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AWARENESS OF THE NEW MEDIA TECHNOLOGIES IN THE CLASSROOM TEACHING AMONG STUDENTS IN JAIPUR, INDIA: AN EMPIRICAL RESEARCH

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Abstract: *Education is one of the key aspects in the present century. It's almost fifteen years into the 21st Century, many universities around the world are trying new ways of teaching and learning and coping to find the new evaluation patterns in the classroom teaching. In the 21st century technology plays a significant role in changing the classroom environment. Many New Media Technologies were introduced by teachers to make the classroom more interactive and collaborative. This change has also been there for years in many universities around the world. Many universities in India are also a part of this pedagogy shift. Many universities are adapting new methods, processes and products to identify educational goals. The use of New Media Technologies, classrooms is becoming knowledge delivery centers and classrooms are expanding by themselves. Students can learn, interact and share the knowledge anywhere in the world. These technologies allow teachers to keep track on the student progress on time from anywhere. The technologies encourage peer to peer learning and collaborative research and also increase the teacher – student relationship. Teaching and learning through new media technologies helps to diversify the learner's need and provide a teacher student collaborative learning environment. This research paper deals with the awareness of the different New Media Technologies used in the classroom teaching among students in Jaipur Region India. The main purpose of this research for the conduction of the experimental research among students in near future and to identify the effect of new media technologies on students' performance.*

Keywords: *New Media Technologies, Classroom Teaching, Technology in Education, Learning Environment.*

1. INTRODUCTION

A famous quote articulates "Education is the most powerful weapon which you can use to change the world." - Nelson Mandela. Education plays a vital role in the present century. In many countries, universities are finding the ways to make the education more effective and collaborative way. India also a plays an important component for the contribution in the developmental role in the education sector. According to the report "All India Survey on Higher Education-2015" by Ministry of Human Resource Development, Department of Higher Education, there are

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total 757 universities in the country and total number of the students enrolled in these universities are 33.3 million. To cope up with this huge data base, many universities are also facing the challenging task for making the classroom teaching more collaborative.

It's almost fifteen years into the 21st century, many universities around the world are trying new ways of teaching and learning and coping to find the new evaluation patterns in the classroom teaching. In the 21st century technology plays a significant role in changing the classroom environment. Many technological innovations in the academics are playing a significant role in teaching and learning. Universities are adapting different New Media Technologies to make the classroom more effective and collaborative. For example, technology has changed the making of the course plans and lesson plans for students. Unlike in the traditional system, lessons are no longer fit in one size, teachers and students are having greater control on learning. By implementation of the technology, teachers are taking different roles which includes mentor, designer of projects and teacher.

The use of New Media Technologies, classrooms are becoming knowledge delivery centers and classrooms are expanding by themselves. Students can learn, interact and share the knowledge anywhere in the world. These technologies allows teachers to keep track on the student progress on time from anywhere. The technologies encourages peer to peer learning and collaborative research and also increase the teacher – student relationship. By implementation of the New Media Technologies also give hands on experience by sharing, managing the projects and helps to present their work using the different mediums. The learning became more interesting and innovative for the students. For this study, for analyzing the awareness of the New Media Technologies among students include: social networking, web 2.0 technologies, use of internet and wireless facilities, virtual laboratories, maker space, 3D Printing Technologies, flipped classroom concept, use of smartphones for referencing, use of google apps and gamification. These technologies are categorized in Horizon Report on Higher Education 2014. This research paper deals with the awareness of the different New Media Technologies used in the classroom teaching among students in Jaipur Region India.

2. REVIEW OF LITERATURE

New Media Technologies are defined as the content available using different forms of the electronic communication made available using computer technology. The content can be viewed from any one of the any place and anytime.

According to the report by NMC Horizon Report (2014)[1], new media technologies are broadly classified as the consumer technologies, digital strategies, learning technologies, social media technologies, visualization technologies, enabling technologies. These are technologies are rated as the emerging

technologies. Angela Murphy (2013)[8] reflected that mobile devices and laptops are the major sources for the students to access course materials and also different usages of the media technologies in higher education like laptops, desktop computers, smartphones, tablet computer, netbook, E-reader, MP3 Player, standard mobile phone. The commonly used technology are mobile technology, smartphones, internet and other sources like MOOCs (Massive Open Online Courses). Recent years, Mobile technology [8] had changed the higher education system by using the sign language such as texting and it has also reduced the physical walls of the classroom.

Many Technologies like MOOCs and online distance learning also plays an important role for the enhancement of the higher education. MOOCs are considered one of the major tool for distance learning. He also emphasizes on the challenges availed by MOOCs like high drop outs, incomplete learning. Even web 2.0 technologies are emerging technology for teacher centric and student learning environments. Bryan Alexander (2008) [10] explains about the Web 2.0, Folksonomies and also explains about the tagging and social bookmarking. He also stated that the teachers lack awareness of the about the access of the value of information through web 2.0. Now days, Digital games provide an interactive environment with individuals as they allow electiveness, flexibility and non-linearity. Digital games include the Atari games, the computer games, the console games, the mobile games and all distinct kinds. Deniz YENGÝN (2011) [12] says that about nearly 70% of the student believe that playing games helps to learn more and aids development of the certain knowledge and skills. It also helps to develop the social skills of the individual. Digital games should be included parallel in the teaching Programme in schools. But the game based learning is only restricted to school level only. Even many universities are using other technologies like flipped classroom, makerspace, badges [4], open educational resources, 3D Printing, 3D Holographic Technology, Remote Laboratories, Wearable technologies, Machine Learning and Telepresence. Noora Hamdan and Patrick McKnight (2013) [20] stated that Flipped classrooms allow for a variety of learning modes which might involve group work, independent study, research, performance, and evaluation. He has stated that more qualitative and quantitative research needs to be done to identify how the potential of the model can be maximized. Marker space is also an emerging tool in Higher Education. According to Educause (2013)[5] Makerspaces may become linked from campus to campus, encouraging joint project collaboration. Makerspaces permit students to take emphasize of their own learning. By 2030, Holographic Technology, wearable technologies and telepresence technologies would shape the higher education. Ahmed Elmorshidy (2010) [6] emphasized that Holograms are used in various purposes like in presentations and medical animation studio. But the Holographic [6]. Technology is not used because this technology is very expensive to be affordable by the universities. According to TUT Technology Watch Report (2007) [16], Telepresence is also started slowly using

in the universities. Though this technology requires NGN (Next generation Network) infrastructure and the higher bandwidth for higher performance, but still many administrative staff believes that Telepresence will help to enhance the degree of interactivity and collaboration between students and educators. HD video communication will enhance interactivity and productivity in business, as well as in applications in the fields of education and medicine. Augmented Reality [3] is another major technology used by universities for making student and teacher learner centric. Near field technologies are mainly used for marking the attendance and completion of the assignments are the university level.

Many universities around the world has started implementing 3D printing [2] technology in their teaching pedagogy. According to NMC Horizon Report: 2014 Higher Education Edition(2014) [1], One of the major use of 3D printing in higher education that it enables more accurate study of objects that may not be readily available to universities. Universities are beginning to create dedicated spaces to encourage creativity and inspire intellectual inquiry around this emerging technology.

3. RESEARCH METHODOLOGY

This research paper deals with the awareness of the different New Media Technologies used in the classroom teaching among students in Jaipur City India. Jaipur City is known as Pink City in Desert State of Rajasthan, Western India. The City is famous for its tourism, handicrafts and forts of the Rajasthan State. The primary data was collected through questionnaire. The questionnaire includes the demographic questions and analytical questions. Convenience sampling technique is used for selecting the samples among the students. The sample size was 100 students.

To test the reliability of questionnaire, Chonbach's Alpha is used. Chonbach's Alpha is used to find out the consistency between the variables. If variables are correlated then Chonbach's Alpha value will increase. Generally the coefficient should lie in between 1 and 0. As per rule of thumb, an alpha value of 0.7 (some say 0.6) indicates acceptable reliability and 0.8 or higher indicates good reliability. For this study, Alpha value is 0.702, which is acceptable that variables are related to each other.

4. DATA INTERPRETATION AND DATA ANALYSIS

The research paper argues that technology was making higher education a challenging mode of learning. As the technology is moving very fast, students and teachers has started adapting these technologies in the classroom. The mode of traditional teaching is shifting towards the collaborative and interactive teaching.

The main objective of the study is:

- To identify the awareness among the students using New Media Technologies.

The major hypothesis was put forward for verification during the course of study:-

$H1_0$: There is no awareness among the students about the various new media technologies in class room teaching.

5. DESCRIPTIVE STATISTICS

Table 1
Year of Study

Year of Study	*No of Students*	*Percent*
1st Year	0	0
2nd year	60	60
3rd Year	24	24
4th Year	6	6
Total	100	100

This table represents the data collected in the respective year in which students are studying various courses in different Universities of Jaipur City, as 60% studying in 2nd Year, 24% studying in 2nd Year and 6% studying in 3rd Year.

Table 2
Gender

Gender	*No of Students*	*Percent*
Male	65	65
Female	35	35
Total	100	100

For this study, the data is collected from 65 male students and 35 female students irrespective of all courses.

Table 3
Awareness about New Media Technologies

Awareness about New Media Technologies	*No of Students*	*Percent*
Yes	61	61
No	33	33
Do not Know	6	6
Total	100	100

The above table represents that 61% (61) students are aware of the term new media technologies and 33% (33) students are not aware of the new media technologies. Interestingly, 6 students do not know about the term New Media Technologies.

Table 4
Awareness of Web 2.0 Technologies

Awareness about web 2.0 technologies	*No of Students*	*Percent*
Yes	45	45
No	40	40
Do not Know	25	25
Total	100	100

It was observed that only 45% (45) students are aware of the term web 2.0 technologies which consists of the social networking sites, blogs wikis, folksonomies, video sharing websites, hosted services, and other web based applications and 40% (40) students are not aware of the term web 2.0 technologies. Only 25% (25) students do not know whether the term web 2.0 technologies exits or not.

Table 5
Use of Internet and Wireless Facilities for referencing

Use of internet and wireless facilities	*No. of Students*	*Percent*
Yes	64	64
No	34	34
Do Not Know	2	2
Total	100	100

The table 5 represents that majority 64% (64) students use internet and wireless facilities for referencing, reading the e-books and downloading the contents. Around 34% (34) students do not use the facilities provided by the universities and 2% (2) students do not know that whether these facilities are available to them.

Table 6
Awareness about Virtual Laboratories

Awareness about Virtual Laboratories	*No of Students*	*Percent*
Yes	21	21
No	55	55
Not allowed to use	24	24
Total	100	100

It was observed that, 55 students are not aware about the term virtual laboratories, 24 students do not heard about the term virtual laboratories. Only 21 know about the virtual laboratories and their use in the education.

Table 7
Awareness about Maker space

Awareness about Maker Space	*No of Students*	*Percent*
Yes	36	36
No	44	44
Do not Know	20	20
Total	100	100.0

The table 7 represents that 36% (36) are aware about the term maker space, 44% (44) students are not aware about the term maker space and 20% (20) students says that they have not even heard about the term maker space. Students who are studying in the private universities are more aware about the term Maker Space compared to those studying in the government universities.

Table 8
Awareness of 3D printing technologies

Awareness about Maker Space	*No of Students*	*Percent*
Yes	7	7
No	74	74
Do not Know	19	19
Total	100	100

The above figure demonstrates that 74% (74) and 19% (19) students do not know about the 3D printing technologies. Only 7% (7) students are aware about 3D printing technologies.

Table 9
Implementation of Flipped Classroom Concept

Implementation of Flipped Classroom Concept	*No of Students*	*Percent*
No	88	88
Yes	12	12
Total	100	100.0

The above figure represents that 88% (88) students feel that teachers still follow concept of the traditional classroom where the teachers come to the classroom, teach through the blackboard and give notes as a reference. On the other hand, 12% (12) students commented that few teachers are following the concept of the flipped classroom.

Table 10
Use of smartphones and mobile phones for referencing in the classroom

Use of Smartphones for referencing	*No of Students*	*Percent*
Yes	33	33
No	27	27
Not allowed to use	40	40
Total	100	100

The above table represents that only 33 students use smartphones and mobile phones for referencing, 27 do not use any mobile phones and 40 students says that they are not allowed to use the smartphone and mobile phone in the classroom by the teachers. The reason is that teachers feel that students are deviated and pay less concentration by using smartphones and mobile phones in the classroom.

Table 11
Awareness about Gaming used in Education

Awareness about Gaming used in Education	*No of Students*	*Percent*
Yes	67	67
No	30	30
Do not know	3	3
Total	100	100

The above table represents that majority 67% (67) of the students are aware about gaming and feel that gaming should be the part of the syllabus. Students feel collaboration of gaming with learning can increase the development of skills and logical thinking. The students 30% are not aware about the term gaming.

Table 12
Mode of taking notes in the classroom

Mode of taking notes in Classroom	*No. of Students*	*Percent*
Notebook	89	89
Digital Notebook	5	5
Smartphone	6	6
Total	100	100

Interestingly it was observed that majority of the students (89%) take the notes by using the notebook and only 5% use digital notebook and 6% uses smartphone (Table 12). The reason for not using the Digital Notebook and Smartphone because students are not allowed to use these gadgets by the teachers in the classrooms.

Table 13
Use of Google Apps for referencing

Use of Google apps for referencing	*No. of Students*	*Percent*
Yes	48	48
No	52	52
Total	100	100

48 students use different google apps for the referencing in their studies and 52 students do not use google apps for referencing, as many students do not smartphones because they are not allowed to use in the classroom for referencing.

6. STATISTICAL INTERPRETATION

For Hypothesis testing, one Sample T-Test is used to know the awareness of the new media technologies among the students.

Table 14
One-Sample Statistics of the Variables

One-Sample Statistics

	N	*Mean*	*Std. Deviation*	*Std. Error Mean*
Awareness about New Media Technologies	100	1.45	.609	.061
Use of Smartphones and Mobile Phones for referencing	100	2.07	.856	.086
Awareness about Web 2.0 Technologies	100	4.36	1.685	.168
Use of Internet and Wireless Facilities for referencing	100	1.38	.528	.053
Gaming a part of Education	100	1.36	.542	.054
Awareness about Makerspace	100	1.84	.735	.073
Flipped Classroom Pedagogy	100	1.74	.525	.052
Awareness about 3D Printing Technologies	100	2.12	.498	.050
Aware about Virtual Laboratories	100	2.03	.674	.067

The result shows the P value (.000), which is less than .05 (table value 1.96). So we reject the Ho and accept the Ha. The above table shows that students are aware of the new media technologies. As students are using smartphones, it is convenient to share the information among the peers and teachers. Many universities has started providing the internet and wireless facilities to the students and teachers. Interestingly students are less aware about 3D Printing Technologies, Virtual laboratories, maker space. It was observed that due to improper training many students are less aware about New Media Technologies and its uses. Even, students feel that many teachers are still following the traditional way of teaching compared to the flipped classroom technology.

Table 15
One-Sample Test of the Variables

One-Sample Test

	t	*df*	*Sig. (2-tailed)*	*Mean Difference*	*95% Confidence Interval of the Difference*	
					Lower	*Upper*
Awareness about New Media Technologies	23.799	99	.000	1.450	1.33	1.57
Use of Smartphones and Mobile Phones for referencing	24.187	99	.000	2.070	1.90	2.24
Awareness about Web 2.0 Technologies	25.877	99	.000	4.360	4.03	4.69
Use of Internet and Wireless Facilities for referencing	26.155	99	.000	1.380	1.28	1.48
Gaming a part of Education	25.111	99	.000	1.360	1.25	1.47
Awareness about Makerspace	25.044	99	.000	1.840	1.69	1.99
Flipped Classroom Pedagogy	33.171	99	.000	1.740	1.64	1.84
Awareness about 3D Printing Technologies	42.564	99	.000	2.120	2.02	2.22
Aware about Virtual Laboratories	30.140	99	.000	2.030	1.90	2.16

7. CONCLUSION AND RECOMMENDATION

In this study, it was observed that many students in the Jaipur region are aware about the terms involved in New Media Technologies, but they do not know about the usage of these technologies in the classroom. Students feel that there should be proper training among the peers and teachers for implementation of these New Media Technologies in the classroom teaching.

This study will also help to identify the popular technology used in the classroom teaching and used for the experimentation for identifying the performance of the students before and after implementation of these technologies in the teaching pedagogy.

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