

A Study On Students' Perception Through Online Teaching And Learning In Higher Education After Covid Pandemic: A Case Study Of Jamia Millia Islamia University, New Delhi, India

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Abstract: India has a highly developed higher education system that provides education and training in nearly all areas of human creative and intellectual venture. While online education is usually considered of as an alternative to traditional education, during and after the Covid pandemic it became a necessity for keeping higher education institutions active. This paradigm shift could generate changes in students' perception of this way of teaching shifting from traditional to hybrid teaching. Objectives of the study are – 1. To know the socio-economic profile of the participants. 2. To study the perception of students about the way universities managed to provide knowledge in the context of online learning. 3. To study the perception of students about the ability to learn and assimilate information in the context of online learning. 4. To study the perception of students about the use of E-learning platform in the process of online learning. A cross-sectional study was held at Jamia Millia Islamia in New Delhi. An online survey based on a semi-structured questionnaire was administered among students enrolled in a degree program under the university.

Keywords: Online teaching and learning; E-learning; higher education; students' perception.

Introduction

India has a highly developed higher education system that provides education and training in nearly all areas of human creative and intellectual venture. It possesses the world's third biggest publicly supported higher education system, just behind the United States and China. According to All India Survey on Higher Education (AISHE) 2019-20, total 3,85,36,359 students enrolled in year 2019-20 which shows a growth of 11.4% in the student enrolment in the last five years from 2015-16 to 2019-20. While online education is usually considered of as an alternative to traditional education, during the Covid pandemic it became a necessity for keeping higher education institutions active. The cancellation of examinations, suspension of in-person classes, closure of schools, and physical distancing that did not allow face-to-face instructions are some of challenges leading towards the solution of online classes. These

challenges and disruptions resulted in the transformation of the education medium: the adoption of the online mode of instruction across the world (Fung et al., 2022). Schools and colleges shifted to screens, and instructors and students adapted to this new learning model, with new teaching protocols and the adoption of relevant infrastructure. The sudden transition to online learning was not so easy for the institutions in India due to a lack of resources and limited infrastructure (Iyer et al., 2022; Oyedotun, 2020).

The online education scene in India was usually self-paced and used for supplementary learning purposes, with an upward-moving trajectory over the last two decades, but coronavirus gave it an unwanted boost. Changes in delivery mechanism of education system has faced many challenges in India and effect the accessibility (Goswami et al., 2021; Naik et al., 2021). Lack of stable connectivity and accessibility, the prerequisite of being familiar

with technology, regional disparity, and gender differences, coupled with socio-economic factors were few of the challenges and the list is endless. However, students and teachers both overcome these challenges and pass the time of covid-19 pandemic.

Now, when the pandemic is over and the education system is back to the traditional face to face teaching. Students are taking physical classes in the university and ratio of online classes become almost negligible. The mindset with having exclusive E-learning for last two years can highly affect the educational process and student's perception about the use of the online environment in the process of teaching and learning, and these ideas stand at the basis of our research. There is need to know whether students were satisfied or dissatisfied with the online classes managed by the university at the time of covid -19 pandemic. Since they have experienced the pros and cons of the exclusive online classes, they would be able to share their view point towards facilities, methodology of teaching, examination pattern and practical problems faced by them.

Objectives:

1. To know the Socio-economic profile of the students enrolled in higher education.
2. To study the perception of students about the way universities managed to provide knowledge in the context of online learning.
3. To study the perception of students about the ability to learn and assimilate information in the context of online learning.
4. To study the perception of students about the use of E-learning platform in the process of online learning.

Methodology

The study is cross-sectional in nature and attempts have been made through online platform of google forms to give description of the state perception of the students enrolled in higher education as it exists in the area under

consideration. The study is based on primary data which has been collected by a well-designed questionnaire containing multiple choice questions.

Population and Sample

The study was carried out at Jamia Millia Islamia, New Delhi. It is central University and it has nine faculties with number of centres of learning and research. It offers 60 courses in under graduation programs, 80 master degree programs, 56 Ph.D. degree programs, 18 P.G. Diploma Programs, 11 Advanced diploma courses, 20 diploma course, 21 certificate programs.

Total 100 students have been selected enrolled in different course offered by Faculty of Architecture and Ekistics, Faculty of Engineering and Technology, Faculty of Social Science and Faculty of Management Studies through random sampling method.

Inclusion Criteria

- Students enrolled in higher education course at Jamia Millia Islamia
- Students who have experienced online classes at least for a year
- Student who are willing to participate in the survey.

Exclusion Criteria

- Students enrolled course rather than degree courses.
- Students who enrolled recently in degree courses.

Source of Data

Data was collected online. The questionnaire was sent as a link on personal mobile number of the students of the university through the free application Google Forms. The participants in the study received information before administration of the questionnaire about the purpose of the survey. Checking a specific box, they approved the participation to the study. The e-mail addresses were not collected in order to respect privacy and confidentiality.

Tool used

The questionnaire used in survey was made in four parts 1. Personal information regarding demographic profile of the students, 2. University Management for Online Classes, 3. The Ability to Learn and Assimilate Information, 4. Use of e-learning platforms. Questions in 'Personal information' consist of multiple-choice answers only. Under 'university management for online classes', a combination of questions was included having multiple-choice answers, open ended answer and 5 points Likert Scale (Always, often, sometimes, rarely & never). Questions in the category of 'the ability to learn and assimilate information' were having multiple-choice answers, open ended answer and 5 points Likert Scale (In a very small extent, in a small extent, nor in small, nor in great extent, in great extent, in very great extent) and (Very satisfied, fairly satisfied, nor satisfied nor dissatisfied, not really satisfied, not at all satisfied). Questions under 'use of e-learning platforms' were having multiple-choice answers, open ended answer and 5 points Likert Scale (Not at all useful, somewhat useful, nor useful nor useless, useful, very useful).

Data Analysis

Keeping in view of the objectives of the study the collected data was analysed by using statistical methods like count, percentage, and frequency.

Result and discussion

I. Socio-economic Profile:

The socio-economic profile contains information about sex, age, religion, caste, monthly family income, possession of assets and usage of online facilities provided by university. Most of the respondents are male (63 percent) and belong to age group 18-24 years (76 percent). Maximum respondents (94 percent) are Muslims. 73 percent of the respondents are from general caste, followed by 26 percent from Other Backward Class and only 1 percent from Sc/St category (Ref: Table 1)

46 percent of respondents are from Faculty of Engineering and Faculty of Architecture and Ekistics followed by 24 percent from Faculty of Education, 16 percent from Faculty of Management Studies and 14 percent from Faculty of Social Sciences. Maximum respondent 64 percent of the respondents are having to monthly family income 6,000-18,000/-, 60,000-1,25,000/- and above than 1,25,000/-. 97 percent of respondents do not live in hostel and 100 percent of the students have smart phones and 95 percent have internet facility. However, only 67 percent of respondents have personal computer/laptop, 71 percent of respondents have access to university open library and 13 percent of respondents has printer at home. For further details refer table number 1.

Table 1: Socio-economic profile of the students

Variables	Category	Count (n)	Percentage (%)
Sex	Male	63	63
	Female	37	37
Age	18-24 years	76	76
	25 years-30 years	21	21
	Above 30 years	3	3
Religion	Muslim	94	94
	Hindu	6	6
Caste	General	73	73
	Other backward class	26	26
	SC/ST	1	1

Faculty in which enrolled	Faculty of Management Studies	16	16
	Faculty of Education	24	24
	Faculty of Social Science	14	14
	Faculty of Engineering	39	39
	Faculty of Architecture and Ekistics	7	7
Monthly Family Income	Less than 6,000/-	5	5
	6,000 – 18,000/-	23	23
	18,000 - 30,000/-	11	11
	30,000-45,000/-	11	11
	45,000-60,000/-	9	9
	60,000- 1,25,000/-	21	21
	More than 1,25,000/-	20	20
Live in Hostel	Yes	3	3
	No	97	97
Do you have smart phone?	Yes	100	100
	No	0	0
Do you have laptop/ personal computer?	Yes	67	67
	No	33	33
Do you have access to internet?	Yes	95	95
	No	5	5
Do you have printer?	Yes	13	13
	No	87	87
Do you have access to university open library?	Yes	71	71
	No	29	29
How do you access classes in online mode?	Google Meet	94	94
	Zoom Meeting	4	4

Source-Primary data

2. The perception of students about the way universities managed to provide knowledge in the context of online learning:

Universities, teachers and students were not prepared for the sudden shift to exclusively online learning and teaching, but they tried to find strategies to adapt and meet the new challenges (Table 2). If we look into the technical prepared of the university for running online classes, some difficulties aroused related to losing signal during video conference, delayed visualization and unclear sound and frequency of occurring these difficulties were often and sometimes, 76 percent of the respondents believed that sound problem

occurred often and some times. Difficulty while connecting to the platform was occurred sometimes and rarely, stated by 74 percent of the respondents. Losing signal and delayed visualization were problem occurred sometime and often, believed by 64 percent and 68 percent of respondents respectively.

In the category of use of tools during classes, Documents (word, pdf, PowerPoint), chat discussion and URL addresses are most used tools. Video conferencing and audio conference were believed always used tool by 64 and 69 percent of the respondents respectively. Tools of tasks in word, pdf format used by 59 percent of the respondents in always and often category. 53 percent of respondent believed that

existing rules of classroom teaching can be followed in online classes. 29 percent of respondents answered I don't know/I am not answering option and 18 percent of respondents believed that rules cannot be followed in online classes.

Maximum 72 percent of the students stated that content of class room teaching focused on more theory than practical, only 4 percent believed

that tasks were more practical than theory. While having online classes, assignments were given online. 42 percent of respondents believed that they got more time to complete their assignment with online classes. 29 percent of respondents in each group believed that they got less time to complete their assignment with online classes and nor less nor more time to complete their assignment.

Table 2: Perception regarding 'University's Management for Online Learning'

Variable	Category	Percentage (%)
Technical preparedness	Difficulties while connecting to the platform (sometimes, rarely)	74
	Loosing Signal During Video Conference (Often and sometimes)	64
	Delayed visualization of messages communicated on the platform (Often and sometimes)	68
	The sound is not clear (there are interruptions) (Often and sometimes)	76
Use of Tools during classes	Audio Conference (Always and Sometimes)	68
	Video Conference (Always and Often)	64
	[Documents posted on the platform (Word, Pdf, PowerPoint) (always and often)	76
	Forum discussions (often and sometimes)	69
	Chat discussion (often and sometimes)	75
	URL addresses (to other web sources) (often and sometimes)	71
	Glossary of term (often and sometimes)	64
	Tasks in word/pdf format (that only the teacher could see) (always and often)	59
	Task posted in databases (that were seen by the entire class) (often and sometimes)	62
Adherence to the existing teaching rules in the online teaching/learning system	Yes	53
	No	18
	I am not answering/I don't know	29
Content of the classes	More theory than practical tasks	72
	More practical than theory tasks	4
	Same amount of practical and theory tasks	24
Task allocation with online classes schedule	Less time	29
	More time	42
	Nor less nor more	29

*Source: Primary Data

3. The perception of students about the ability to learn and assimilate information in the context of online learning:

Students were attending online classes through their smartphones and they were adjusting with the new normal education pattern. Here, we discuss about their ability to learn and assimilate information provided by the information (Table 3). 53 percent of the respondents believed that online environment was suitable for education and training in a very small extent and in a small extent. Only 19 percent of the respondents believed that online environment was suitable for education and training in a very great extent and in a great extent. 57 percent of the respondents believed to answer live during video conference for teacher's questions and 34 percent of the respondents believed to answer in written in chat box for teacher's questions.

61 percent of the respondents believed to present in online mode is easier than offline classes and only 18 percent of the respondents believed to present in online mode is harder than offline classes. When the course is held in audio and video in both mode, 72 percent respondents believed it easier to acquire and assimilate information. Very less percent (15 percent and 16 percent) of the respondents believed that it easier to acquire and assimilate information when it is developed in writing on forum respectively. However, 44 percent of respondent found it harder to assimilate information in online mode and 30 percent of respondent found it easier to assimilate information in online mode.

Overall experience of online learning and classes found very satisfied and satisfied by almost 50 percent of the respondents. But 43 percent of respondents prefer classes to be held face to face and 44 percent of respondent prefer a combination of online and face to face mode both. Only 13 percent prefer online classes.

Table 3: Perception regarding 'ability to learn and assimilate information'

Variable	Category	Frequency (%)
Suitability of the online environment for education and training	In a very small extent and in a small extent	53
	Nor in small nor in great extent	28
	In great extent and in very great extent	19
From the perspective of student-teacher interaction, preference to answer to the teacher's questions while	Answer a live during a videoconference	57
	Offer a written answer on chat/forum	34
	I don't know/ I am not answering	9
Presentation in online mode	You find it harder to present	21
	You find it easier to present	61
	You find it nor easier nor harder to present	18
Easier process for acquisition and assimilation of the information, when	The course is held audio	15
	The course is held audio and video both	72
	The course developed in writing on forum	13
	Easier to assimilate information	30
	Harder to assimilate information	44

Compared to face-to-face taught courses/seminars, during online courses, it is:	Nor easier, nor harder to assimilate information	26
Overall online learning experience	Very satisfied and satisfied	49
	Nor satisfied nor dissatisfied	27
	Very dissatisfied and dissatisfied	24
Preference to online/offline classes	For the course to be held online	13
	For the course to be held face to face	43
	A combination between online and offline course hybrid mode	44

*Source: Primary Data

4. The perception of students about the use of E-learning platform in the process of online learning:

Even though the E-learning platform meets the basic conditions in order for students to turn their preference towards it, (ease of use, usefulness), students still prefer other platforms because of the small number of technical issues they had while using them (Table 4). 59 percent

of the respondents agree for the use of online platform while offline classes. In usefulness of different classroom tools, 9 tools were found useful and very useful. Video conference come on first place with 55 percent, followed by document (word, pdf) with 54 percent and forum discussion with 51 percent. Only 42 percent of the respondents believed that glossary of term is useful and very useful tool during online classes.

Table 4: Perception regarding ‘the use of E-learning platform’

Variable	Category	Frequency (%)
Use of online platform while offline classes	Yes	59
	No	41
Usefulness of different tools	Audio Conference (useful + very useful)	46
	Video Conference (useful + very useful)	55
	[Documents posted on the platform (Word, Pdf, PowerPoint) (useful + very useful)	54
	Forum discussions (useful + very useful)	51
	Chat discussion (useful + very useful)	43
	URL addresses (to other web sources) (useful + very useful)	50
	Glossary of term (useful + very useful)	42
	Tasks in word/pdf format (that only the teacher could see) (useful + very useful)	51

	Task posted in databases (that were seen by the entire class) (useful + very useful)	46
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*Source: Primary Data

Discussion:

The goal of this study was to determine how college students felt about online learning and teaching in higher education after the Covid 19 epidemic, which resulted in significant changes due to the lockdown of the universities. Our study aimed to deeply assess student a satisfaction about the way universities managed online classes, the ability to learn and assimilate information and the use of E-learning platform in the process of online learning.

In the current study it was found that students have often faced some kind of technical problem while in online classes. Study by Panchabhai S.S. (2021) have also stated that 70 percent of the respondents are strongly agree for technical issues in online classes. This led to distraction during classes and completion of the assignment. Coman c. et al (2020) stated that 69.4 percent of respondent frequently and often faced technical problems while having online classes. Various teaching tools have been used by the teachers like audio conference, video conference, char box, Document (word, pdf, Ppt) etc. Bast F. (2021) found in his study that video conferencing is the best method in which students and teachers can interact directly. In online classes, more focus is given on theory in comparison to practical work and similar findings were found in study by Panchabhai S.S. (2021).

It is found that overall online learning experience was found very satisfied however in study Abbasi S. et.al (2020) overall experience was 77 % negative as response received from learners. The respondents were in favour of combination of online and face to face teaching and Coman C et al (2020) study showed that 77 % negative perception for pure online classes. In current study, it was found that more time is

managed to complete the assignment with online classes which is supported by the finding of Panchabhai (2021) and Bast F. (2021) that 60 percent of respondents were strongly agree with good time management in online class schedules.

Conclusion:

According to the study of the gathered primary data, online teaching and learning was one of the choices for maintaining the continuity of teaching and learning, particularly in higher education. during the covid 19 pandemic. The students aren't entirely happy with the online teaching and learning, though. The students encountered a number of obstacles, including technical difficulties, the need for clarification of their doubts, trouble comprehending practical courses, etc. This particular stage of online instruction and learning can be seen as a transition from classroom instruction and online instruction. There are tremendous growth potentials to online teaching and learning. As more and more online teaching learning platforms are making their platforms more attractive and quite similar to classroom teaching and learning, we can definitely conclude that the scope of growth of online teaching and learning is very vast.

Presently though the students have opined in favour of classroom teaching and learning only. More improvements in online teaching and learning will make online teaching and learning more useful and beneficial specifically in higher education. These online teaching and learning can be more effectively cater the rural population and to the people at remote places. This can be used for many more purposes that traditional school and college education.

Developments in internet and related technologies facilitated the online education,

specifically distance learning. Not only personal computer, laptop, but also the handy mobile phone can be used for online teaching & learning. The most important feature is any time and everywhere the facility can be used.

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