddhist education system mainly known for equality for all castes and availability of education for all, teachers were not only Brahmins but other also, Buddhist education being more people-centered etc. They proved to be the guides of positive change in the methodology.

Education during British Rule in India - During the British rule, the missionaries started the early work in the field of education, although their original purpose was to spread the religion. To fulfill this school was opened in Madras in 1715, in Bombay in 1718 and in Calcutta in 1731 (Singh 2005). Sanskrit College was established in Banaras in 1791. The British were initially reluctant to allow missionaries by the East India Company to continue their educational activities because of Indians opposing conversion. As a result, this policy was opposed by missionary supporters in England, which received overwhelming support and became a cause of the Charter Act of 1813. In order to quell the resistance and to restore the broken faith, an amount of one lakh was fixed for the education of Indians in this Act (Basu, 1979). Under the imperialist rule, education was used only as a tool of clerk production. The only objective of this education system was to keep the imperialist rule strong and to exploit the local natural and human resources as much as possible.

Start of Digital Education - Digital education is a means of teaching-learning through soft contents with electronic devices. In this medium of education, a student can learn without going to school or college and without physical appearance. Digital education broadly has two types. In the first type teacher and learners are connected on the real time basis, like video conference. But in the second they are not connected on the real time, like study through TV and radio. The first attempt for the digitization and wide spread of education in India was made in the year 1937 in the form of a radio program which was named School Broadcasting Project. Which was a program to be done with a school. This program was conducted and limited to the then Mumbai, Madras, Delhi and Calcutta. However, this program was not successful due to the disparity of syllabus and time table among the states. In the year 1956 in independent India, a program assisted by UNESCO was started in All India Radio as a community development project to bring awareness in the work related to agriculture. This was the first radio program to achieve success. This program was run based on listening cum discussion cum action. For this radio program named "radio forum project" 144 villages of Maharashtra state were chosen. Other radio program that has tremendous success that are- 'university broadcast project' of 1965, 'farm and home broadcast project' of 1966, 'IGNOU air broadcast' of 1992, 'Gyan Vani' (education FM radio channel of India) of 2001 etc. (R.V Vyas et al, 2002). Education through television started in India in 1961. It started on the base of pilot project. The name of program was secondary school education project. It aimed to teach English, Hindi, Chemistry and Physics of class eleventh students. In the 1966 project called Delhi agriculture television was started to give information about agriculture to farmers surrounding Delhi. And that's proved as affirmative educational action of towards green revolution in India. In the area of digitization of education, the first big development came in the 1982. When INSAT (Indian national satellite) program was launched. This program was focused on rural backward areas. Through this satellite project many educational programs were initiated and thousands of students have benefited. In the year 2000 the ministry of human resource, ministry of information and broadcasting, Prasar Bharati and IGNOU combinedly started a dedicated educational television channel. Name of the channel is 'Gyan darshan',

in the initial phase this channel broadcasted for two hours only. But in course of time, it started airing for the whole day (24 hours). The latest development in television education happened in the year 2017, Where a group of 22 channels 'Swayam Prabha' was broadcast to provide high quality educational content for higher secondary and higher education. The number of channels (34) is now bigger than in the beginning. Swayam Prabha is free to AIR, 24*7 running group of channels. The channels provide fresh content for 4 hours which is repeated four to five times in a day. So that students can use it as per their convenience (R.V Vyas et al, 2002).

Pandemic and Digital Education- The lockdown caused by the Corona pandemic has brought many changes in our lives. The way of living, the way of dine, the social behavior etc. Many things in our lives have been badly affected by this pandemic, education being one of them. specially in developing countries like India where educational infrastructure is poor. from 25th march 2020 all schools and colleges had shut down due to imposition of lockdown. around 84 weeks of shutdown of schools and college which has devastating consequences on students, especially the primary school students. 2.40 crores students who enrolled in various schools in country face loss of learning. in between of lockdown on July 14th 2020 to mitigate loss of learning Ministry of Human resource and development issued a guideline for online classes. In the guideline, the ministry divided the students into three categories based on the availability of device and internet, in which the first category is of those children who have smartphones and internet. In the second category, those students have been kept who have a smartphone but do not have regular internet. There are students in the third category who can study only through radio or television because they do not have proper online resources. for the deferent categories of students, ministry gave comprehensive guidance to hassles teaching-learning. Online classes were made available in the 'DIKSHA' (an initiative of NCERT) platform in government schools, but other platforms like Zoom, Google Meet, Webex etc., were used in private schools and colleges. despite this guidance and efforts made by government, A study conducted by Azim Premji University in January 2021 on more than 16000 children of five states which include classes II to VI. This study found that 92% of children had lost at least one specific language ability over the past year. And 82% of the children had lost at least one mathematical ability. major problem in online education in India are poverty, deficit internet penetration and low bandwidth. in this regard the parliamentary Standing Committee report said “about 70% of the country does not have access to Internet connectivity and available quality of connectivity is poor”(Manas Gohain, 2021).

Research Methodology & Result- A research survey was conducted for this research paper through google forms, in which 120 educationists from different states, college principals, associate professors, assistant professors and research scholars and students took part. In this survey, we asked them a total of six different questions, including three each with closed ended and open ended. first question - Do you think that it is possible to improve the education system with digitization? In which 89 percent people expressed the possibility of improving the education system with digitization while 11 percent people answer negative (Figure-1). The second question is how education can be improved by digitization. In which 65 percent of the respondents think that digitization can improve learning outcomes, teaching practices and teaching process, i.e., in all areas of education, while 17 percent think that only teaching-learning qualities can be improved. 12 percent people think that only

teaching-learning behavior can be improved and 6 percent respondents believe that digitization can only improve the teaching process (Figure-2).third question(open ended) is- how does digitization improve the education system? In response to this question, 28 percent of the respondents believed that digitization provides a better facility to the students through which they can learn from wherever they want. 23 percent of the people believed that digitization would provide us with better resources and provide a huge coverage area. 22 percent of people believe that it gives us a better way and method to learn. 27 percent of the people believe that with digitization, students can get the opportunity to learn at home from a teacher from outside their city, state and country. And 11 percent of the respondents believe that digitization provide unlimited online study materials and can be accessed from anywhere (Figure-3). Fourth question: To what extent digitization should be done in the education system, in which 78 percent of the people said that both teaching methods and teaching processes should be digitized. Although 17 percent suggest that only teaching methods should be digitized. However, 5 per cent people believe that only teaching processes should be digitized (Figure-4). fifth question is whether we should adopt digitization only as a part of the existing system? In which 44 percent of the people believed that 'yes' we should adopt digitization only in the present system as an ancillary. 33 percent people believe that 'no' education should be completely digitized. 17 percent people are not in a position to say whether it should be adopted only as ancillary or should be digitized completely. And 6 percent people believe that children of lower-level classes should be given education in the traditional way. sixth question that what can be the disadvantages due to digitization? Which was an open-ended category question in which almost everyone's answer was different, although some of the main meanings are visible as follows - the possibility of increasing mental depression in the students, lack of adequate teaching methods in the present time and online classes Frequent generation of unnecessary distractions during the course of time, no proper means of ensuring from the teacher's point of view the extent of ethical issues and the impact of discipline on students in digital classrooms, loss of phonetics, lack of teacher-student relationship, student interactions Lack of development of relationships, which is likely to have a negative effect on personality, not encouraging innovation much, can negatively affect the transfer of cultural traditions, as well as affect the health of the students.

Conclusion - From the above analysis, the result shows that meaningful and specific changes are inevitable in the education system due to digitization of education, it brings about positive improvement in all aspects of education and mainly increases the outcomes of education. It can make the spread of education unhindered even in the remote areas of countries with a large geographical area like India, where no basic institution for education exists or no educational institution can be established due to lack of proper population ratio.

QUE.1- Is it possible to improve the education system with digitization?

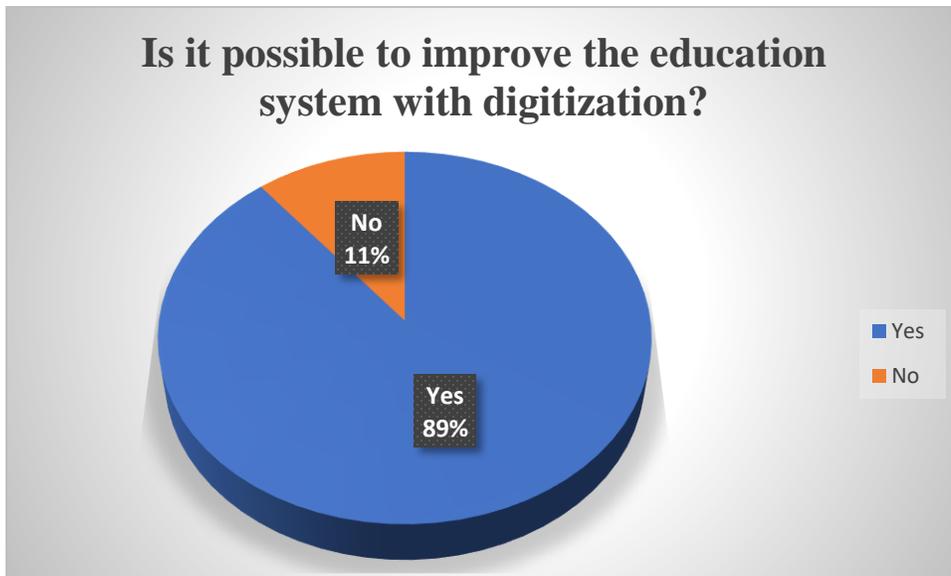


Image-1

Que. 2- How education can be improved by digitization?

- 1- In the teaching process. 2- In teaching practice. 3- In learning outcomes. 4- In full education system.

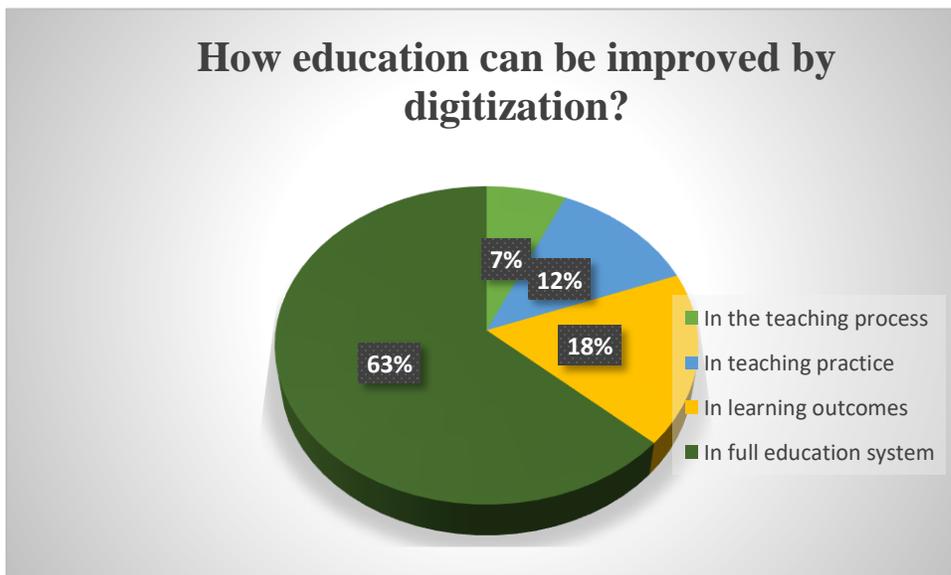


Image-2

Que.3- How does digitization improve the education system?

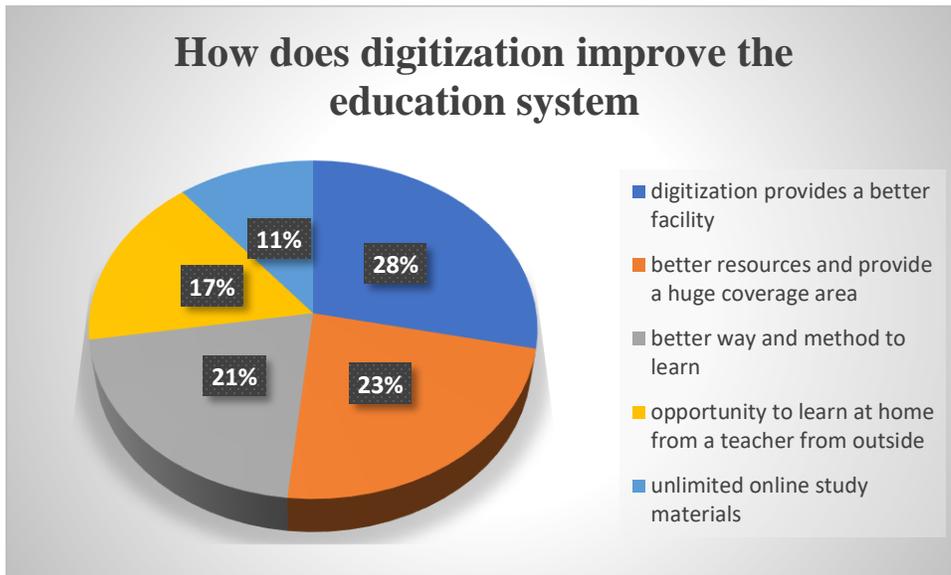


Image-3

Que.4-To what extent digitization should be done?

1- Only in teaching methods. 2- Only in teaching processes. 3- Of the whole education system.

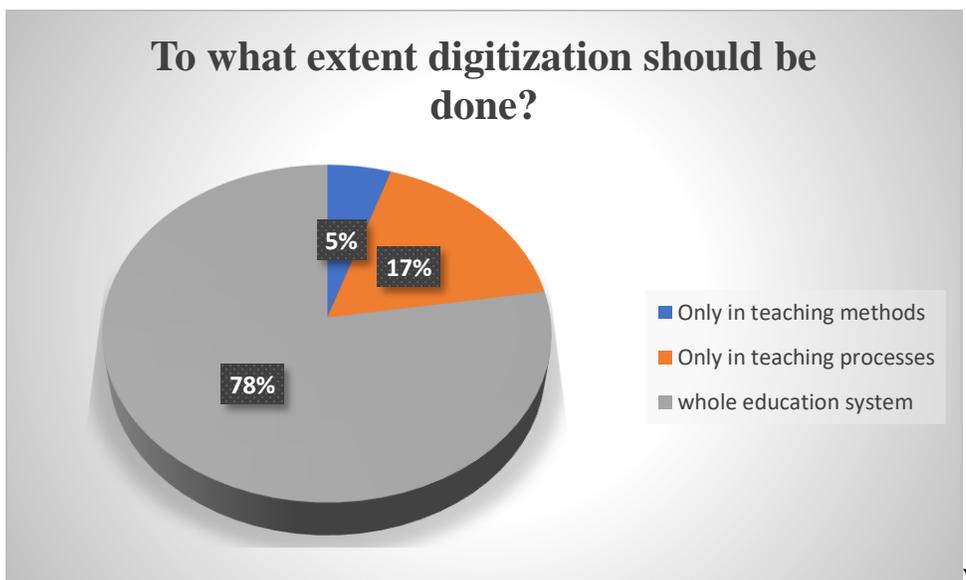


Image -4

Que. 5- Should we adopt digitization as a part of the existing system itself ?

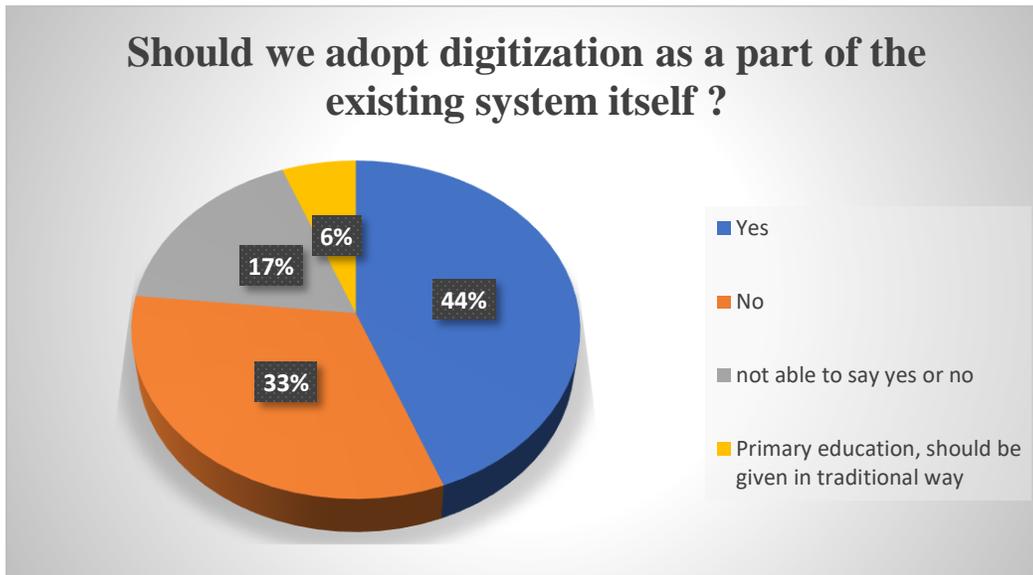


Image- 5

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