



## “Effects of Online Education during Covid-19 on Current Learning System: A Case Study”

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### Abstract:

*Pandemic condition like Covid-19 influenced and damaged various sectors throughout the world. Education was one of them also influenced mostly during Covid-19 pandemic. Millions of students and active teachers/professors, who previously apply regular offline teaching methods in their institutions, and because of the Covid-19 pandemic both students and teachers locked at their home. To overcome on this and to continue the educational process, the online mode of teaching was used in most of the countries of the world, even in India also. In this modern mode, both teaching and learning done through various electronic devices. These are relatively new to the entire teaching-learning community. The basic aim of this study is to understand and analyse that how newly online mode of education emerged had really fared to the teachers and students in India too. It tried to understand the various users' experience and the unique set of challenges that this mode of education brings to us. For this questionnaire was created for college students. The questions useful to collect ideal information about various aspects of online teaching mode like, setting up online education at home, knowledge transfer, comfort, evaluation, and future aspects. This will definitely be a key indicator and usefulness of online mode of education. The questionnaire was created electronically as google forms, then after it circulated in between the college students through electronic device. The responses were received from the college students of various educational institutions across the Kopergaon city. The data was analysed and the results were discussed in two ways, firstly, the perspectives of the learning groups and secondly, online mode versus regular teaching method. Even though online training/distance education is practiced for a longer period of time, the research on the discussed aspects may be limited. This current study is ideal which reflects the merits and demerits of the new- normal online education mode from home in the compiled voice of learners Kopergaon city. This ideal and unique study pin points the compliments of various participant's and grievances of online educational mode which ultimately compared with regular teaching method. This further enlightens how to improve the technologies to make them use more efficiently for the learners. Even that this current study gives a proper framework to modify or create new educational policies, laws, and schemes to obtain equal access to resources for all as well.*

**Key Words-** E-Learning, Online Class, Covid-19, Pandemic, distance education, online education, teaching and learning, knowledge transfer, online educational mode, offline teaching mode, etc.

### Introduction

The bizarre suspect called SARS-CoV-2 had caused a serious venture of time from its origin to the current conditions all over the globe. The COVID-19 ultimately pushes our day- to-day life and led to a new fashion of life within the custody to cease the spread of this type of virus as it is seriously contagious. According to UNESCO, by the end of April 2020, nearly 186 countries have implemented nationwide lockdown, influencing about 73.3 % of the total enrolled learners (Education: From disruption to recovery, 2020). As a result of it the complete lockdown led the educational institutions to use online teaching methods in immediate action. This action ensured continuity of learning in students worldwide. In this severe contagious situation traditional face-to-face learning was not possible.

In most of the developing countries like India, traditional learning methods were widely used before the emergency and pandemic like COVID-19. However, the closing of institutes and there is ever increasing pressure and burden to complete the prescribed syllabus in time frame with the

academic calendar forced the educational institutions to abandon their concerns and compelled them to adopt emergency remote education. The Indian central government on March 16, 2020, announced the lockdown of all the educational institutions including schools, colleges, and universities due to the number of positive cases of coronavirus in India has increased to 114, to overcome on this situation and control the spread of coronavirus infection. The center government has also sent a letter to all Chief Secretaries to promote online education to minimize the loss due to the closure of the educational institutions and engage students to ensure continuity in education. Therefore, after two to three weeks, most of the institutions have started taking online classes, and upto May 30, almost all institutions used online teaching tool (Mishra et al., 2020; MHRD, 2020). It was for the first time in Urban and Rural India, online classes have been conducted at such large scale. Previously the online classes led various difficulties for both teaching and learning communities, even though the internet is a major technological advancement which reshaping our society and universities globally (Volery and Lord, 2000). The online learning system varies dominantly from the traditional classroom situation when it concern to learner's motivation, their satisfaction, and interaction, as stated in a study college students of Kopargaon city were asked about their opinions regarding online education which dominantly implemented during COVID-19 (Aditya and Jha, 2020). Having understood the importance of the above discussions, the main objective of this study is to assess the learner's view towards online education. This study analysed the survey responses which gathered from the participants of college students. It is expected that the result and findings of this study will definitely be useful in 1) improving the current scenario of preparation, comfort, knowledge transfer, and evaluation pattern 2) this also enlighten the teaching and learning community to approach and get the best out of the online education and 3) suggest valid pin points to govern authority and policy makers to update the current/recent rules, regulations or frame new rules in education applicable to all.

## **Methodology**

This study aimed to identify the influence and impact of online classes on students, thus has the following elements as shown in 1) preparation of survey questionnaires 2) data collection and 3) data interpretation.

### **Preparation of survey questionnaires**

Totally, 19 questions were prepared to circulate among the college students which could respond to them. This questionnaire focused on various aspects of online learning and for that the responses of students give the required information for this study. An initial set of various questions was created which seeking the respondents' opinions on various aspects related to online learning. After, our team decided to focus on another four major aspects. These included setting up of online classes, knowledge transfer, comfort in online classes, evaluation, and future aspects. Within the four chosen aspects, such questions were added which fit to assign aim. Most of the questions is of multiple choice type questions, so the respondents can choose the most appropriate option. In that some questions were simple yes/no type questions while others provide the respondents select from the multiple option. There is also the option to respondents' to give own opinions. A set of questions were also added in the beginning to assess preliminary information such as Name, email address, contact number, etc. There were 19 questions in the questionnaire for college professors, college students.

#### **2.2. Data collection and analysis**

After the preparation of questionnaire, the Google Forms link was circulated among the college students of Kopargaon city. This became possible through email, WhatsApp, Telegram, and other messaging and social media platforms. All the responses were downloaded in an excel sheet and visualized as charts wherever applicable.

**Data interpretation**

The responses were analysed the learners that include students of colleges. The results of all the questions were studied and various opinions and related problems raised by the respondents were collected, compiled, compared, and interpreted. This interpretation includes the underlining various cause of the obtained result, the effects it brings up, and the future predictions and recommendations as well.

**Results and discussion**

The various observations and discussions of the study start from students’ – the learners view regarding education system. The results of the study were then expressed in the form of a discussion which pin pointing the major aspects like 1) Method of Teaching and setting up for online classes at home 2) level of comfort 3) attentiveness and knowledge transfer, 4) evaluation methods in online classes and 5) future aspects.

**Learners of education– the college students’ view**

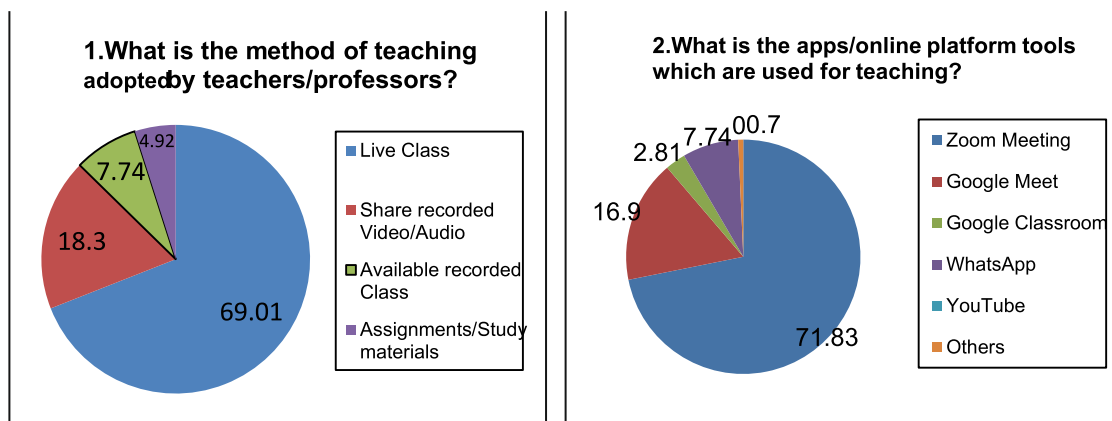
**1. Preliminary information**

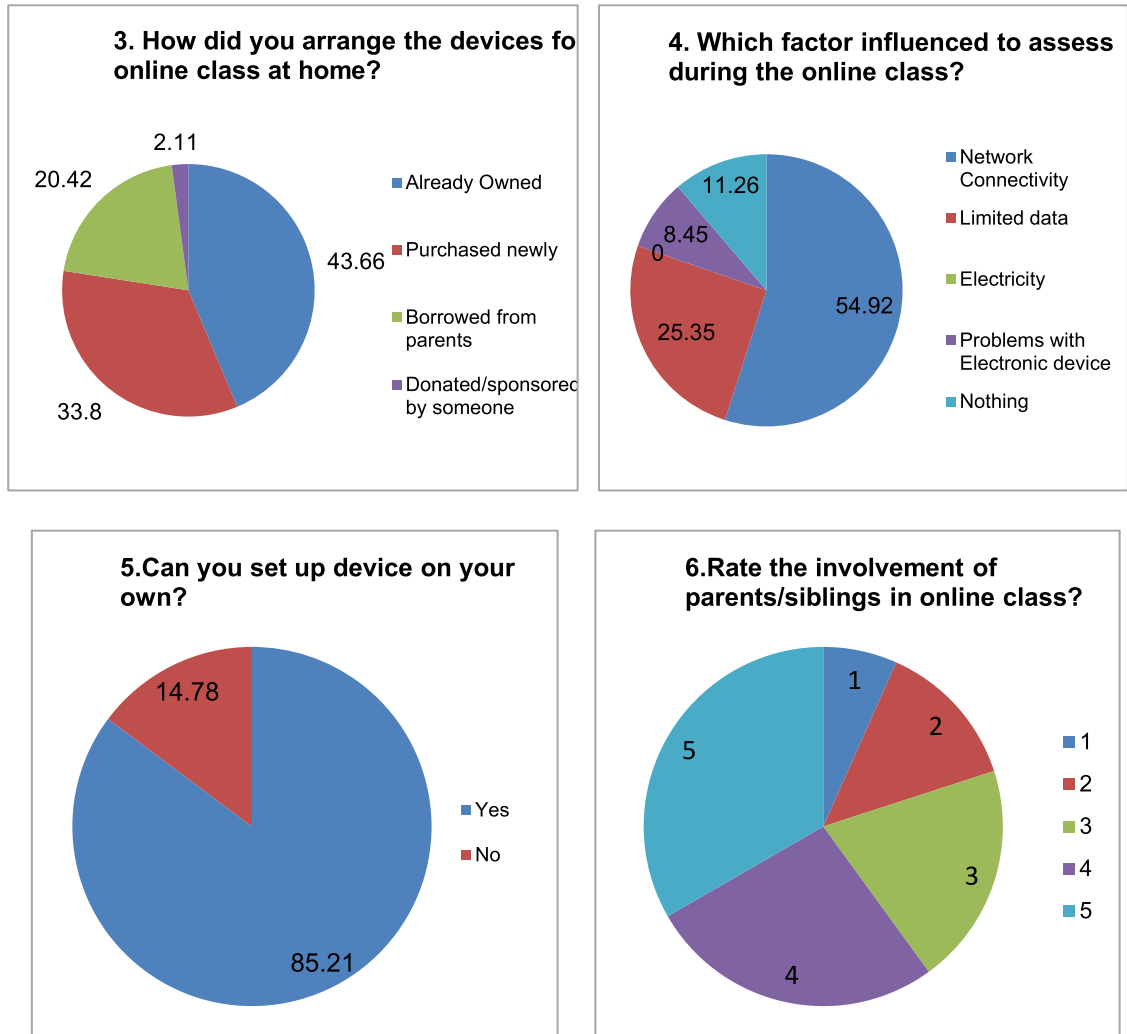
Institutions of higher education utilized alternative way of learning effectively during the pandemic situation shifted away from the traditional means. The questionnaire to evaluate the perspectives of college students was prepared and circulated among college students about online classes. This includes all students who have completed higher secondary education and are pursuing undergraduate, postgraduate degree. A total of 142 responses were received from students of various institutes in the Kopargaon City.

**2. Method of teaching and setting up online classes at home**

The questionnaire for students was circulated in between college students of Kopargaon city. College education includes graduate and post graduate level. It is seen that the college students had online classes. This fact shows that almost all educational institutions switched to online teaching methods at least temporarily during pandemic.

College students were offered a question with multiple choices about the various methods by which teachers/professors used during online teaching. These responses of the college students are shown in Fig. 1. The common methods of teaching included recorded video/Audio (18.3 %) or live online lectures (69.01 %) using television and various applications such as Google Meet, Zoom Meeting, WhatsApp, YouTube, Telegram.





**Fig. 1 Method of teaching and setting up online classes at home**

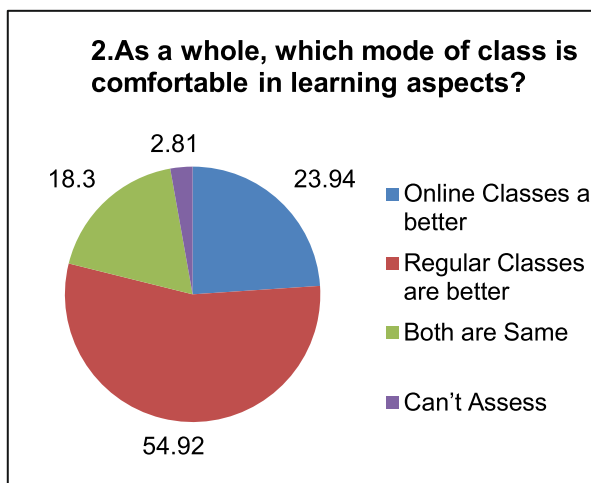
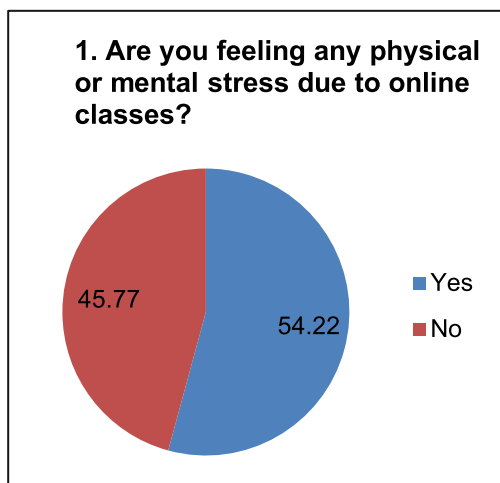
Zoom Meeting was the most preferred platform (71.83 %) as it is easy to handle and don't require any technical skills for operating. Another easy app Google Meet is preferred (16.9%) platform tool used during online classes. WhatsApp (7.74 %) was also used to supplement to the lectures transferring data and information to learners. A significant number of college students made use of either recorded classes or live classes conducted by their teachers. When students were asked how they could arranged the various required electronic devices for online classes, their responses show that a majority (46.66 %) of students had already the required devices (television, smartphone, laptop, etc.) at their home, nearly 33.8% purchased new devices which is additional economic burden during pandemic while 20.42 % borrowed from other people. Very limited (2.11 %) respondents had devices which donated by someone else. It is possible that in households where more than one student needed to attend online classes, there weren't enough devices to attend the online classes. As per the report (Education: From disruption to recovery, 2020) given from a global perspective, almost 826 million students remain out of classrooms who don't have any household computer and 706 million students haven't internet facility at their home. This is alienated economically disadvantaged students

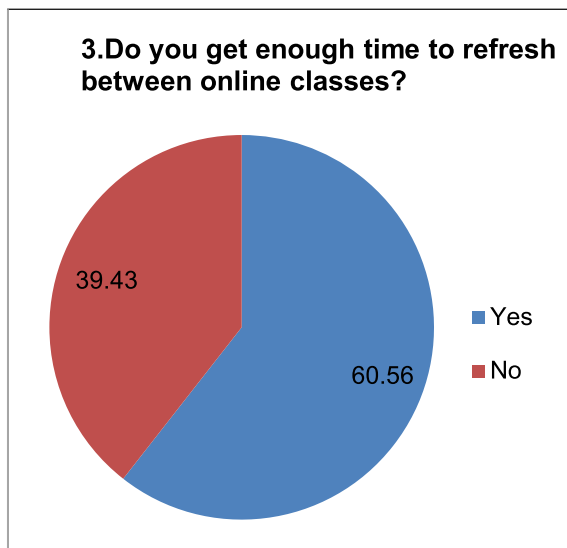
especially students live in rural areas who do not have any access to this type technology.

There might have been students who didn't have or used such devices until now. Regarding the management of electronic devices, 85.21 % could operate on themselves. In this regard, asked to them to rate the involvement of their parents/siblings during their online classes and studies on a 1–5 Likert scale, where 1 marked the less and 5 marked the more involvement. About 33 % and 27 % chose 5 and 4 respectively which suggests that more than half of students' parents were involved in their online mode of education. During Covid-19 pandemic students who attending classes from home seemed to increase their parents' participation in their children's online classes. Students were asked which factors influenced to assess online classes, where they could choose multiple problems. Network connectivity issues (54.92 %) mostly chose by the students. Students especially of rural areas may have been facing issues of bad network coverage. The reports say that students of Uttarakhand who trek for kilometers to get a proper signal to attend online classes (Roy, 2020). Optic fiber and broadband network connectivity are mostly found in and around urban areas very less percentage of availability in rural India. Near about 11.26% of the students who didn't have any difficulties. The graphical representation of the percentage of student's responses for these questions is shown in Fig. 1.

### 3. Level of comfort in online classes

The level of comfort was assessed on the basis of tightness of the class schedule; refreshment intervals, physical pains, and mental stress (see Fig. 2). In that 39.43 % of the students weren't getting enough time to refresh in between classes. Overall, the majority of students (60.56%) had a relaxed schedule with fewer amounts of class hours compared to regular classes, which gave them the advantage of being able to keep up with the courses taught even though the learning environment might not have been ideal. Moreover, 54.22 % respondents having some physical and mental discomforts which include severe headache, strain, and irritation in the eyes, lack of concentration, etc. More time in front of screens could be a cause of these physical stresses and 45.77% respondents having no problem at all. Majority (54.92 %) students were more comfortable in regular classes than online classes. However, there were a some students (23.94%) who responded online classes are better than the regular mode. 18.3 % students responded that both are same and 2.81 students can't assessed.



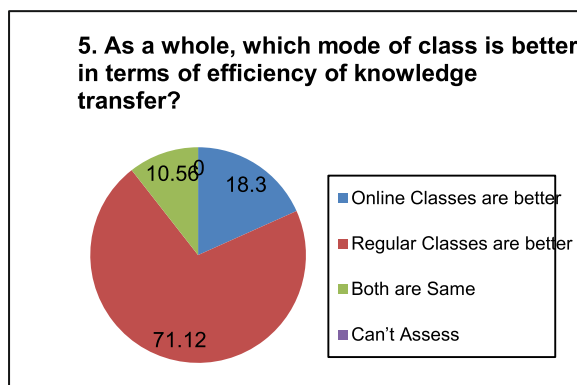
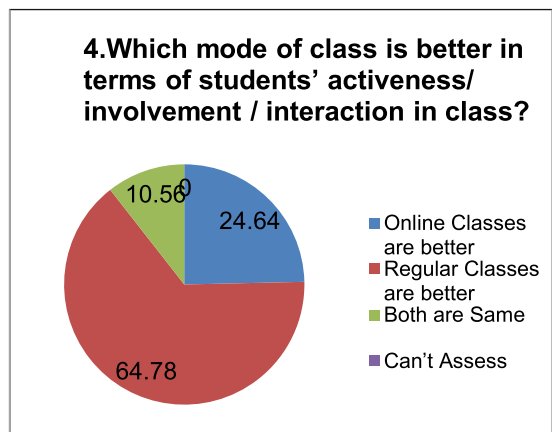
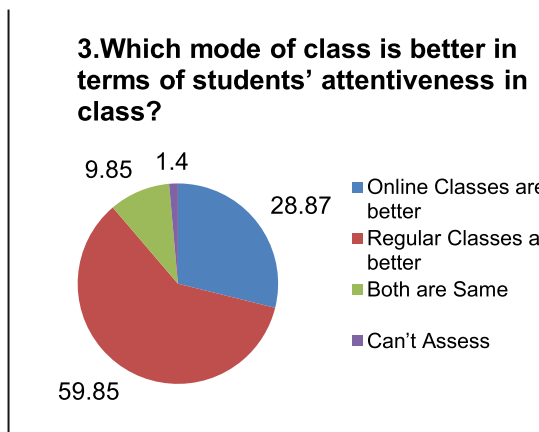
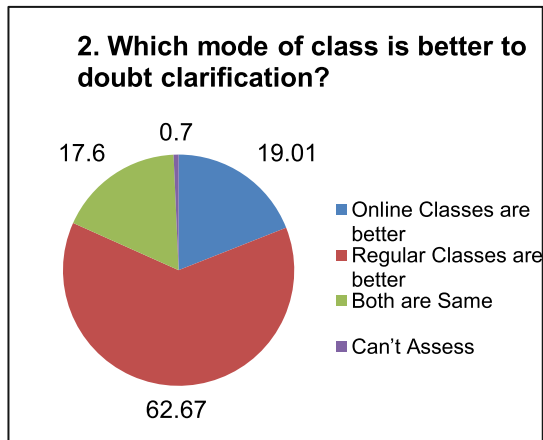
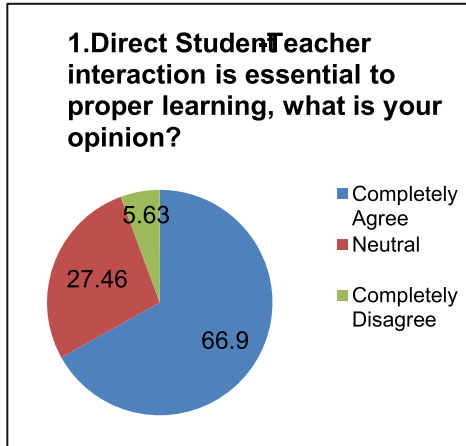


**Fig.2. Level of comfort in online classes.**

#### **4. Attentiveness and knowledge transfer**

Due to lack of direct interaction between students and teachers during pandemic, it became the biggest challenges that the online mode of education faces. “Students during online mode of education don’t get to see the professor or their classmates physically”. This is one of the prime concerns pin pointed when asked them about the negative experiences of online classes in our case study This is confirmed with the observations for a regarding question in this study, where 66.9 % of students responded that direct student-teacher interaction is essential for proper learning (Fig. 3). It has been shown that poor individual attention and the delay in response from teachers (due to electricity related issues, connectivity, limited data) might also play major role to negative experiences encountered by students during online classes (El Mansour and Mupinga, 2007). Another main concern about the online classes was addressed here in the study was the attentiveness of students. This question was focused to identify the level of participation and focus of students during an online lecture. Nearly (59.85 %) of the students responded to being more attentive in regular classes compared to online mode. This is in correlated with our previous observation where majority of the students reported as they were more comfortable (54.92 %) in regular classes. This study was mainly concern with pandemic. During the pandemic there were lockdown everywhere in world; even parents also doing their duties using online mode (work from home).When the pandemic encountered worldwide beginning of the online class era and parents were more concerned about education of their children’s and the new form of classes. Hence, at that time parents could have more attention over their children and they always tried to ensure their children’s participation fully during online classes. This thing is bear out by our previous observation where the majority of students (33%) reported as they were have active participation from their parents in the learning process. The assessment of knowledge transfer during online classes was identical in 2 ways when compared online classes with regular classes. This includes 1) clarification of doubts and 2) difficulty faced with different subjects. Approximately, 62.67 % of students responded that regular classes are better to clarify their doubts. Though the online teaching methods and apps that were chose by teacher have sufficient options to communicate with students to clarify their doubts, but the purpose is not fulfilled when it relate to effective communication during online classes. This also suggests that more discussions should be required along with online classes by using chat tools or other online platforms and encourages to

increase more participation from students. Instead of this for a few students (19.01 %) online classes are better. Some of the college students were habitual with traditional classes especially of rural areas and might not have thought about virtual classes replacing their regular educational system. On the basis of that, we can conclude that till today, online mode of classes are not up to the standard of regular classes in learning aspects according to students.



**Fig.3. Attentiveness and knowledge transfer.**

### 5. Evaluation

Considering all the inconveniences in the evaluation during online mode, 67.6 % responded that exams should be conducted under these circumstances, while on the other hand remaining (32.39%) in favour of no examination. The ways of evaluation was found varying from person to person. Online exams were most favoured by 48.59 % of the students followed by Assignments and homework were responded by 41.54 % students were the method of evaluation since most of them considered that vast majority of students who have difficulty in accessing the internet. Though, these are not adequate and efficient ways to evaluate the students. The third most preferred choice was to other method by 5.63 % of the students (Fig. 4).

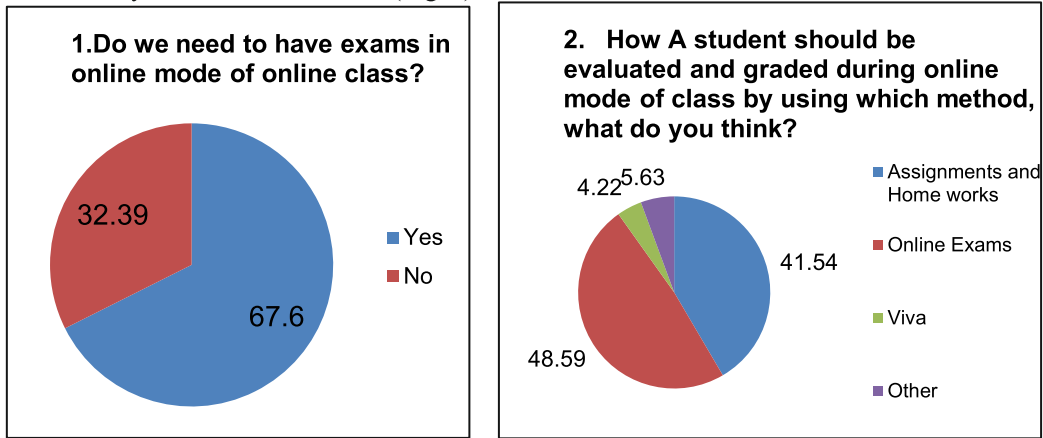
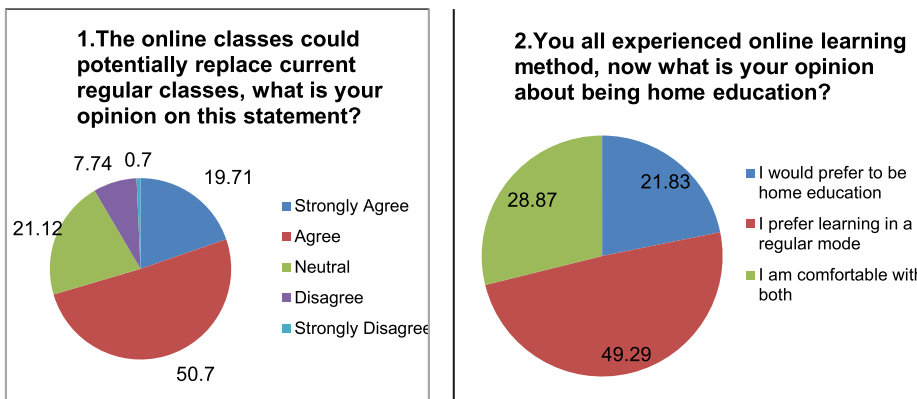


Fig.4 Evaluation in Online Education

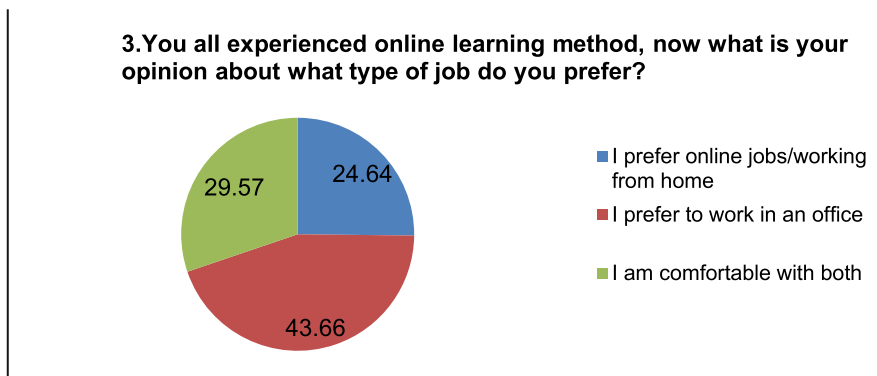
### 6. Future aspects

When we asked students for their opinion about the future aspects of online classes, 50.7 % responded that the idea of online classes could potentially replace regular classes, 7.74 % disagreed with the idea, while 21.12 % responded as neutral. We asked them whether they would use various online resources in the future out of which 49.29 % responded as they would prefer learning in a regular mode, 21.83 % would prefer online education and 28.87 % students can comfortable in both way (Fig. 5). Although most of them do not seem to be in favour of online classes, it hide high potential, which we can hopefully make use of them in future precisely.

After asking them opinion about which type of job do they prefer large number of students (43.66 %) responded as they are more prefer to do work in an office while 24.64% of them preferred to do work from home and 29.57 would comfortable with both.







**Fig.5 Future perspectives on the online classes**

**Conclusion**

The pandemic condition like COVID 19 was worst to human life, in those severe stage teachers and students utilized their knowledge and used various online applications very soon, even without a pre-planned or proper training about these things to teachers or students in such way during pandemic. Both the learners and teachers were forcefully in favour of regular classes. Most of them felt that regular classes were better in terms of efficiency, doubt solving, interaction, and overall understanding about the subjects. Because of lockdown and online classes students didn't have proper practical knowledge about the subject especially of pure science students. Although, there is some level of comfortness in learning/teaching from home, various technical issues (connectivity, low data, internet facility) and both teachers-students required the extra effort in online mode. Since most of the responses leaning in favour of regular traditional learning method, this is due to unaccepted severe situation and lack of preparation of teachers and students shifting from regular to online mode of education.

Online mode has the potential to dominate the educational field, if a proper planning incorporate from the government and various authorities related to education. Shifting towards online classes has numerous advantages like it can reduce travel costs, save time consume, and also access education to students live in remote places (James, 2002). Hence, we can hope that online education will be future in this field. The basic aim of this study is understand teachers' and learners' perceptions on online education.

- ◆ The learners responded that regular classes are better in terms of knowledge transfer and learning efficacy. ◆ Few of them responded that they were more attentive in online classes, probably they owing most favourable situations at home. This pin points that how our learning environment can influence the quality of online learning and teaching.
- ◆ There were many physical and mental discomforts faced by students and teachers during pandemic which affect our entire learning and teaching process. These issues must be handled sincerely.
- ◆ The facet of communication and doubts clearing must be made more effective. Various Platforms which help in this still not used widely and need improvement properly.
- ◆ It should be more investment in technology and basic infrastructure will ensure access to online classes for students and teachers of our entire society especially economically weaker section.

Previously there are many more existing studies regarding the effectiveness of online classes in distance education or training programs. However, online mode of education spread worldwide but in India very little is known about similar online programs. The circumstances of this study are also considered the sudden shift from regular method to online classes which happened during pandemic without preparations. This study also addressed various aspects related with online classes such as the

quality of learning environments and physical or mental stresses. The direct input we received from students of colleges of Kopargaon city will help to analyse the key areas over there improvement should needed. This study may hopefully helpful and is the foundation to future studies at a much larger scale. Various aspects discussed in this study which will ultimately enable all of us to access a new frontier in the educational field.

### References

1. Ambika Selvaraj, e.t., 2021.Effect of pandemic based online education on teaching and learning system.
2. Aditya, K.S., Jha, G.K., 2020. Students' Perception and Preference for Online Education in India During COVID-19 Pandemic.
3. Anab, M., 2020. Covid-19 Paves Way for e-learning, but Deepens Digital Divide Among Students. August 24. The Times of India.
4. Bettinger, E., Fox, L., Loeb, S., Taylor, E., 2015. Changing distributions: how online college classes alter student and professor performance. *Am. Econ. Rev.*
5. Bower, B.L., 2001. Distance education: facing the faculty challenge. *Online J. Dis. Learning Adminis.* 4(2).
6. Cavanaugh, C., Gillan, K.J., Kromrey, J., Hess, M., Blomeyer, R., 2004. The Effects of Distance Education on K-12 Student Outcomes: a Meta-analysis. Learning Point Associates / North Central Regional Educational Laboratory (NCREL).
7. Conceição, S.C., 2006. Faculty lived experiences in the online environment. *Adult Educ. Q.* 57 (1), 26–45.
8. Dhawan, S., 2020. Online learning: a panacea in the time of COVID-19 crisis. *J. Educ. Technol. Syst.* 49(1), 5–22.
9. El Mansour, B., Mupinga, D.M., 2007. Students' positive and negative experiences in hybrid and online classes. *Coll. Stud. J.* 41 (1), 242.
10. Hartman, J., Dziuban, C., Moskal, P., 2000. Faculty satisfaction in ALNs: a dependent or independent variable. *J. Asynchronous Learning Net.* 4 (3), 155–179.
11. Hrastinski, S., 2008. Asynchronous and synchronous E-Learning (EDUCAUSE quarterly). *Educause. Edu. Educause Q.* 31 (4).
12. HRD, 2020. HRD Ministry Launches "Pragyata" With Digital Education Guidelines, Screen-time and Mental Health Tips for Children. July 14. India Today. <https://mh.rd.gov.in/school-education>.
13. James, G., 2002. Advantages and Disadvantages of Online Learning. Retrieved July, 1, 2006.
14. Kim, K.J., Bonk, C.J., 2006. The future of online teaching and learning in higher education. *Educause Q.* 29 (4), 22–30.
15. Kuikka, M., Kitolab, M., Laaksob, M.J., 2014. Challenges when introducing electronic exam. *Res. Learn. Technol.* Vol. 22.
16. Kumar, D., 2010. Pros and Cons of Online Education. Manuscript. North Carolina State University, Raleigh, NC, USA.
17. Lashgari, K., Talkhabi, A., Nazarpour, M., 2011. Comparison between online classes and traditional classes. *Nature Sci.* 9 (6), 18–23.
18. Mishra, L., Gupta, T., Shree, A., 2020. Online teaching-learning in higher education during lockdown period of COVID-19 pandemic. *Int. J. Educ. Res. Open* 1, 100012.
19. Papadima-Sophocleous, S., Loizides, F., 2016. Exploring the benefits and disadvantages of introducing synchronous to asynchronous online technologies to facilitate flexibility in learning. *CALL Communities and Culture—short Papers From EUROCALL*, pp. 363–368.
19. Roy, S., 2020. Education in Lockdown: Poor Internet Connectivity Shadows Online Classes, Many Students Walking to Reception Areas. The Hindustan Times. Retrieved on August 1, 2020.

20. Sahu, P., 2020. Closure of universities due to Coronavirus Disease 2019 (COVID-19): impact on education and mental health of students and academic staff. *Cureus* 12(4).
21. Seok, S., DaCosta, B., Kinsell, C., Tung, C.K., 2010. Comparison of instructors' and students' perceptions of the effectiveness of online courses. *Q. Rev. Dist. Educ.* 11 (1),25.
22. Simon, H., Yatrakis, P., 2002. The effect of self-selection on student satisfaction and performance in online classes. *Int. Rev. Res. Open Distrib. Learn.* 3(2).
23. Sloan Consortium, 2002. *Quick Guide: Pillar Reference Manual*. Needham, MA. Author. Retrieved August, 28, 2008.
24. Song, L., Singleton, E.S., Hill, J.R., Koh, M.H., 2004. Improving online learning: student perceptions of useful and challenging characteristics. *Internet High. Educ.* 7(1),59–70.
25. Toquero, C.M., 2020. Challenges and opportunities for higher education amid the COVID-19 pandemic: the philippine context. *Pedagog. Res.* 5(4).

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