

Students' Perception towards Digitization of Education after Covid-19: A Survey

Sonia¹, Dr. Raju Kumar²

¹Research Scholar, University Institute of Computing, Chandigarh University, Mohali, Punjab, India,

¹Assistant Professor, Smt. A.A.A Govt. P.G. College, Kalka, Haryana, India.

²Associate Professor, University Institute of Computing, Chandigarh University, Mohali, Punjab, India.

E-mail: sonia.jassal6@gmail.com

ABSTRACT

Human beings risk an outbreak on 30 January 2020, Covid-19 proclaimed the WHO a health emergency. Covid-19 is expanding quite quickly across the world not just in human lives, but even in numerous economic sectors such as automobiles, travel, GDP, economy, finance and also schooling. The Covid-19 has pushed a kind of break button. The goal of this study paper is to determine the effect on Indian education systems of the COVID-19 pandemic. This research seeks to examine the experience of the students on online instruction, e-testing and e-assessment of exams. In order to perceive how many students, please themselves with on-line learning when locked down in Germany because of Covid-19 and what their opinion for acceptance of on-line colleges, computerized tests and E-exams in the future is, the survey is performed on university students. A Google form is created for the survey and 324 survey answers were obtained.

Keywords: *Cloud, Big data, Security, Privacy, COVID - 19*

1. Introduction

By 2020, the human race was met in virtually every nation of the planet with an outbreak Covid-19, which spread exponentially. All industries, whether wellness, banking, tourism and even education [1], have been impacted by this worldwide pandemic. During this time, all schools and colleges were closed and students learned online. Though the pandemic impacted student education, a number of Indian students

have had an ability to experience online education. Technology has blended with our everyday lives since the last few years and has made life simpler and quicker. Every field of India was governed by creativity. In order to compete with the environment, the educational sector must also adopt the latest developments. A survey of students from various universities and colleges like Government Colleges of Haryana,

DAV College MCM and Chandigarh, Chandigarh University, Punjab, and Chitkara University and Himachal Pradesh is being carried out to understand the student's opinion about the shift from education to online study. 324 students shared their opinions in this poll. Key topics about which views have been sought include online courses, online assessments and tests and e-evaluating.

2. Literature Review

Online learning is a replacement for conventional lessons in the classroom, in which students may research what they want to learn from and from everywhere, with the convenience of teachers and students, at any time[2]. Many institutions are now adopting the studying and teaching management framework (LMS). The integration of the gaming method into LMS will help students understand further by means of LMS[3]. The perfect pupil-teaching ratio in a typical 30:1 or 40:1 classroom. Online classes, though, are open for up to 100-150 students. Students and teachers will share knowledge 24 hours a day through e-learning. Many universities and colleges deliver online distance learning courses and recruit full students. Students who do not have the choice of attending standard courses will join in the courses and attend online from all over the world[4]. Online schooling has increasingly evolved during the 19th and 21st centuries. It is becoming highly common because of its versatility and

affordability to those who are unable to select daily lessons. In online schooling, the pupil and the teacher play an important part. The position of an instructor cannot be substituted for technology. Teachers have answers to student questions in online schooling, plan, design and review their lectures[5]. In its career growth, health care practitioners often profit from online learning[6]. Agriculture and natural science students profit from online teaching in the United States. There will be some advantages and challenges of online teaching such as job and home balance, cyber scam problems, advantages for working professionals including online classes etc. [7]. [7]. The subject is undertaking at the end of the semester to assess what he has achieved over the whole semestre. During the semi-teaching phase, too, student success will periodically be measured across activities and assessments. Students' online evaluation involves the online evaluation and evaluation of projects and assessments and machine tests. The online evaluation is paperless, as questions on a screen are answered and students must address their questions on a computer. It's an automated mechanism absolutely. The opportunity to utilise a range of appraisal methods to help and measure the learning of students in hi-technology and the 21st century is an age in which technology and the modern environment are digitalizing nearly everything[8%], when various digital means and knowledge can be available everywhere at any

moment. Using artificial intelligence in e-review, examiners will get prompt reactions after checking and evaluation of source data for examination can be achieved later. The semantic web data model, which uses hierarchical and connected representation[9], makes this possible. This becomes possible. There are a range of practical modules that form part of an e-examination system: one for enrollment, examination, user profile management, students exercising, test management, question papers and report reading. The second module is used by the student to log in, review the findings and display them. The third module is the control module for the management of the other two modules, customers, evaluation, questionnaires and the report[10]. Different considerations such as time, form of problem, degree of complexity and others are regarded to render a test paper electronically. The complexity aspect is a subjective factor because it is really challenging to determine what is tough and what is not since it is dependent on the teachers' different judgement. It could be challenging for one teacher exam and simple for the other. Thus, classification of questions is a boring activity. For query recognition based on complexity level of queries, machine learning methods can be used[11]. Any variables often influence student learning in an e-learning environment. Machine learning can be used in an e-learning environment to forecast student

success [12] [12] [13] The study [13].

3. Methods of Data Collection:

The survey is carried out for students in higher education. The survey uses the form of online data collection. A google type is built and forwarded to university and college students who give bachelor's courses and Masters courses. More than 300 students registered 51.9% of the students are women and 48.1% are males..

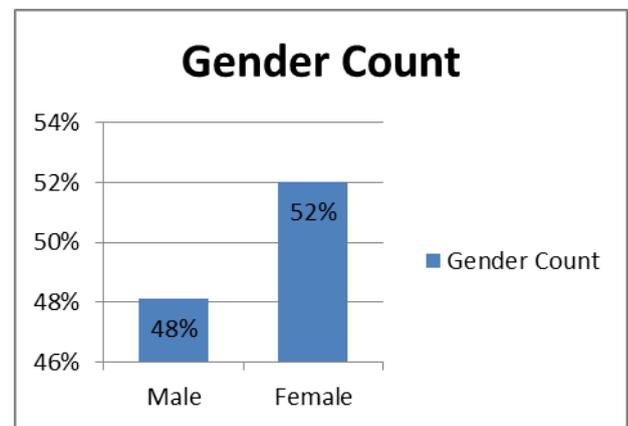


Fig I: Number of male and female students

The major issues for which data is collected related to:

- a) Students perception for online classes
- b) Students perception for online examination
- c) Students perception for online internal assessment and final exam evaluation

4. Results

4.1 Students perception for online classes

Online classes have a benefit of convenience and flexibility of anytime and anywhere. During Covid-19 pandemic when all schools and colleges are closed, online teaching becomes a great medium to educate students. Indian students have

more interest in classroom teaching because they are used to it. Table I shows the percentage of students interested in online teaching and classroom teaching. However the preference of students is classroom teaching still a considerable percentage of students showed their interest to shift to online classes.

Table I: Online Teaching and Classroom Teaching

Gender	Preference Online teaching	Preference Classroom teaching
Male	12.20%	87.80%
Female	14.30%	85.70%

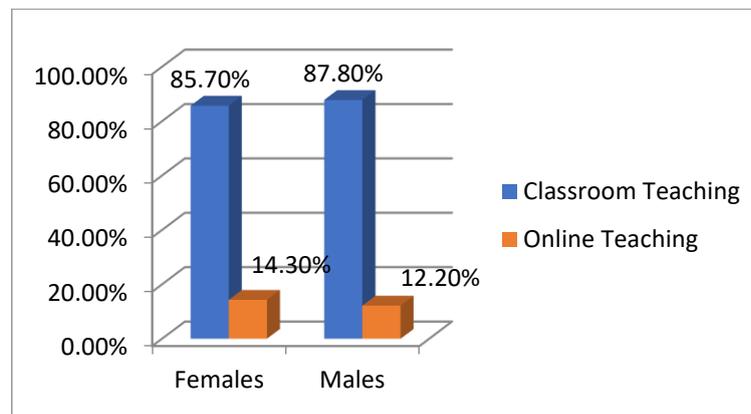


Fig II: Classroom Teaching Vs Online Teaching

The Covid-19 pandemic was accompanied by over 90% of students online schools. For those that were satisfactory with online courses, 72% were pleased and 28% were not satisfied. 86% of

students believe that by classroom instruction they can better grasp the concepts, and they can communicate with teachers more easily throughout class. You prefer to communicate with

face to face. While students are still involved in school teaching, they would prefer to attend a certain section of their curriculum in online learning following a pandemic. 41 percent of students say yes to any aspect of their online curriculum that could be of great significance if India progresses into online education. It is noted that women are more drawn to online classes than men when it comes to the desire for online classes. Women can feel more comfortable at home because of this.

4.2 Students perception for computer - based examination

Because of recent technical advances, the education field is heading towards online teaching and if the teaching is carried out online, it can also take an online assessment mode to assess student results. State-of-the-art technology is required for online examinations. Well designed high-speed internet enabled computer laboratories are important. Computer specifications include well-executed software comprising modules one for query description, time for the test, difficulty-based rating of queries, a further student login and examination module. This are the essential criteria for a computer-based analysis. When questioned, students would like to do their examinations online by machine 38% of students would like to take tests electronically and 62% do prefer to take them on paper..

Table III: Opinions for Computer - based Examination system

Mode of exam	Male	Female
Paper Based Exam	54%	69%
Computer - based Exam	46%	31%

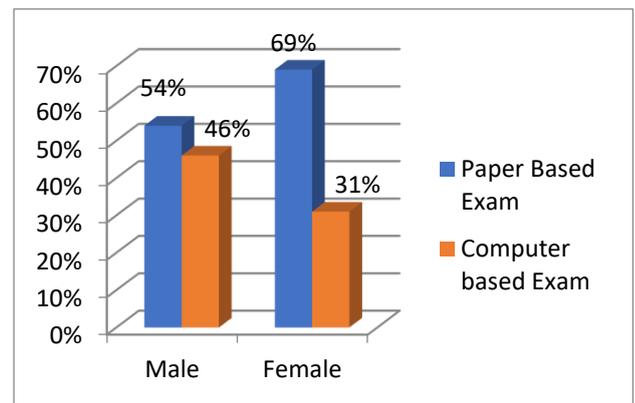


Fig III: Paper based examination vs. Computer - based examination

The Fig. I and Fig. II shows that although students want to study in class with a face to face interaction, they are showing interest in conducting exams online. With respect to computer-based test/exam it is observed that males are more inclined towards computer-based test/exam than females. Although online teaching is less preferred by male students in comparison to female students, higher percentage of male students prefer Computer - based examination.

4.3 Students' Perception For E-Assessment Of Exams

E-assessment or appraisal is conducted by machine to either apply the marks to the final outcome or evaluate learning of the pupil throughout the course. The tendency in higher training is to take jobs and examinations in the centre of the six-month cycle and at the end of the six-month period. 54 percent of students expressed an interest in the online appraisal method and felt that this would improve fairness in scores when questioned whether exams or evaluations were carried out online..

Table III: Opinions for E-Assessment

E-Assessment	Agree	Disagree
Male	54%	46%
Female	55%	45%

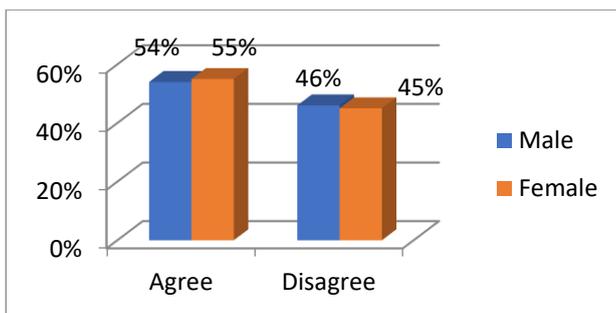


Fig IV: Opinions for e-Assessment

The greater proportion of men and women is in support of automated evaluation. The main explanation for that may be because the markers for the conventional appraisal method vary nearly evenly.

5. Discussion

The survey reported that 28% of students are not pleased with online schooling. The explanation for the unhappiness is weak internet access in some places, which often allow voice to not be noticed and video to be disconnected. Practical online success is hard for students. In developing countries, computerised virtual labs will address the issue of performing realistic lessons[14]. Some students have no cell phone or notebook, although others have safety worries. Students are concerned about how stable or not the network they use for online courses. During the lesson, anyone does not hack their details. The creation of a safe Indian app will tackle this issue. Although a smaller proportion of students have demonstrated their interest for online teaching due to factors like lack of Internet connections or the lack of medium for attending courses, a strong proportion of students have demonstrated their interest for machine analysis and e-evaluation.

6. Conclusion:

21st Century innovations improve the educational field and it is an hour for the Indian Education System to adopt these technologies. Online courses offer advantages of class comfort and versatility. This needs sufficient high-speed Broadband in both the urban and rural areas of the world. Any student must have basic programming skills. The accountability of the educational

method would be provided by a machine based test and e-evaluation. Computer-based test for entry, preparation, Olympiad and recruiting, etc is already undertaken. It may also be seen in separate institutes/universities for analytical examinations. The survey revealed that students are more interested in classroom learning rather than online training, but also in computer-assisted evaluation. Much is now being achieved in this region where 90 per cent of students with their online courses after the pandemic but still a lot of work is needed for the technology to be updated to ensure computer-based assessments can be carried out in virtually every college in the world. The test may also be performed electrically by means of semi-automatic or completely automated assessment tools while computer-based assessments are conducted, which saves time and greatly decreases paper usage in exchange. The algorithms for these days are used to improve education in order to forecast the success of students prior to tests, to measure the drop-out rate of students, etc. For rendering education framework online, artificial intelligence may be used. Resources for computer usage can be built - dependent assessments comparable to paper exams and the same can be tested using computers..

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