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DIGITALIZATION IN HIGHER EDUCATION: THE NEED OF THE HOUR

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Abstract: Digitalization is gaining importance in this era of technology. Thus, it's time for the teachers at the higher education levels to inculcate the habit of using technology whilst teaching to enhance learning as well as mold the students such that they are able to make place for themselves in this competitive world. India is just catching up with this new trend. The current study gives an overview of different aspects of digitalization in higher education and analyzes the impact of digitalization on the teachers in higher education sector. For the purpose, both primary and secondary sources of data have been used. The primary data was collected using questionnaire from 30 teachers from Damodar College, Margao Goa. The study found that though use of digital tools required a lot of initial preparation, yet it improved the class environment with students' involvement. However, they have experienced distraction when the infrastructure would not support the technology.

Key words: Digitalization, higher education, technology, teaching

'Educators have always found new ways of training the next generation of students for the jobs of the future, and this generation will be no different.'

- Justin Reich

Introduction:

Technological advancements have taken place in every sphere and thus there is a need to prepare the coming generation for meeting the challenges of the same. The students are in the era where they are connected to technology and hence the traditional modes of teaching can be improvised. The role of the students as well as the teachers is changing. According to Minal Anand, Founder & CEO, GuruQ, it is a must for the education sector to adapt to a dynamic environment as it allows it to keep pace with a competitive world. Many discussions and deliberations have emerged at the national and world level about the changes required in the educational level to make the learners employable and suitable in the labour market. Digitalization in India is still an evolving process in some parts of the country. However the 'Digital India' scheme is an effort that diverts towards making India digital. The first step to achieve this is to get the education industry prepared for the same so that the future generation is all set to embrace it. The educators have to play a key role in integrating technology with the present education system.

'Digitalization' means use of technology in performance of tasks. Digitalization in education is the use of technology such as computer, internet facilities, mobile phones or tablets, software applications and the like for the purpose of teaching and learning. Digitalization in education comes with several benefits. No task in the current generation can be performed without the help of technology. Almost everyone and everywhere technology is considered a blessing as it saves a lot of time and money and facilitates better working. It gives one an option to present the matter in diverse ways. It gives quick access to information. As pointed out by Ralhan, B. (CEO, Next Education India Pvt. Ltd.) the advantage of digital learning is also that it helps both introverted and extroverted students voice their views in the classroom. He further believes that the learners who are shy and hesitant can be empowered by the teachers in classrooms. Some of the aspects of digitalization involved in higher education are discussed below:

- a. Computers in the form of desktop or laptops or rather tablets are what the trend is now and hence are no more a luxury. With the Digital India scheme such accessories are no more a dream to the children of the poor in the country. Furthermore mobile phones with updated features are also quite common amongst the youth.
- b. Internet connectivity has made teaching learning more easy as a lot of content is available at the click of a mouse. Thus study material for making presentations or drawing notes is more convenient than going through books which consumes more time.
- c. Various digital tools like the Youtube, online portals, apps, multimedia etc. are available everywhere. It makes the teaching-learning process more interactive and interesting unlike the traditional mode of classroom learning that focuses mainly on the lecture method. The multimedia aids learners in making their presentations in form of videos, pictures etc. makes learning a fun. Various softwares like the VideoPad and the like is available that enables the teachers to show the class only that part of the video that is essential for the learners by editing the same.
- d. Technology has made things simpler for the teachers especially with respect to submission of assignments, attendance records maintenance, maintenance of marks statement, intimating the parents about the students' progress, preparing lectures using multimedia, etc.
- e. Technologies like video conferencing and webinars enables a learner to get access to information without physically being present at the presentation venue.
- f. The use of collaborative and cooperative learning strategies has made learning with digital tools all the more interesting. The concept of flipped learning has emerged wherein the teacher's role in the classroom is flipped to a facilitator while the student has to put in efforts to learn and present by getting access to the links or the study material provided by the teachers. The students gain as well as share more knowledge by adopting such interactive strategies. Google classrooms, Kahoot, Moodle and the like are some examples of online classrooms that support collaborative learning strategies.
- g. The use of technology demands that a teacher has sufficient knowledge about the different forms of technology and tools used for the purpose of teaching. To be more specific, they should be able to create their own content, edit the same, share multimedia content, possess skills with regards to authenticity of online content before sharing and referring to the same.

The current study deals with application of digital tools in teaching learning in higher education. The current generation has access to various means of technology and is well versed with the software applications available. Moreover, mobile phones and laptops are no more a luxury items. Furthermore, while smart classrooms are dreams of some higher educational institutions it is already a practice in private schools and recognized higher educational institutions.

Literature Review:

Digitalization is an evolving process in India and a lot still needs to be done in this area. Some of the studies in this area have been discussed. Kulkarni K. (2013) in his study has revealed that digitalization in higher education is beneficial as it helps transmit data faster and with less cost; however the preparation required by the teachers' is much more than the traditional classroom lecture method. Tunmibi S., Aregbesola A., Adejobi P., and Ibrahim O. (2015) in their case study in Nigeria studied the impact of e-learning and digitalization in primary and secondary schools. The study revealed that e-learning gives unlimited access to information and aids teachers to develop their computer skills apart from bringing the best in students. Eriksmo A and Sundberg J. (2016) has experienced an improvement in the class participation due to digitalization. Grajek S. (2016) however pointed out that some colleges do find it difficult to get the access to wireless connections as well as upgrade the classroom technologies. Marathe S. (2018) in his study found that the fast speed data connectivity has enhanced learning through multimedia and other online methods and techniques due to accessibility. The studies have come up with the advantages of going digital in the teaching learning process while few studies have also come with the disadvantages.

Objectives of the study:

In the view of the above studies, the current study aims at studying the following objectives:

1. To give an overview of different aspects of digitalization in the higher education.
2. To analyze the impact of digitalization on the teachers in higher education sector.

Research Methodology:

Method of sampling: The college has 54 teachers teaching at the graduate and postgraduate degree courses with commerce, management and IT backgrounds. The courses run by the institution are Bachelor in Commerce, Bachelor in Computer Applications, Bachelor in Business Administration(Financial Services) and Postgraduation in Commerce. All were considered for the purpose of study. However, only 30 teachers gave their responses. Hence, this was treated as a convenience sampling method.

Method of data collection: Primary and secondary data sources were used for the purpose of study. The primary data was collected using the google forms sent to all the teachers. The secondary data was collected from online sources.

Data Analysis: The data was analysed using simple tables and percentages. The impact of digitalization on teachers is studied using five point Likert scale from strongly agreed to strongly disagreed.

Analysis of data:

A total of 30 teachers responded to the questionnaire sent via google form links. The data below is an analysis of the types of digital tools used by the teachers, their experiences whilst using the technology and its impact on them. The study placed forth the following:

1. Types of digital tools used: With respect to the use of digital tool by the teachers, a majority of them as shown in Table No. 1 that is 90% used laptops in the class while teaching whilst others did not make use of the same. Laptops are used by the teachers as a reference while teaching and for taking students attendance. 40% of the teachers used LCD projectors for making presentations, showing videos or other multimedia, whilst others do not or may not use depending on the subjects being taught by the students. A minority of 13% used online classroom tools like the Google classroom that very well helps teachers in giving assignments, study material or other instructions to the students. It was observed that the teachers with IT background and new appointees well versed in technology used the same as it helped them save time on passing on classroom discussions. 10% of the teachers undoubtedly with IT background used other digital tools for the purpose of teaching than mentioned above.

Digital tools	No. of responses(Yes)	Percentage	No. of responses(No)	Percentage
Laptop	27	90	03	10
LCD projector	12	40	18	60
Online classroom	04	13	26	87
Others	03	10	27	90

2. Use of technology: In the past the teachers used overhead projectors in the class that did not require knowledge of use of technology. However, in recent times the teachers have put on their hands onto learning and using technology in the class for teaching. Thus as depicted in Table No. 2 below, almost 90% of the teachers have been using technology while teaching. 77% of the teachers agree that it is a curriculum requirement and hence introduced by them in the class. As far as the facilities supporting technology are concerned, 87% of the teachers have agreed that the college provides them with required digital technology. As far as experience in handling digital tools 67% have agreed that they are well experienced with the same. 67% of the teachers have agreed that they communicate online with students and parents that has enabled parents to keep track of their wards progress in academics. 60% of the teachers prepare their own material for students using the digital technology. This includes mainly the study material and powerpoint presentations.

Responses with respect to use of technology	No. of responses(Yes)	Percentage	No. of responses(No)	Percentage
Use digital tools while teaching	27	90	03	10
Use of digital tools as per curriculum requirement	23	77	07	23
College provides with required digital technology	26	87	04	13
Well experienced with digital tools	20	67	10	33
Communicates online with students and parents	20	67	10	33
Creates own digital material for students	18	60	12	40

3. Impact of digitalization on the teachers: Further, the impact of embracing digital tools in teaching has been displayed in Table No. 3 below. The statements in the table are rated on a five point Likert scale from strongly agreed to strongly disagreed. The strongly agreed and agreed has been clubbed in one column, likewise strongly disagreed and agreed has been clubbed for the purpose of convenience. The study shows that use of digital tools enables the teacher to keep the class lively and engaged as shared by a majority of 90% of the teachers under study. 80% of the teachers also felt that digitalization supports in application of practical knowledge. The teachers were able to give their quality time to the students and complete the syllabus well in time and more effectively than done previously using traditional classroom method according to 80% of the respondents. As many as 70% of the teachers agreed that students response in the class improved as a result of use of technology, while 10% disagreed. Majority of the teachers that is 90% also strongly agreed or agreed that technology can be used in large classrooms with ease. However, use of technology also had some negative impacts. The teachers had to update themselves with the technology constantly as agreed by 90% of them. All of the respondents agreed that employing any technology required a lot of initial preparation. A small percentage of 10 teachers still had difficulty using technology while teaching. With respect to use of technology for every subject being taught, 80% of the teachers agreed that it was feasible to use technology for every subject.

Table No. 3: Impact of digitalization				
Statements	Strongly agree and agree	Neutral	Disagree and strongly disagree	Total
Enables you to keep classroom environment lively and engaged	27(90%)	03(10%)	-	30(100%)
Supports in application of practical knowledge	24(80%)	06(20%)	-	30(100%)
Enables to complete the syllabus well in time and effectively	24(80%)	06(20%)	-	30(100%)
Students response improved in class	21(70%)	06(20%)	03(10%)	30(100%)
Feasible to use in classrooms with large numbers	27(90%)	03(10%)	-	30(100%)
Need to update yourself with technology constantly	27(90%)	03(10%)	-	30(100%)
Requires a lot of initial preparation	30(100%)	-	-	30(100%)
Have difficulty in using digital technology	03(10%)	-	27(90%)	30(100%)
Infrastructure support for technology always	15(50%)	03(10%)	12(40%)	30(100%)
Feasible to use for all subjects	24(80%)	-	06(20%)	30(100%)

(Figures in brackets denote percentages and outside bracket denotes number of respondents)

Discussion:

The study and its findings are subject to the subjects taught in the class. The college with the aim of keeping itself abreast with technology and latest advancements has introduced technology. Fedena is the system which teachers use for feeding students attendance, entering marks and also giving assignments in class. However, very few teachers used the same for giving assignments. The teachers did find a difference in the new way of teaching with technology rather than following the traditional classroom method solely. Teachers are timely updated with use of technology, though some find it a little difficult to grasp. The initial stage of

preparation becomes difficult for some teachers who are not so tech savvy. However they do find it convenient to use technology as it has enabled them to share the resources more easily than physically sharing study material. Problems have been encountered when the technology does not work in class due to technical reasons or electricity failure. Teachers that have been teaching practical papers such as accounting and mathematics or like papers find it difficult to use technology while teaching.

Conclusion:

In a way, digital learning paves way for active learning. There are hurdles in use of technology which can be overcome with the passage of time and practice. The role of teachers is very important in making students' tech savvy and gets them used to the same. It is the responsibility of the teachers to prepare the students for the 21st century challenges rather than focusing on just teaching as it helps them to give a practical touch in their respective subjects. Thus, teaching learning has been undergoing a total change and needs to undergo such change to make digital India a dream come true. As a responsible citizen every educator has to learn to accept change for the good of the society and for the benefit of the nation.

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