

THE DIGITALIZATION IN EDUCATION: A NEW ERA

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1. INTRODUCTION:

The world has witnessed various advancements in technology in the past two decades. And innumerable debates have been undertaken as to whether technology is a boon or a bane. But in the month of March, 2020, when all the citizens of the country came to a standstill because of the risk of spread of Pandemic, technology could be identified as a boon. Specifically, for the educational institutions, the only medium of connectivity between students and teachers was through the digital platforms. The use of digital tools in education is not something very new but the pace at which they are required to be used is needed to be fast. Gradually all the instructors and learners entered fiercely the phase of digitalization. All the interactions, assessments, classes and every academic activity was carried out on digital platform. Henceforth, the concern was that to what extent are the instructors prepared to develop and deliver high quality e-content to students.

2. REVIEW OF LITERATURE:

The teaching pedagogies have been evolved over consistently depending upon the requirement. In a study conducted on data from 20 countries in which it was found out that different universities have developed innovative teaching pedagogy and there are numerous opportunities to learn from these institutions so that academicians can strengthen the collective response to the pandemic (Crawford et al, 12). The extent to which digitalization takes place in an organization depends on the governance arrangements and academic staff (Tømte, 98). There can be different application of digitalization on modern education (Viberg and Mavroudi, 1). Use of smart boards, LCD projectors, etc, were already used in educational institutions (Seethal and Menaka, 140). But online webinars, online workshops, e-quizzes, online examination gained more momentum since the period of lockdown in India. Further for using these tools effectively, proper training is required (Mahapatra, 117). A research conducted on secondary data reveals that faculty members are finding it difficult to hold online classes (Ramya and Variyar, 38).

3. OBJECTIVES:

The objective of the paper is to study the current status of digitalization of education and to assess the role of teachers in developing psychological resilience amongst students for handling crisis situation.

4. RATIONALE OF STUDY

Education systems in India have constantly undergone changes depending upon the requirements of the students. With the advent of Information, communication and technology, the traditional teaching methods needs to ICT empowered for better delivery and improved

understanding of the content. A couple of researchers have stated that there is a need of conducting an organised research in online teacher education (Dyment and Downing, 316). The technological revolution has impacted almost every walk of life. But few studies have been conducted for studying the effect of digitalization in education sector.

5. RESEARCH DESIGN:

The study has been conducted using self-administered questionnaire created on Google Forms. The Google Form was circulated amongst faculty members belonging to different streams in various Higher Education institutions in India. Convenience sampling techniques was adopted for collecting the responses. A quantitative analysis of data was carried out using Microsoft Excel. 207 responses could be gathered and have been analyzed.

6. DATA ANALYSIS AND FINDINGS:

- *Demographic and academic profile:* Various demographic variables have been used for the purpose of study. Out of the total respondents, 83% were females and 17% were males.

Table 1 shows the

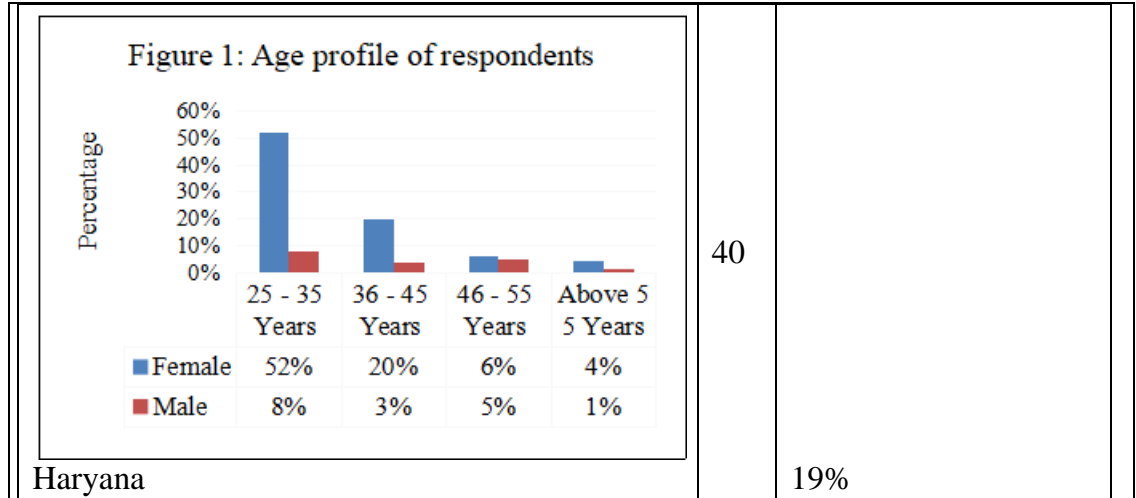
Table 2: State where institution is located		
Chandigarh	49	24%

streams of respondents where 27% respondents have been from Commerce stream, 6% have been from History and same percentage of respondents have been from management stream, 11% have been from Information Technology (IT), 40% have been from Science stream and 4% belonged to other streams.

Table 1: Streamwise classification of respondents (in percentage)							
Stream→	Commerce	History	Humanities	IT	Management	Science	Other
Gender							
Female	22	6	10	2	3	36	4
Male	5	0	1	3	3	4	0
Total	27	6	11	5	6	40	4

Figure 1 shows that majority of the respondents belonged to the age group of 25-25 years. Figure 2 shows that Majority of respondents are involved in teaching of Undergraduate classes. Further out of total respondents teaching undergraduate classes, 52% of the of them are females.

Table 2 shows the state where the institution of the respondents was located and table 3 shows the state of residence of respondents. The two tables have difference in terms of the residence and area of working.



Haryana

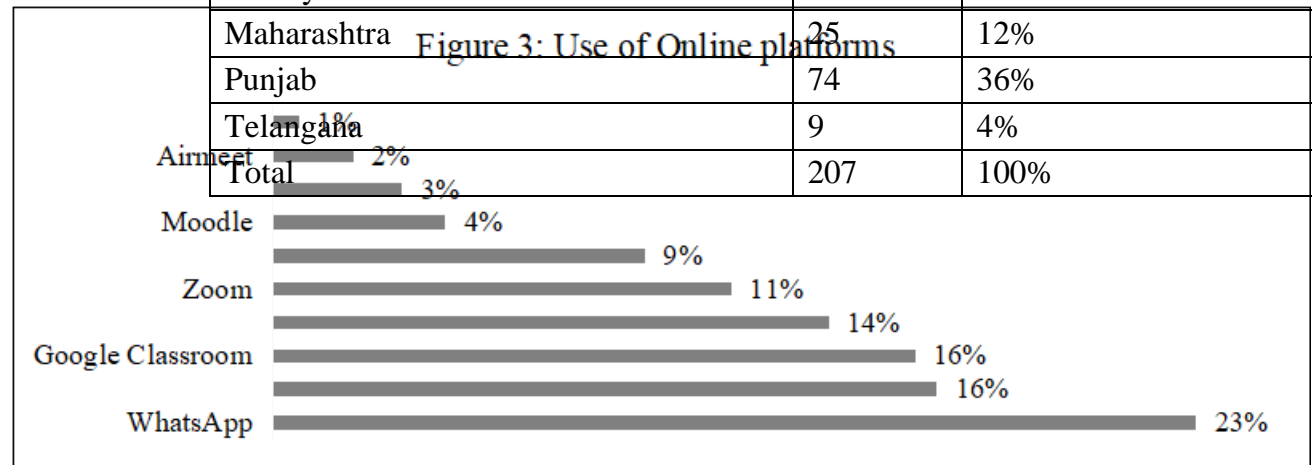
40

19%

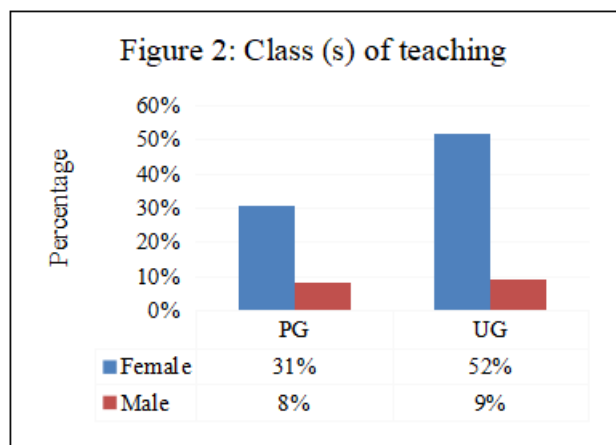
Table 3: State of residence of respondent

Bihar	13	6%
Chandigarh	11	5%
Haryana	90	6%
Madhya Pradesh	12	6%
Maharashtra	24	12%
Punjab	46	22%
Telangana	11	5%
Madhya Pradesh	10	5%
Maharashtra	25	12%
Punjab	74	36%
Telangana	9	4%
Total	207	100%

Figure 3: Use of Online platforms



- *Use of online platforms for providing education:* Figure 3 shows the majority (23%) of respondents preferred to use WhatsApp as a medium for providing online education to students during the time of Pandemic. Google Classroom and YouTube have been second most preferred mediums for providing online education. The least used online platform has been Virtual labs



despite of the fact that majority of the respondents have been from science stream.

- *Psychological resilience of faculty members:* 94.2% of respondents have stated that teachers have a role in developing psychological resilience amongst students for handling crisis situation like the Pandemic 2020 while only 5.8% respondents are not sure for it. As a matter of fact, none of respondents disagrees with the statement. Further analyzing the response to this question on basis of various demographic and academic variables, it has been found out that 16% males and 78% females believe that teachers have a role in developing psychological resilience amongst students for handling crisis situation like the Pandemic 2020 (Table 4). Also 59.9 of respondents belonging to the age group of 25-35 years said yes to the given statement.

Table 4: Response to question “Do you think that teachers have a role in developing psychological resilience amongst students for handling crisis situation like the Pandemic 2020?” (in percentage)

Response →	Yes	No	Maybe
Gender			
Male	15.94	0	1.45
Female	78.26	0	4.35
Age			
25-35 years	59.90	0	0
36-45 years	23.19	0	0
46-55 years	5.31	0	0
Above 55 years	5.80	0	5.80

- *The silver lining in the times of distress:*
42% of the respondents strongly agreed that the period of Pandemic in 2020 provided an opportunity to develop their technical skills, while 36% of respondents agreed to it, 11% were neutral about it, and 12 % respondents disagreed with the statement. Further majority of females between the age group of 25-35 years agreed that the period of Pandemic in 2020 provided an opportunity to develop their technical skills. Also, majority of female respondents between the age group of 25-35 years agreed that they had become more creative in the time of Pandemic i.e. COVID-19.

- *USE OF TECHNOLOGY:*
Majority of respondents had not taken any kind of online class before the period of lockdown and nearly half of them found it difficult to conduct online classes during the lockdown. Also, the responses have been different amongst different age groups. The respondents above the age group of 55 years strongly agreed that they found it very difficult to teach online and agreed that they were lacking technical skills. But they made effort by attending some online training programmes to teach effectively which aligns with the suggestions made by a couple of researchers (Paulson and Jesper, 2016). Further, nearly half of respondents mentioned that they are comfortable using the digital tools for teaching which corresponds to some research findings (Ivari etal.)

7. IMPLICATIONS:

Majority of respondents have been from science stream, still the least used platform by the respondents has been virtual labs. It implies that there is either lack of awareness amongst faculty members or there is need to provide appropriate training for using virtual labs. It is important for academicians to innovate new methods of teaching. The Industrial Revolution 4.0 can be directly connected with online education. Research has proved that there are various challenges in the phase of Industrial Revolution 4.0 which can be addressed by digitalization of education. Few researchers have stated that by using ICT tools, academicians can assist more to students in developing job-oriented skills which is the requirement of Industrial Revolution 4.0 (Muktiarni et al., 2019).

Moreover, since the young segment of the respondents have reflected that they have made an effort to convert the challenges of the Pandemic Times into an opportunity. They have identified the silver lining in these difficult times and agreed that the duration of lockdown provided them with an opportunity to develop their teaching and other skills.

8. SUGGESTIONS:

For dealing with any kind of panic situation amongst students, faculty members play a very crucial role. They are capable of assisting students in developing psychological resilience for handling the crisis situation. There is a need to create awareness about the use of online platforms like Virtual Labs for teaching fraternity of Science stream. Adoption of more number of online training courses by faculty members can help in developing comfort with the use of digital tools for online teaching.

9. CONCLUSION:

The advancements of ICT have proved to be a boon in the situation of Pandemic in the year 2020. Specifically mentioning about the status of education system of India, numerous efforts have been undertaken for developing online teaching skills and are still in progress. No new technology can be learnt overnight. But consistent practice and collaborative efforts amongst faculty members from various streams be it commerce, science, humanities or so on can help in developing the overall teaching learning process. As faculty members and students are entering the new era of digitalization in education, some challenges are bound to come up. But faculty members across the country have the capability of converting these challenges into opportunities.

10. SCOPE OF FURTHER STUDY:

Thought the study has been conducted with best possible efforts, but there is always scope of further research. There can be various dimensions of technology that be studied in the education sector. Few studies have been conducted in this area so far so it opens gateways for new research. Further state wise comparison can be made in terms of availability of technological infrastructure. In addition to it, the impact of digitization can be studied from student's perspective as well.

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