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# IMPACT OF DIGITALISATION ON EMPLOYABILITY OF FACULTIES IN EDUCATION SECTOR IN INDIA DURING 20-21

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## Abstract

**Purpose:** - The Digitalisation affected the lifestyle of complete society during last few years. In India digitalisation is promoted a lot through various policies adopted by the government. The Covid -19 had indirectly contribute in promotion of digitalisation as everyone was bound to use digital techniques during lockdown. Digitalisation make life easy on one hand but on the other hand it has created a lot of problem for the employment. So, this study tried to analyze the impact of digitalisation on employability of faculties in education sector in India during 20-21.

**Design:** - Data has been collected from Secondary data through authorized government sources, news, articles & journals etc.

**Practical Implication:** - The insight from this paper can help to design the techniques and procedures in an effective way to increase the employment level and reduce the salary cut in organizations during this digitalization phase. This study has become more relevant in the preview of increasing disturbance due to this pandemic of covid 19.

**Originality:** This study's primary motive is to analyze the impact of online teaching on employability of faculties in education sector.

**Keywords:** - Education sector, Employability, Online learning, digitalization, Government policies.

**Paper Type:** - Article

## I. INTRODUCTION

Digitalisation is blending of data, text and techniques into day to day working to make our life smooth and comfortable. Digitalisation helps to grow our business by transforming it from an

industrial age to age of technology and creativity. It leads to different opportunities and new challenges of digitization. It helps in creating digital process and generating increased revenue by transforming data into digital format.

In India during COVID-19 pandemic organisation become automated and digital as maximum work is done through electronic media whether it is in banking industry, IT industry or education sector. In education sector digitalisation leads to online teaching learning process with the use of desktop computer, laptop, mobile devices etc. To run these devices different software application and internet is used. Digital technology is used to teach students of all the age group at all the places. Rapid technology adoption and increasing internet penetration led to unprecedented increase in digitization (Pianta 2009) Due to digitalisation, the use of artificial intelligence has seen a spike. Which would raise the rate of unemployment. Employees in the organisation are poised to retain their competitive advantage only in the field of management, decision-making, planning, reasoning and controlling. It shows that in the coming years creativity, flexibility and analytical thinking will be in demand. Technological integration of business units result reduction in their workforce as per the data produced by many business surveys. The big business tycoon says that they want task specialised workforce to perform the technical work. (Business standard).

In the last five years, the Indian economy has seen remarkable growth in e-commerce. An attractive online client base has resulted from increased internet penetration, quick technology adoption, and strong sales of technical gadgets such as smart phones, tablets, and other such devices. In the lives of ordinary Indians, digitization has brought about social transformation. The current administration has launched a project named "Digital India".



Industry has recently expressed concern about employability of adult population in India. All the personnel are expected to have acceptable soft skills, technical skills, and practical orientation. Due to Digitalisation skill in Information and communication technology become a vital part to get the employment across the economy, yet a large section of the population still lacks the fundamental abilities required to thrive in this new environment. The demand for techno savvy individuals has risen dramatically in this globalised, liberalised, and technologically advanced society, but pupils are relying on technology rather than employing it as a skill.

In terms of employability, it was discovered that industry has numerous obstacles and issues regarding employability. Low-quality education, a lack of skill-based education, and a lack of industry-academic interaction are all contributing factors to the current job predicament. Faculties do not have application skills, and they lack numerous abilities that are required by education sector due to online teaching learning, according to the challenges and concerns expressed by education industry.

In this research, much more pertinent thinking came into notice that digitalisation brought revolutionary changes in the social and personal areas of human life. With technology getting quicker, smarter, and cheaper, it'll only be a matter of time before occupations that were previously performed only by humans are either reimagined and mechanised in new ways or totally automated. If all of the workers who do these jobs lose their jobs and are unable to find new ones, technology may result in widespread unemployment (Autor and Dorn 2013).

The outcomes of our research can provide a valuable contribution towards finding out the reasons of decrease in employability due to digitalisation in education sector in India during 20-21. Our study shows the unemployment level of the personnel during this harsh time. In the following segments, we give a concise review of the literature followed by statistics and techniques used to express the approach utilized in the research. At that point, we examine the outcomes and the suggestions followed by closing comments of the study.

## II. LITERATURE REVIEW

Digitalisation is believed as transforming tangible products and services into digital form. It is also referred as application of digital technology in each and every aspect of organisations and human society. Digitalisation led to changes and advantage over existing way of working. (Parviainen, Tihinen, Kaariainen & Teppola, 2017).

Digitalisation is conditional and it is based on many factors in an economy like facilities, capabilities and other organisational conditions. In any economy policies should not only promote digitalisation but also focused on variety of other country specific factors like economic growth and rising productivity. (Dalum et al. 1999; Castellacci 2006). For those industries with access to networks, the digital revolution opened up new technology potential for mechanisation, specialisation, and labour division. facilitated the expansion of a networked business (Freeman and Louçã 2001). A technological paradigm is a collection of interconnected and pervasive technologies that boost production in a variety of industries (Dosi 1988; Freeman et al. 1982). The emergence and dissemination of digitalisation explored with a focus on economic effects that these technology will have on several sectors of economy. (Castellacci 2006, 2008).

Digitalization has transformed and provoked the entire society in recent years, resulting in new working skills, modern cultural conditions, and creative communication and entrepreneurship tools (Newell & Marabelli, 2015). Digitalization relates with intellectual capital in a knowledge economy, where knowledge becomes a strategic resource (Bejinaru, 2017b). Digital activities and conditions that enable business operations, collaborations, and engagement, resulting in the formation of complex networks (Pînzaru, 2015).

According to existing research, new technologies such as the Internet are resulting in job growth in the low-skilled service sector but job losses in occupations that demand repetitive operations that are becoming increasingly automated. (Marcolin, Miroudot and Squicciarini, 2016). Technical knowledge and skills need to be refreshed to be updated with the latest changes in techniques to have better and more options of the job. Those who are through with the latest technology tend to fare well in the new jobs.

Education will aid in the acquisition of knowledge, the development of soft skills, the improvement of work ethics, the development of trust, and the expansion of one's social network. In his post regarding the Importance of Education in Finding a Job, Friedman (2019) stated. With rare exceptions, a candidate's ability to find work is determined by the quality of their education and their level of preparation for future work. He stated that if people know what they want to do in the future, they should try to pursue organised education that will help them advance in their chosen field, since this will boost their career chances.



In terms of restructuring and updating the global educational environment, the digitization process is a powerful trend. In the educational process, digitalization entails converting text, images, video, and audio into a computer-readable format. The computer, the internet, the smartphone, the scanner, the digital camera, the projector, and the printer are all examples of digitalization tools. Digitalization can take the shape of an online application, an online exam, the exchange of online / web knowledge, digital support materials (in various formats such as ppt, pdf, and doc), social groups, and digital publications, among other things.

Industry groups should collaborate with governments and educational institutions to give up-to-date information on employment possibilities, career prospects, and changing skill requirements in the industry to reduce qualification mismatches. It is critical to form multi-party collaborations in order to attain these goals (Bratianu & Bejinaru, 2017). It may be argued that the modern educational system is experiencing a skills shortage. Students' personal endeavours to learn something new, make goals in relation with their knowledge and the actual world, and utilise their imagination to seek creative answers to conventional questions rather than following stereotypical models are not appropriately supported by the educational process. (Lupan & Bejinaru, 2019).

Various studies have been shown in the literature, each of which presents a basic structure for understanding impact of digitalisation on employment. Papers have also identified a possible advantage of digitalisation and technological advancement. However, few papers have tried to analyze and present its impact on Indian labour market. It's understandable that, before the Covid-19 pandemic, only very few educational institutes and organisation used online learning but now for education industry it become a part of their methodology and they have to use these technologies.

The literature has featured various models that allow the entire system to comprehend the education sector insight into online teaching. Papers have likewise featured impact of technological advancement on labour market throughout the world. However, no one tried to find out the impact of digitalisation on employability of faculties in education sector in the Indian setting. Further, as far as we could know, a study on this line has not been attempted. Although, they adopted the new procedure and techniques for their development but

we need to analyze the level of their preparedness for increase in their employability in new scenario.

We tried to fill this gap with our study, drawing insight from the literature review in finding out the research problem, focusing on Impact of digitalisation on employability of faculties in education sector in India during 20-21.

### III. OBJECTIVES

1. To Disclose the different digitalisation techniques used in India during 20-21
2. To study the employability problems of faculties in education sector in India 20-21

### IV. RESEARCH METHODOLOGY

In the research methodology the data is gathered from specified documents & compiling database to do the analysis. The study is descriptive in nature and is based on secondary data taken from various government reports published by the Government of India and other published reports of public and private sector organisations and in India. Data has been collected from articles, journals & internet.

#### 1. Digitalisation Techniques in India during 20-21

Nobody expected it to endure this long when employers asked staff to work from home (WFH) in early March 2020. People were forced to turn their homes into working offices due to nationwide lockdowns.

Because of social distancing conventions, we've shifted to digital platforms for the majority of our duties, from ordering groceries online to organising virtual meetings with doctors, dieticians, and fitness coaches, among other things. Technology is one factor that has enabled this new normal. During this pandemic, we relied on technology to keep us informed and entertained. Individuals, as well as large and small businesses, have relied on technology to stay adaptable and maintain operations.

The importance of technology to businesses cannot be overstated. Within weeks, enterprises were able to switch from physical to WFH systems thanks to technology. Employees may log on from anywhere with a WIFI connection, thus couches have become the new (soft) workplaces.

The Digital India initiative has had a steady rising trend, with various milestones and flagship initiatives. For developing countries, information and communication technologies have enormous potential to create new opportunities and difficulties.



India has been harnessing technologies along the lines of liberalisation since the 1990s. However, in recent years, the Indian government has placed a greater emphasis on digitisation and has begun to recognise India's potential as a true technological leader.

India's digital economy is expected to grow to a trillion-dollar ecosystem by 2025, according to estimates. This will have a number of good effects, ranging from increased job creation to increased foreign investment, the development of domestic digital infrastructure, the expansion of small and medium businesses, and an overall improvement in the country's economic growth. However, India faces a number of challenges on its way to becoming a developed country. The project also aims to tap into the potential of India's digital startup ecosystem, which has 9,300 startups, making it the world's third largest. Many of these businesses focus on specialised areas of technology, such as artificial intelligence, blockchain, analytics, and cybersecurity. The MeitY has established programmes such as TIDE (Technology Incubation and Development of Entrepreneurs), ESDM (Electronics System Design and Manufacturing) Skill Development, and the establishment of incubation centres to promote indigenous technology in order to build a suitable ecosystem. The e-commerce market, which is expected to reach \$54 billion in 2025, is expected to rise at a rapid pace.

In its first five years, the Digital India Initiative has been a major success. However, in order to fully realise the potential of India's digital economy, a greater emphasis must be made on some essential components such as improving digital literacy and accessibility. Despite the fact that the government has built cutting-edge systems and programmes, it is critical to guarantee that these systems are interoperable across the board. The government should invest in e-commerce, data processing, and the tech start-up ecosystem as priority sectors.

It's also vital to recognise that the programmes and initiatives under Digital India don't operate in a vacuum; robust legal and administrative frameworks are needed to make this vision a reality. India's cybersecurity frameworks must be strengthened immediately, and citizens' informational privacy must be protected.

### **1.1 Technology trends in 2020-21 in India**

**1. Artificial Intelligence:** - Many sectors have benefited from AI and its application. In a post-COVID corporate world, the use of AI will become a requirement rather than a choice. Consider the

massive amount of data being collected on healthcare, infection rates, and actions taken to avoid infection transmission. Companies will be able to examine this data, create trends, and codify hypotheses using AI-enabled tools and applications. AI is also assisting businesses and governments in ensuring contactless deliveries, social distancing, and public hygiene. This will be the case throughout the year of 2021.

Artificial Intelligence can be used further in the following areas: -

- The ability to give increased scale and scope to help firms establish redundancy while lowering costs are two other common AI use cases.
- Improved research and development, as well as new product development.
- Smart sales and supplier projections enable new ways of working and managing on-demand labour.
- Using powerful prediction algorithms to help enterprises with cybersecurity.

**2. As – a – Service:** - As-a-service is a service delivery approach that enables us to employ cloud-based and on-demand services without making significant upfront commitments. As-a-service (AaS) or anything-as-a-service (XaaS) is the key to bringing digital trends such as cloud, AI, and machine learning (ML) to the masses.

Cloud services from Microsoft, AWS, IBM, Alibaba Cloud, and others have aided innovators in a variety of fields in deploying or utilising cutting-edge technology without the need for specialised equipment, personnel, or upfront investments.

**3. Cybersecurity:** - One of the most important technological trends to be aware of is cybersecurity. The growing volume of data generated by AI, machine learning, the Internet of Things (IoT), and other digital technologies has put data privacy and security at danger.

Cybercriminals are continually on the search for crucial data from businesses, such as client and employee information, as well as citizen information from government databases, to sell on the black market.

**4. Internet of Things:** - The Internet of Things (IoT) is a game-changing technology with enormous potential. It demonstrates how information can be shared across connected devices.

As we observe an increase in linked devices, these linkages have developed to a gigantic scale. Everything is becoming connected on a global scale, from refrigerators and household appliances to



automobiles and industrial gear, allowing people and organisations to share information more quickly and easily.

**5. CDP Explosion:** - Customer Data Platforms (CDPs) have exploded in popularity in recent months, and for good reason. Data from many sources may be notoriously difficult to arrange, which is obviously inconvenient for businesses that rely on timely, well-curated data to function properly.

The Coronavirus outbreak has altered the trajectory and speed of digital transformation, and it is expected to do so until 2021. The focus, decisions, and technology investments that will drive the list of digital transformation strategies that will define 2021, and hopefully the recovery from the Coronavirus pandemic, will be informed by the trend lines and new priorities facing organisations of all sizes that we observed in 2020.

## **2. Employability of faculty in education sector in 2020-21**

### **2.1 Unemployment in India during 20-21**

The employment structure of an economy is a common tool that can cause a change in inequality in either direction, that is, an increase or decrease in inequality. Other economic tools, such as targeted group policies and programmes, have a short-term impact, whereas job-based redistribution has a long-term impact. In the 1999-2000 fiscal year, 7.32 percent of the workforce was unemployed. In absolute terms, 26.58 million individuals were unemployed. In comparison to other quickly expanding countries, our labour force has a low level of education and skill. Furthermore, the system places an excessive emphasis on broad academic education with little or no vocational emphasis.

The preference for general education arises mostly from the misconception that an academic degree is essential to obtain a government job, which is widely coveted due to near-complete job stability and pay scales that are often substantially above market prices. As a result, the educational system has failed to recognise the need of imparting vocational skills as well as developing student awareness and willingness to gain marketable abilities. An approach to teach vocational skills will help workers earn more money in the long run. A massive expansion of training facilities is urgently required.

### **2.2 Employment Trends among faculties in education sector in 20-21**

In India's education business, employability is becoming a major worry. All members of the

teaching profession are expected to have appropriate soft skills, technical skills, and practical focus. The majority of industry experts voice their dissatisfaction with the results that are emerging as a result of the online instructional learning scenario. Experts believe that the impact of digitalisation on faculty employment in the education sector would be even more severe if faculty members do not receive enough training and the tools and techniques utilised for online learning remain inadequate in the system.

The severity of the impact is determined by how quickly the economy recovers, how quickly work returns to normal in the economy, and when limitations on social gatherings and offline work are eased. Having said that, the employment situation, no matter how dire it appears now, will undoubtedly improve in the future. Every person in the economy hopes to find a job that pays well, but the recent employment trend does not appear to be in sync.

### **2.3 The challenges and concern faced by education industry for employment of faculties.**

Most of the time, industry wants faculty to have a basic understanding of application of subjective skills orientation to get the job done, and orientation to do tasks wisely, but these expectations are not met. Most firms today are searching for somebody who can do it all, are multi-skilled, and can deal with professional issues. The demand for techno savvy individuals has risen dramatically in this globalised, liberalised, and technologically advanced society, but faculties are relying on technology rather of employing it as a talent. There is a significant gap between academic knowledge and the practical experience necessary in the workplace. The emphasis should be on overall skill development for Indian youngsters. India has reached the point where it boasts the world's largest demographic dividend in terms of working young. As a result, now is an excellent time to promote skilled-based programmes such as short-term courses, vocational training, and so on. Despite the Government of India's multiple endeavours to impart skill development to the youth between the ages of 18 and 35, the skilled workforce in India is only 2.5 percent, which is substantially lower than in industrialised countries, where skilled workers account for 60-70 percent of the workforce.

## **V. SUGGESTIONS/ RECOMMENDATIONS TOWARDS IMPROVING EMPLOYABILITY OF FACULTIES**

There are some suggestions for adding value to employability of faculties to develop career in long term.



- If faculties are motivated to acquire expertise and skills that are in high demand, they can acquire professional qualifications which would be great for career development.
- Flexible online training Programmes can be used to acquire digital qualification. Higher education and degrees are definitely adding value to knowledge.
- Industry and Academia interface can help to improve skills in line with industry requirements which eventually can be catered through education.
- Universities should try to develop more part time courses which could be need based, skilful and job oriented.
- Indian education system should develop new vision focussing on quality education which will be skill oriented rather than theoretical. They should be able to know whether a particular course or programme delivers value or not, then things can be under control to some extent.
- High-tech Libraries can be of great use for researchers & faculties who are searching information on any relevant topics.

## VI. CONCLUSION

This dearth of Information and Communication skills in the population is of particular concern to Human resource managers and policymakers, as the personnel with the least ICT skills are among those most at risk of losing jobs as the workforce undergoes a technological change. Workers with the lowest levels of ICT abilities and who are least prepared to upgrade their skills would be disproportionately affected by labour market disruptions. Industry faces a number of challenges, one of which is the retention of trained personnel. Having said that, the employment situation, no matter how dire it appears now, will undoubtedly improve in the future.

Unemployment, along with a scarcity of skilled labour, is India's most serious problem. Though, most of the time, the issue is not the job's availability, but rather a mismatch or a lack of capabilities to do the work. As a result, developing skilling models that not only address the need for qualified human resources but also provide employment at the bottom of the pyramid is critical.

It is clear that the Online Education System and digitalisation faces significant issues such as curriculum reform, talent exodus, quality of education provided, teacher technical skills, and technical gaps. It is critical that all stakeholders involved pay attention to this and take appropriate steps to improve the quality of faculty training and skills for online education.

Gender and career studies have been conducted in a number of nations. It was discovered that in the Scopus database, there was not a single research paper published from India on employability of faculties in education sector.

In terms of employability, it was discovered that the education sector faces numerous issues and concerns regarding teachers' employability. Low-quality education, a lack of skill-based education, a lack of industry-academic interface, differences in teaching patterns in Indian and differences in methodology used to teach in online environment to students are all contributing factors to the current job predicament. teachers do not have application skills, and they lack numerous technical abilities that are required by industry, according to the challenges and concerns expressed by industry. Finally, we presented a solution to the industry's problem by spotlighting new training opportunities for faculties in digitalised environment.

## VII. REFERENCE

- (1) Article The importance of Education in finding a job – Ashley Friedman June 11 2019 in The cLassroom
- (2) Autor, David H., and David Dorn. 2013. "The Growth of Low-Skill Service Jobs and the Polarization of the US Labor Market." *American Economic Review*, 103 (5): 1553-97. DOI: 10.1257/aer.103.5.1553.
- (3) Bejinaru, Ruxandra. (2013). Impact of Digitalization on Education in the Knowledge Economy. *Management Dynamics in the Knowledge Economy*. 7. 367-380. 10.25019/MDKE/7.3.06.
- (4) Bejinaru, Ruxandra. (2017). Dynamic Capabilities of Universities in the Knowledge Economy. *Management Dynamics in the Knowledge Economy*. 5. 577-595. 10.25019/MDKE/5.4.07.
- (5) Blazar, D., & Kraft, M. A. (2017). Teacher and Teaching Effects on Students' Attitudes and



Behaviors. *Educational evaluation and policy analysis*, 39(1), 146–170.  
<https://doi.org/10.3102/0162373716670260>

(6) Bratianu, Constantin. (2015). Challenges for the University Intellectual Capital in the Knowledge Economy. *MANAGEMENT DYNAMICS IN THE KNOWLEDGE ECONOMY*. 3. 609-627.

(7) Bratianu, Constantin & Bejinaru, Ruxandra. (2017). Knowledge Strategies for Increasing IC of Universities.

(8) Castellacci, Fulvio. (2006). A critical realist interpretation of evolutionary growth theorising. *Cambridge Journal of Economics*. 30. 861-880.  
10.1093/cje/bel028.

(9) Dibyendu Maiti, Fulvio Castellacci, Arne Melchior (2020). Digitalisation and development: Issues for India and Beyond. *Digitalisation and Development*, 2020. ISBN : 978-981-13-9995-4

(10) Dosi, Giovanni & Orsenigo, Luigi & Labini, Mauro. (2003). Technology and the Economy. *The Handbook of Economic Sociology*.

(11) Dr. Amar Latta and Trishla Singh(2021). "Digitisation in India and its Impact on the Economy. *Journal: International Journal of Advanced Research in Science, Communication and Technology*, 2021, Page 179  
DOI: [10.48175/IJARSCT-V2-I3-330](https://doi.org/10.48175/IJARSCT-V2-I3-330)

(12) Freeman, Chris & Louçã, Francisco. (2001). *As Time Goes By: From the Industrial Revolutions to the Information Revolution*. 10.2307/4134358.

(13) Newell, Sue & Marabelli, Marco. (2015). Strategic opportunities (and challenges) of algorithmic decision-making: A call for action on the long-term societal effects of 'datification'. *The Journal of Strategic Information Systems*. 24. 10.1016/j.jsis.2015.02.001.

(14) Parviainen, Päivi & Tihinen, Maarit & Kääriäinen, Jukka & Teppola, Susanna. (2017). Tackling the digitalization challenge: how to benefit from digitalization in practice. *International journal of information systems and project management*. 5. 63-77. 10.12821/ijispm.

(15) Squicciarini, Mariagrazia & Marcolin, Luca & Miroudot, Sébastien. (2016). THE ROUTINE CONTENT OF OCCUPATIONS: NEW CROSS-COUNTRY MEASURES BASED ON PIAAC. 10.1787/5jm0q1dhszjg-en.

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