Impact of online learning on boys and girls aged 16 to 22 during Covid-19 pandemic

Bhagyashree Kulkarni[1], Khushi Jadhav[2], Kalyani Sanap[3]

[1,2,3]*Department of Forensic Psychology, Institute of Forensic Science, Mumbai-32*

Abstract-The current research paper discusses the various impacts of online education on the students. Many schools and colleges were at an offline halt during the pandemic. As a result, many students opted online education. For data collection, 346 participants completed an online research form. The findings indicate that the following factors are significant for satisfaction with online courses: quality and efficient interaction, technological services available, organized online study modules, and improvements to facilitate the conduct of practical training. Students from rural locations are more likely to experience problems when learning on digital platforms because they lack the appropriate equipment and an adequate broadband connection. An analysis on the collected data to determine the benefits of E-Learning tools and their impact on the social, physical, and mental development of individuals. The outcome of this research shall be useful to academicians, researchers, and policymakers working on similar projects.

Keywords: **Online learning, pandemic, network connectivity, students**

INTRODUCTION

The worldwide pandemic had a significant influence on all economic sectors. Professionals found it rather simple to adjust to work from home as the new normal and to continue doing their jobs. However, the global education system imposed a number of challenges that mostly depended on traditional classroom instruction. Online learning has always been a harbinger of the democratization of education, which is not just a technique but an intrinsic instrument as it removes all barriers to learning and empowers the helpless: those who, for the most tragic of reasons, have been refused access to traditional education. It is no exaggeration to say that online learning has been only the ray of hope in dark days of the COVID-19 epidemic. It has risen, as the rescuer in a world petrified by SARS-CoV-2 virus, so powerful, invisible and unknowingly deadly that it held man and country in a lockdown. The world might have just come to a halt, but the doors to teaching and learning have not been closed solely due to online learning.

According to a blog from Kajabi online learning is defined as "Online learning is an educational medium that allows students to participate in courses via the internet."

ADVANTAGES OF THE ONLINE LEARNING

Online education provides one free hand to learn anything one desire. One might expand their network by connecting with people all around globe. Online classes help to improve communication skills. Online learning environment lets one study at their own pace. Consider designing and teaching your own class to broaden your career options. Online learning provides one opportunity to learn from experts; hearing about their thoughts, strategies, successes, and mistakes. One can opt for listening to an audio recording while doing domestic tasks, travelling, or waiting in line. In an online setting one can learn in a safe atmosphere that encourages learning instead of competition and pressure. One can facilitate their brain by undertaking quizzes, watching informative programs, reading blogs, listening to educational Podcasts, etc. As one works through online courses, learning to hold themselves responsible leads to building discipline. Not all online courses focus on advanced academics. In actuality, a lot of them center around personal interests and hobbies. Learning virtual etiquette can assist one to their expert life, as well.

The curricula and personnel at colleges and universities must be reduced in order to accommodate the expectant demand. Offline schools can't offer a class just because an individual has interest wants to learn the subject. Online learning gives one chance to learn in whatever setting is most productive, with

greater ability to concentrate and comfortable for them. Even though online classes allow one to schedule learning at one's own convenience, one must consider them seriously and give full attention. One could complete most courses much faster than regular semester time. Because teachers and professors do not have to pay for classroom space, student supplies, or other overhead costs involved with teaching in a physical classroom, online courses are far less expensive.

DISADVANTAGES OF ONLINE LEARNING

In a traditional classroom setting, professors provide immediate, in-person feedback to students. This made the learning processes simpler, broader, and more meaningful, strengthening the motivation level of the learners. Online learning can cause social isolation, excessive stress, nervousness, anxiety and depressive thoughts. For students who struggle with time management and strong self-motivation, online learning can be challenging. Compare to physical education programs, students are continually pushed forward by other activities like peer interactions and rigid schedules. The absence of face-to-face interaction between classmates, students, and professors in an online environment may prevent certain students from performing effectively within a group activity.

Some of the challenges in online learning are that students may still cheat in a number of ways. Detection of cheating during online exams is more difficult than during traditional methodologies since students cannot be precisely examined throughout tests without a video stream. There is no trustworthy technique of monitoring. The problem is that the majority of e-learning education providers place a greater emphasis on theoretical learning than on the development of practical skills. While persistent prodding from professors may not be desirable for many, it is an effective way for tightening the reins on students. Online education is bounded to certain discipline. For the time being, areas like social sciences and the humanities are better suited to online learning than scientific disciplines like engineering and medicine, which need for a certain level of hands-on experience. Online learning is unreachable to the computer illiterate population. As similar, poor-quality assurance and a lack of accredited online learning

providers keep up to weaken the legality of online education. Online learning and pandemic developed bad habits in students. Screen-time as increased; playing online games, using social media and OTT platform to pass time; staying awake late at night. As physical activities are restricted, lousiness begins to build up those results in development of mental and physical health issues. Many parents worry and frequently complain that their children don't spend enough time talking to them. Even though living under one roof, distance between them has started increasing.

RURAL AREA ONLINE LEARNING

Many rural areas in India are still grappling with challenges to make education completely digital or online. There is still potential for development even if the country's rural areas' electricity and network systems have advanced significantly. For the rural population, consistent electricity supply and a lack of speedy internet remain important issues. In rural India, not many people have access to their own laptops or computers, and phone displays are not ideal for prolonged study sessions. Additionally, data packs and their expenses can be a major barrier for both faculty and students, notably during live classes. As a result, learning is still constrained by the insufficient number of technical gadgets available.

Rural area population's familiarity with digital technology is relatively weak. While smart classrooms and digital learning have already made a way in urban educational setups, some rural areas still rely on traditional teaching methods for their lessons. As a matter of fact, the transition from traditional to digital educational methods cannot happen overnight. To get comfortable utilizing digital technology for teaching and learning, both teachers and students need sufficient training and more user-friendly platforms. Another obstacle to making learning totally digitized in such places is the lack of teachers or the low teacher-to-student ratio in villages. A large number of skilled and well-trained teachers are required so that each and every student receives complete attention even during an online class. While the coexisting online classroom solutions are aimed to facilitate involvement and intuitiveness among pupils towards literacy, an educator's guidance and attention remain vital for learners.

URBAN AREA ONLINE LEARNING

When the Covid-19 pandemic first hit metropolitan areas, thousands of people lost their means of subsistence, they also had to cope up with the trauma and expenditure of a loved one who had contracted virus. Media reported that hospital bills were skyrocketing. City dwellers particularly the poor informal sector worker have taken the maximum brunt of epidemic. Urban unemployment, which was already high, worsened. According to Periodic Labor Force Survey (PLFS) report released by National Statistics Office (NSO), Unemployment rate in urban areas rose to 20.9% during the April-June quarter of 2020; which was 8.9% in the same quarter the previous year. At least in rural areas, people have some assets like land and livestock to fall back during a crisis, but urban workers had nothing of that kind.

Combined with insufficient income support, this increases unemployment and has contributed to especially towering rates of food shortage and mental distress among families suffering job loss. Mothers are more likely to face unemployment than fathers, impart due to gender imbalance in domestic care responsibilities. According to a recent report released on May 5, 2021 at Azim Premji University in India by the Center for Sustainable Employment, State of Working India 2021, only 7% of men suffered job losses during the first lockdown in 2020, compared to 47% of women who ended up losing their jobs and did not get back to work even by the end of the year. Compared to men, women spend more time and efforts on domestic chores and 4.5 hours of a day caring and serving children, elders and the sick. During the pandemic, their share of unpaid affectionate work raised by almost 30 per cent.

Urban area students adopted online learning very quickly and got engaged in learning new technicality. Even in household with broadband access, the internet was unreliable and slow. Continuous buffering in connectivity led to frustration and impatience in students. There was disconnection between teachers and students with cameras turned off. Education day by day is becoming costly fair with increased expenses on internet packages and gadgets.

Work from home is the by-product of new normal. As both parents were working and going through their own struggle, they couldn't focus as much on their children. Therefore, students were unable to communicate, discuss and play with family. They made plenty of acquaintances on social media and assumed they were everything to them. It was observed widely that students would log into the class and then get distracted with other activities.

Many praised the increased family time. To help ensure healthier children during pandemic, parents followed regular mealtimes, involving children in meal preparation, encouraging them for physical workout. Parents motivated students to opt for their hobbies and improving them with help of online platform.

OVER COVERAGE LEARNING

Due to digital divide, remote people and tribal communities are socially and geographically isolated from the outside world. Lack of mobile and internet connectivity is only further worsening the economic and social inequality, which have long been battling even for basic infrastructure such as roads and health facilities. Generally remote areas are prone to natural calamities like landslides, flood, thunderstorm, cyclone, etc. Surrounding that helps in connectivity like transformers and cables get collapsed. Additionally, it also causes travelling problem. Parents are inadequately educated and lack the intuition to enable their children to learn well. Students chip into the family account by participating in artistic activities, taking up available job opportunity, running small stalls, and selling merchandise. Language is one of the barriers to communicating with these people. They're also not technologically smart, making it difficult to reach the other side of the globe. Covid- 19 pandemic and followed lockdown also stressed this digital peak in accessing Covid- 19 testing, treatment and vaccination, apart from its impact on online education.

METHODOLOGY

The hypothesis of research was "To study the impact of online learning on boys and girls in the age group 16-22 years during Covid-19 pandemic regarding reboot, effect of pandemic and adaptation of online learning".

Aim:
To study impact of online learning on boys and girls in the age group 16-22 years during Covid-19 pandemic

regarding reboot, effect of pandemic and adaptation of online learning.

Materials:
A self-developed inventory by the researchers titled Online Learning Impact on Students Inventory.

Method:
This research is carried out using the self-developed inventory by research authors titled Online Learning Impact on Students Inventory. This inventory comprises 50 statements. It is administered as a group test online via google forms. The statements of the inventory were collected by reviewing various situations observed during online education in pandemic. Every statement has five options 'Strongly Agree', 'Agree', 'Neutral', 'Disagree', and 'Strongly Disagree'. There was no right or wrong answer as well as there was no time limit to complete the test. However, subjects had to respond whichever thought comes to their mind first. The test is an attempt to understand the impact on the students of online learning.

Participants:
The Online Learning Impact on Students Inventory was administered on total of 346 individuals belonging to the age group of 16-22 from the various parts of country. Out of 346 individuals, 173 were boys and 173 were girls. These participants attempted the inventory from their homes, using the google form.

Ethics Statement:
Utmost confidentiality of personal details and scores are maintained by the researchers.

Scoring:
The Scoring of the test was carried using the Pearson correlation scale. There were 50 questions with 5 options.
The measure of correlation is represented by "r" and it has a range of -1.00 to 1.00. An r of 0.20 or -0.20 indicates a weak correlation between the variables. When the measure of correlation is 0.00 there's no correlation.

Using the Pearson formula, PEARSON (data_y, data_x), the Pearson product- moment correlation measure obtained for the raw scores was 0.98. The value of 0.98 shows there's a strong positive correlation between the two variables, which supports the thesis.

RESULT

Positive correlation has been found between impact of online learning on boys and girls. Tests were conducted on 173 males and 173 females. The Pearson product moment correlation obtained was 0.98. This indicates that there is a positive correlation between two variables, supporting the hypothesis.

DISCUSSION

The aim of the pilot research was to find a significant correlational impact on online learning in boys and girls. The research was carried out on a sample age group of 16-22. Out of the 346 responses received, 173 were boys and 173 were girls. Of the 346 respondents, 165 lived in rural areas, while 181 lived in urban areas. Majority number of student, 26.3%, aged 20 participated in the survey. Other age parameter like 16, 17, 18, 19, 21 and 22 included 3.2%, 7.8%, 8.1%, 22.8%, 19.7% and 12.1% of respondents respectively. Students from various educational field showed interest in the survey.
For the purpose of research, authors came up with their own self developed inventory using google forms. Completing the inventory was taken as consent to participate.
The Online learning Impact on Students Inventory consisted of 50 statements with five options. The scoring of this survey was derived from the Pearson scale since it is pilot research and it helps in the easy calculations of the responses received. The Pearson's correlation method helped the researchers in proving the hypothesis expecting to find a linear relationship between the two variables. A positive correlation of 0.98 was obtained between the two variables in the Pearson scale which strongly supports the hypothesis, hence there has been drastic impact of online learning on boys and girls during pandemic period.
Though online and distance courses have been around for a good number of years, the adoption of the online way of taking classes in comparison to the traditional face to face classroom approach in schools and colleges have been considered widely only during pandemic in India. The survey helped us to know various happening in period the pandemic like online

learning, connectivity challenges, mental and physical health of subject, family time, etc.

When asked about concentration, girls (38.1%) relatively focused more than boys (33.5%) during an online class. Learning aids have been most effective in assisting online learning. Both boys (41.6%) and girls (40.4%) nearly unanimously agreed that travel and stationery expenditures had been reduced. In a way to keep online session lively peer interaction is important, yet, 34.6% of boys reacted neutrally and 39.8% of girls disputed that they actively participated in online class. 54.9% of girls and 35.2% of boys believed that they had learned how to deal with difficult learning circumstances. Taking advantage of online learning, a significant proportion of students stated that they managed to take online lectures while roaming. However, 41.0% of girls and 32.9% of boys disagreed that online classes would be desirable than classroom learning. Students happen to disagree that online learning assisted in developing discipline in oneself.

When enquired regarding preference, 52.0% boys strongly agreed and 47.3% girls agreed that they found face-to-face classroom learning better. Societal pressure in offline meeting compels one to work effectively. Online learning enables learners gain theoretical knowledge more significantly. One has little practical comprehension of the subjects one is learning. Different art forms and activities would be appropriately learnt through personal encounters, as stated by 35.8% of females and 32.9% of boys. Dissatisfying professors might be avoided with online learning.

Screen time rose significantly as more devices were available and more content became available on the internet; 54.9% of girls agreed and 42.1% of boys strongly agreed. Screen time interferes with one's sleep routine. Because the lockdown kept people at home, there was less possibility for in-person interactions. 52.6% of girls and 34.6% of boys strongly agreed that it was hard to make new friends and lacked social relationships. Students have been more invested with their social media pals than with other friends and family. There came a period when students showed up in lectures only for the purpose of being there. While lessons were taking place, I would frequently go to social networking platforms. Gadgets, particularly mobile phones, were super active, generating significant disruption with notifications, comments,

pop-up messages, and other features that irritated persons, as acknowledged by 32.3% of females and 40.4% of boys. It became difficult to concentrate without checking one's phone.

The pandemic was unpredictable, forcing everyone to swiftly adapt to a new normal. When surveyed, 46.2% of girls and 43.3% of boys believed that everyone, including instructors, was working hard to make things work in online mode. During the outbreak, teachers efficiently fixed the technical glitches. However, it was also observed that during an online session, it's not like every student received attention from the instructor. Even during examinations, the in-charge provided the best possible supervision, as indicated by 36.4% of girls and 38.7% of boys. Nonetheless, many agreed to cheat in an examination conducted online.

The pandemic also drew family members together; 28.9% of girls and 39.3% of boys said they appreciated spending time with their families. Parents encouraged their children to rise from mattress and stay fit. 42.1% of boys and 46.2% of girls stated their parents expressed concern about their eating habits. They were also concerned about their children's education, as reported by 36.4% of girls and 34.6% of boys. During the epidemic, parents did not chastise their children for using their cellphones unreasonably.

Students were especially prone to developing undesirable habits during the period of pandemic. 28.9% of both girls and boys acknowledged that dozing and postponement wasted their time. Students grew sluggish throughout the epidemic. There were students, 43.3% of whom were girls and 39.3% of whom were boys, who admitted that they had certain mental health concerns during the crisis. Majority of students responded neutral when polled about their immune power during a pandemic.

Poor network connectivity has been one of the biggest barriers to the seamless flow of online education. Back then, remote places struggled. Poor network access became an excuse to avoid doing the required task. The majority of girls (45.0%) and boys (28.9%) report being unable to connect via the online platform and missing courses. Prolonged lagging in a virtual classroom causes frustration. Gadgets were weakly productive. Understanding how to use high technology for the first time is difficult for novices, according to 43.4% of females and 39.3% of boys. Nevertheless, there have been responses from girls (33.5%) and boy

(31.2%) which said that despite of the difficulties they kept learning new things.

The research conducted and the calculated correlation for the hypothesis was strongly positive provides us the insight that online learning during Covid-19 pandemic has influenced various factors like connectivity, habits developed, adapting to new ideas, pros and cons of virtual platforms and many more.

CONCLUSION

The researchers tapped numerous aspects of online education after administering an Online Learning Impact on Students Inventory to boys and girls aged 16 to 22. Even though the sample size is a bit small considering a pilot research to adhere to the broader online education community, the data may shed light on the common challenges that learners confront while taking courses online. Education is essential for students since it is no nearly impossible to live a fulfilling life without it. For instance, while e - learning is not a sustainable mode of education, it may be a highly supportive tool. If it is not an option, it can be an addition. The internet is platform rich in features and information that it might be the finest source of knowledge. So, students should have optimum access to all of these available resources for better utility. Although some potential outcomes have been observed in thriving E-Learning in remote regions due to a lack of knowledge and understanding, unwillingness, low literacy rates, and a shortage of adequate infrastructure, the researchers are certain that the technology is an aid to poor gentry to bridge the gap among both educated advanced cities and rural undeveloped areas in the near future. The comfort level of teachers and students with online educational design, formation, extent of interaction in both learner and instructor, the quality and quantity of course content, technical support, and overall impression of online class delivery all have an impact on the overall education platform and defines the ultimate outcome of online education. Improvements in the quality of virtual classrooms with the assistance of various service providers, videotelephony software, web conferencing, videoconferencing, and contact centers, as well as the assistance of efficient gadgets, can help make online education more effective and widely accepted throughout the country.

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