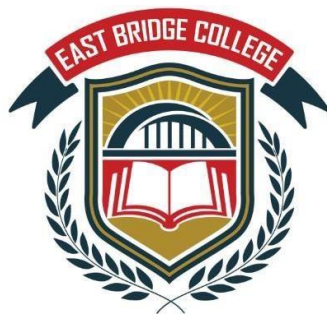# Role of Teachers as a Leader to Develop Environmental Awareness among Students for a Sustainable World

A Thesis Presented to

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By- Rohit Kumar Pal

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Role of Teachers as a Leader to develop Environmental Awareness among Students for a Sustainable World

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ABSTRACT

The purpose of this study was to conduct an online survey regarding people's experiences and perceptions related to online classes and environmental awareness. Delivery of classes through online mode & using many virtual platforms to share a concept is now a new normal situation in India after the Covid-19 outbreak and lockdown situation. Now in India, different ed-tech platforms are providing services for Board, College, and University level examinations as well as various competitive examinations. A huge number of children, as well as adult learners, are using their platform to get success. Whether online education is good or not is a constant dilemma but nowadays, one of the most important issues is climate change, and we are hoping for a sustainable world through sustainable practice. As trees are considered the most significant source of paper, we may reduce the usage of paper by adopting an online education system. To study people's views a questionnaire (Microsoft Form) link was sent to various colleges and university students as well as guardians over WhatsApp, Facebook, and E-mail. Responses from 72 people are considered in this survey. This online survey method was used for the collection of data. This study shows how can a teacher-leader makes his/her students aware of the environment through proper leadership and administrative style and make both online & offline modes of delivery equally effective. Some suggestions & research questions have also been pointed out in this article to revolutionize the teaching & learning process along with the thought of environmental protection.

Keywords: - *Covid-19, lockdown, online education, ed-tech platforms, climate change, sustainability.*

CHAPTER ONE

INTRODUCTION

In March 2020, World Health Organization (WHO) declared covid-19 as a pandemic [1]. Due to the outbreak of the disease, many countries have declared lockdown. Among various sectors, one of the most important sector that is affected is education. To manage students and for completion of the syllabus, many educational institutes, schools, colleges, and universities have declared online classes [2]. Even though the country has been adapting to new-age learning, there are so many obstacles to achieve entire success as only 45 crore people of our total population of the country have access to the internet/e-learning. The people residing in rural areas are still very much affected due to a lack of technologies, connections, smart devices and therefore hampering the cause of online education. The Covid-19 pandemic taught the entire society how necessary is for educational institutions to adopt online learning and introduce a virtual learning culture. The pandemic has been steering the education sector forward with technological innovation and advancements [3]. Differences between traditional education & online learning are listed below.

Traditional Education	Online Learning
Requires less discipline but imposes more structure	Requires discipline on the part of the student, but allows the student to create his or her own structure.
Demands a heavy schedule	Allows for more flexibility
Creates a specific lifestyle	Gives the student control over his or her lifestyle
Fosters competition	Fosters personal growth and development
Emphasis on school spirit and unity	Emphasis on learning specific skills
Extremely costly	Extremely affordable
Suited more for younger students	Suited for students of all ages
Restricts available time	Allows more time for work and family
Requires a physical geographical location	Permits students to travel
Rigid deadlines	More flexibility
Direct contact with students and educators	Online contact with students and educators
Access to campus activities and services	Access to endless online materials
High demands on time	Low demands on time

Fig. 1: Difference between traditional education & online education

Though online education, training, skill development, and certificate courses are new-age learning methods following are some advantages & disadvantages.

Fig. 2: Advantages & disadvantages of online learning.

Apart from everything, one most important thing is that online education does not need any kind of paperwork. Thus, we can reduce the cutting of trees by practicing it in an effective way as trees are considered the most important source of paper [4]. Not only that, but quality education may also reach every corner of the world through this mode of learning. Whether online education is good or bad for us is a constant dilemma but practicing it in an effective way may satisfy sustainable development **goal number 4** which is about "**Quality Education**" and **goal number 13** which tells about "**Climate Action**".

Fig. 3: Sustainable Development Goals

Nowadays, as pollution and climate change are burning phenomena, we must think about a green future to restore our degraded ecosystem. There are so many causes that must be set off.

Our ever-increasing addiction to electric goods, modern car culture, appetite for globally sourced goods, methane emissions, deforestation, increase usage of chemical fertilizers, and ever-increasing human population are a major cause in this respect. As a result, we all face different problems. Global warming and climate change may lead to storms, widespread flooding may result in financial loss, low summer flow of many rivers results in concentrated polluted enriched fresh water in the river and therefore different aquatic species are lost and biodiversity is greatly affected. Higher temperature expands seas and oceans, changes in weather will affect the types of crop production, pollution causes various epidemics and many more. Every anthropogenic activity has some impact on the environment. More often it is more harmful to the environment than begin [5]. However, mankind, as it is developed today, cannot live without taking up these activities for food, security, and other needs. Consequently, there is a need to harmonize developmental activities with environmental concerns.
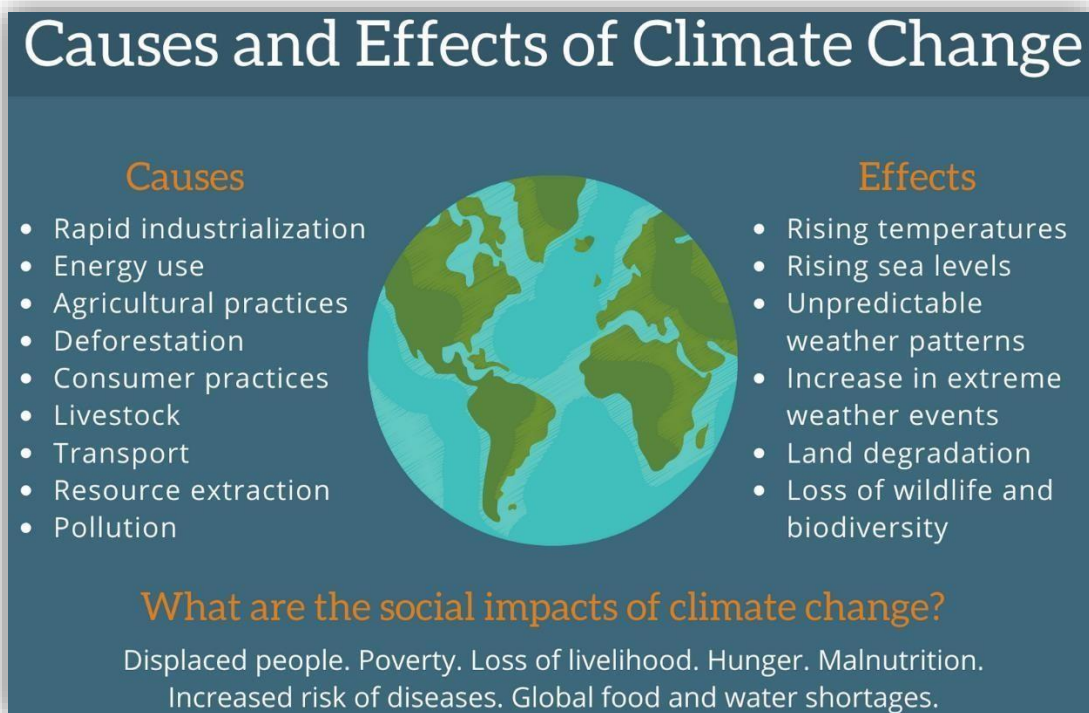

Fig. 4: Causes & effects of climate Change

CHAPTER TWO

OBJECTIVE

The main objective of the study is to focus on the quality traits of new-age education leaders & administrators who can make online education very effective in a sustainable approach besides the traditional mode keeping in mind about the environmental concerns & climate change issues. How new-age teacher leaders can make awareness about the environment among students is also a part of this study.

CHAPTER THREE

REVIEW OF LITERATURE

To perform this research many research works have been studied that have already been done in the same domain. Their description and abstract summary have been listed below. In a study published in the year July 2020, Naman, Khatak, Poonam has shown how online and offline modes of education are co-related and what are the specific challenges for Indian educators as well as students [2]. Apeksha R Kanojiya (Nov 2020) has reported how online learning has impacted the children in the state of Maharastra, India due to covid-19 [6]. Vikram Jadav & associates (May 2020) has reported on students' role to look at Problems during covid-19 in the education system during lockdown issues in Maharashtra, India [7]. In a study, Singh, Gautam, Patni, & Nautiyal reported on impact assessments in the higher education sector due to covid 19 [8]. Shrivastav, Singh & Singh has also reported about the impact of covid-19 in the higher education sector of India [9]. A work on the acceptability of challenges has also been reported by Bhist, Jasola & Bhist [10]. A comparative study on the environment for e-learning, online learning & distance learning has also been cited to perform this research which was reported by Moore, Dickson-Deane & Galyen in the year 2011 [11]. Kundu & associates have reported on the flourishing scenarios of the e-learning industry due to covid -19 pandemic in India. [12]. Verma, Verma, Garg & Godara jointly reported about the perspective of medical students for e-learning [13]. In a newspaper article in India Today Singhal has reported why offline teaching is far better than online teaching in India [14] & Dutta, D. A. (2020) wrote an article about impact of digital social media on Indian Higher Education & what should be the alternative approaches of Online Learning during COVID-19 [15]. Though online education has become new normal, there are so many problems faced by student communities related to connection, health etc. Many studies have been performed for this purpose. Lissak, G. (2018) has worked on the adverse physiological and psychological effects of screen time on children and adolescents [16]. Chang *et al.* (2018) published a work on computer/mobile device screentime of children and their eye care behavior: the roles of risk perception and parenting [17]. Moravec, T *et.al* in the year 2015 has published an article regarding the influence of using e- learning tools on the results of students at the tests [18]. In a work, Liaw, S. S. (2008) investigated about student satisfaction, behavioral intention, and effectiveness of e-learning [19]. Kulkarni & Bhore (2019) worked on the effects of electronic gadgets (Television, Mobile Phone and Computer) on health status among secondary school students in some selected districts of Maharashtra [20]. Undoubtedly, there are so many articles regarding the practice of online teaching. Martin, Budhrani, Kumar & Rajput in the year 2019 has reported about the strategies of good online teaching practice in an article that is cited to perform this research [21]. Hartis reported the effectiveness of blended learning [22], Sun & Chen (2016) have reported on online education and its effective practices [23]. Moreover, as the main objective of my study is to find out the relation between online education and sustainability through effective leadership practice many studies have also been cited. A brief study about climate change education published by Stevenson & associates (2017) has helped to understand the moral feeling about climate and how effective teaching practices can motivate students to do something about climate [24]. Olsson, Gericke & Pauw reported the challenges of sustainability education in their study named "The effectiveness of education for sustainable development revisited – a longitudinal study on secondary students' action competence for Sustainability"[25]. James Taylor & Maria De Lourdes Machado has shown us how to make effective strategic planning for higher education administration & leadership [26]. A brief scenario of global online education has been reported by Palvia *et al.* (2018) [27]. Danelia Tilbury in an article redefines environmental education for sustainability [28]. Tilbury in another book chapter also reported on the forces that are much required in higher education for sustainability [29]. John Huckle has focused on theoretical aspects of environmental education& sustainability [30]. Michael Bonnet in an article wrote about the frame of mind in response to sustainability [31]. Tilbury, Coleman & Garlick in a book chapter wrote a review about environmental education and its contribution to sustainability in Australia [32]. These studies helped me a lot to plan this research.
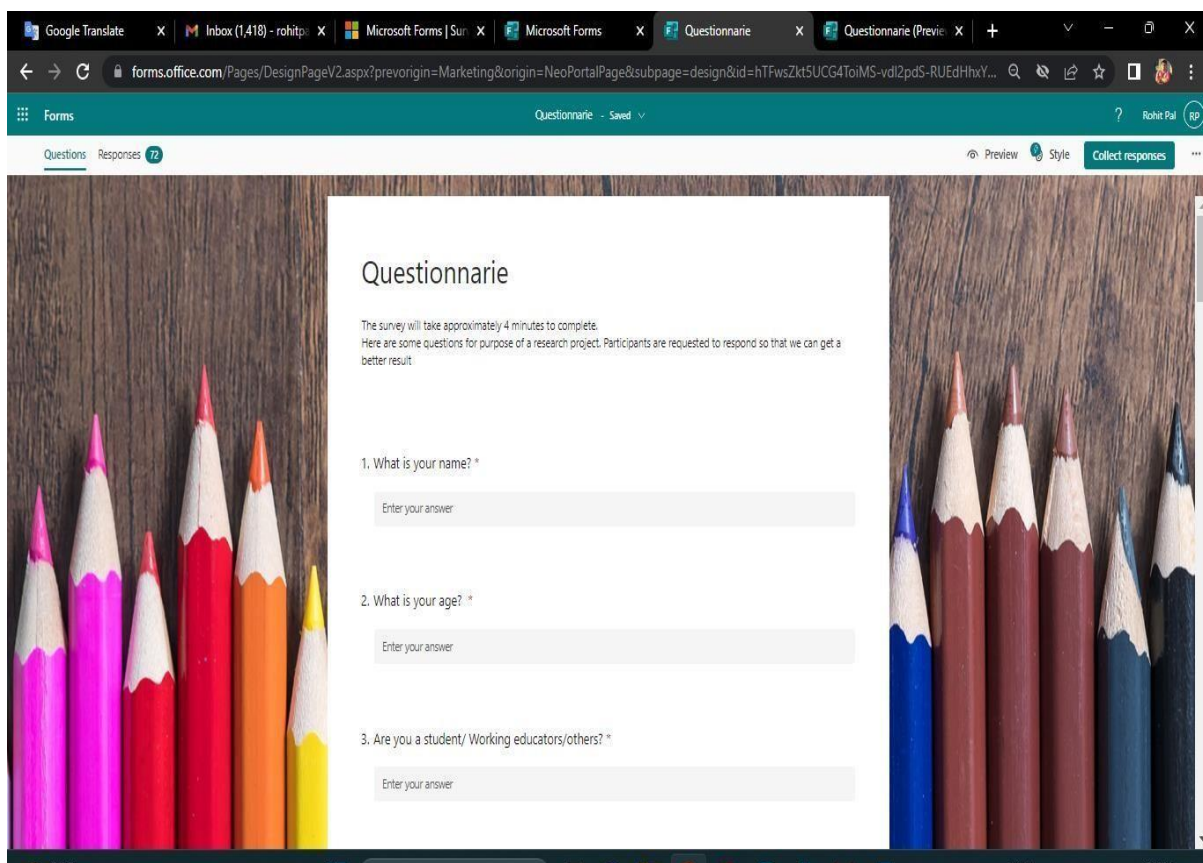
CHAPTER FOUR

METHODOLOGY

This research was conducted by an online survey over Microsoft Forms and it was circulated through What's App and e-mails, and telegram groups. The response of each participant was collected using a linked survey which was automatically generated and recorded. However, those who failed in completing the survey were excluded from the analysis.

The range of the age of participants was 15 to 75 years. No other demographic variable such as ethnicity, socio-economic class, or residence was considered in the present study. The questionnaire included 20 questions covering psychological, health, and technical aspects and was applied to a sample consisting of 72 participants which in turn reflects the major population of students, faculties, and parents of school-going children. The survey was developed using the free software "Microsoft Form" and the further results were analyzed using MS Excel. Questions were asked in the form of multiple-choice & opinion-based formats. There were no right and wrong answers but it was made to analyze the overall opinion. After collecting the data, every question percentage was calculated. Respective graphs are prepared by using MS- Excel.

The link of the questionnaire is given below- https://forms.office.com/r/7Pg1NfdKmA

Questions asked in the survey (attached in the form of 7 screenshots)
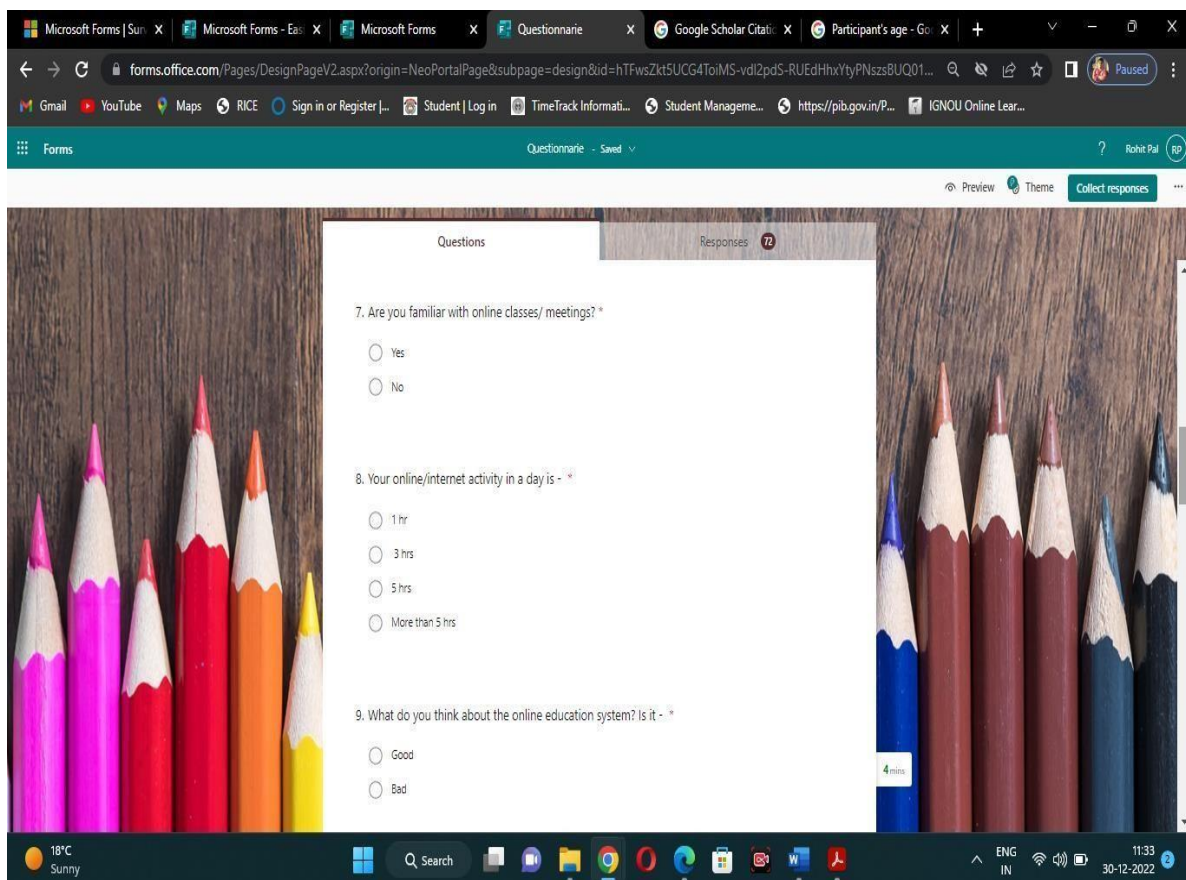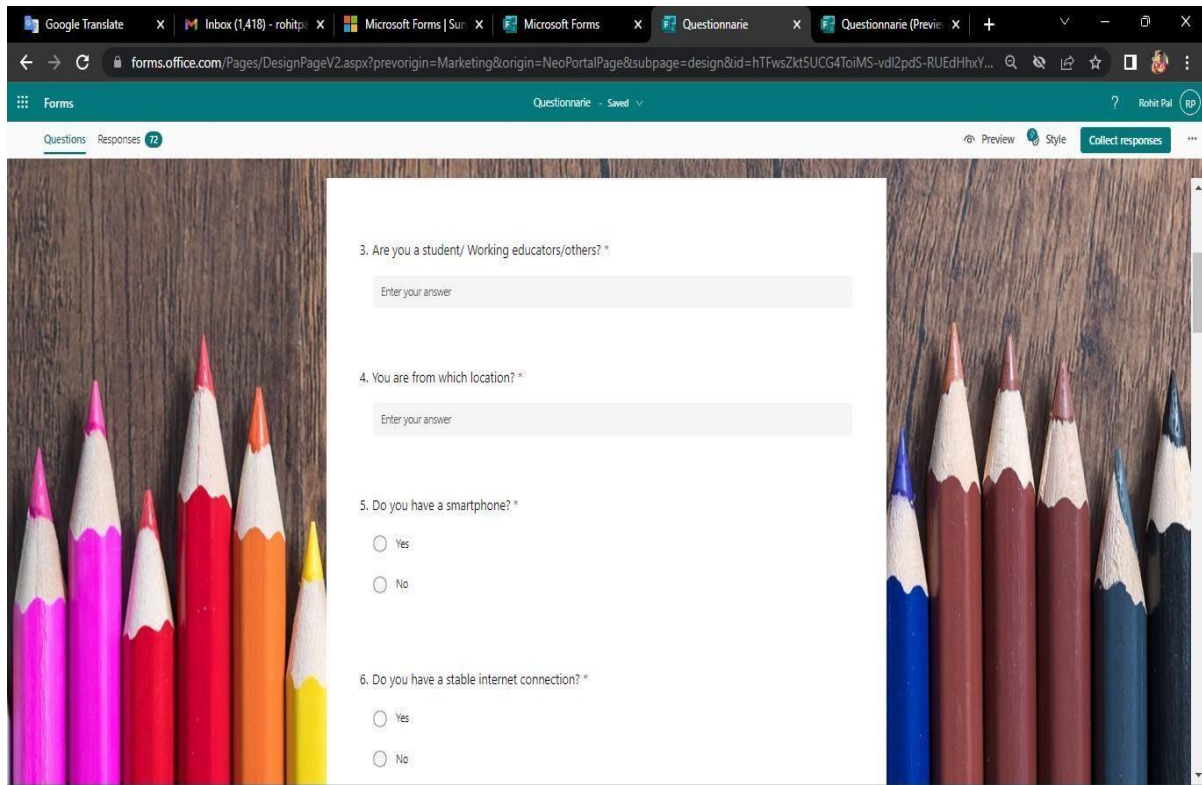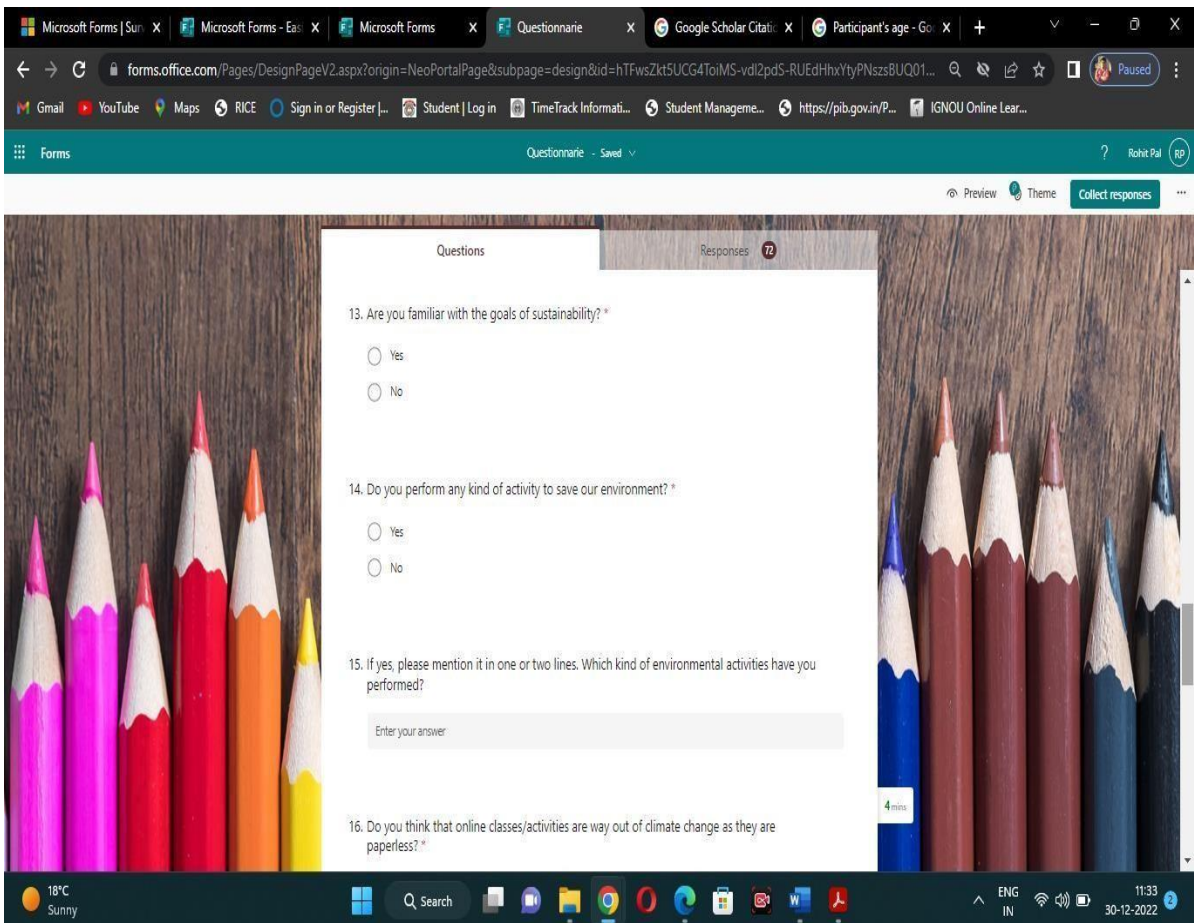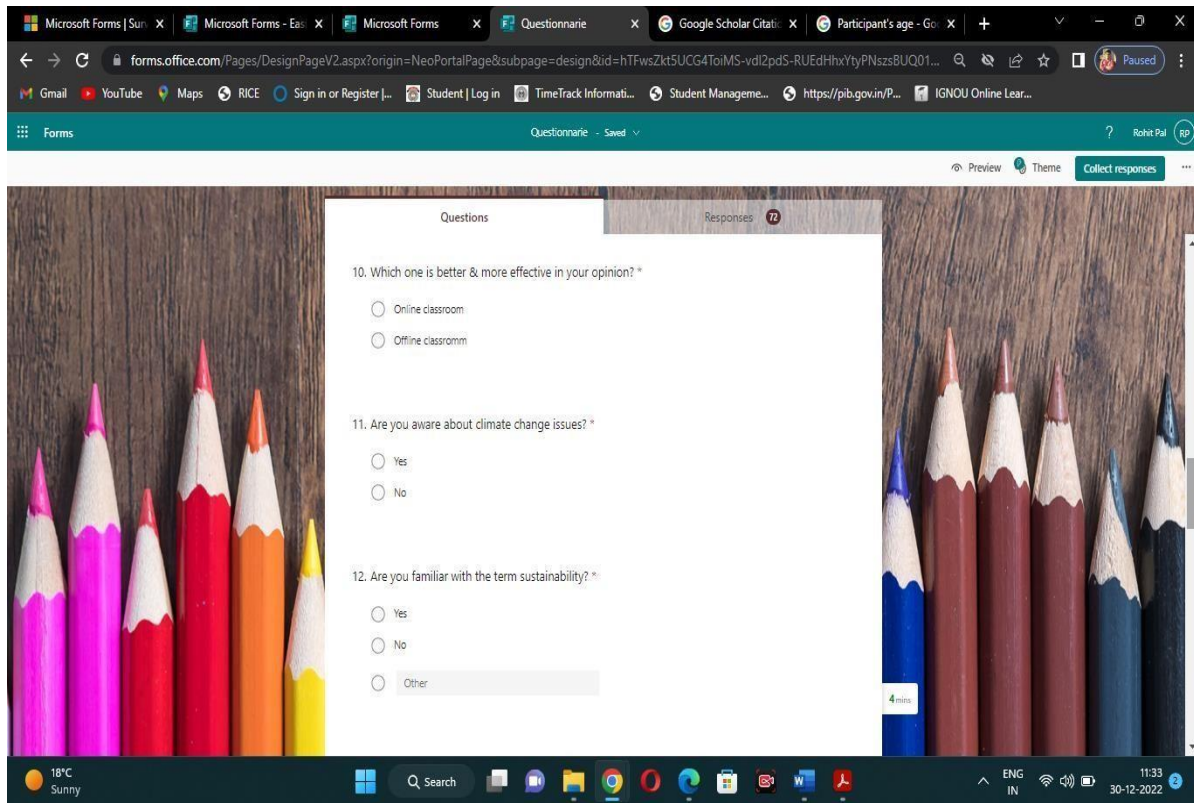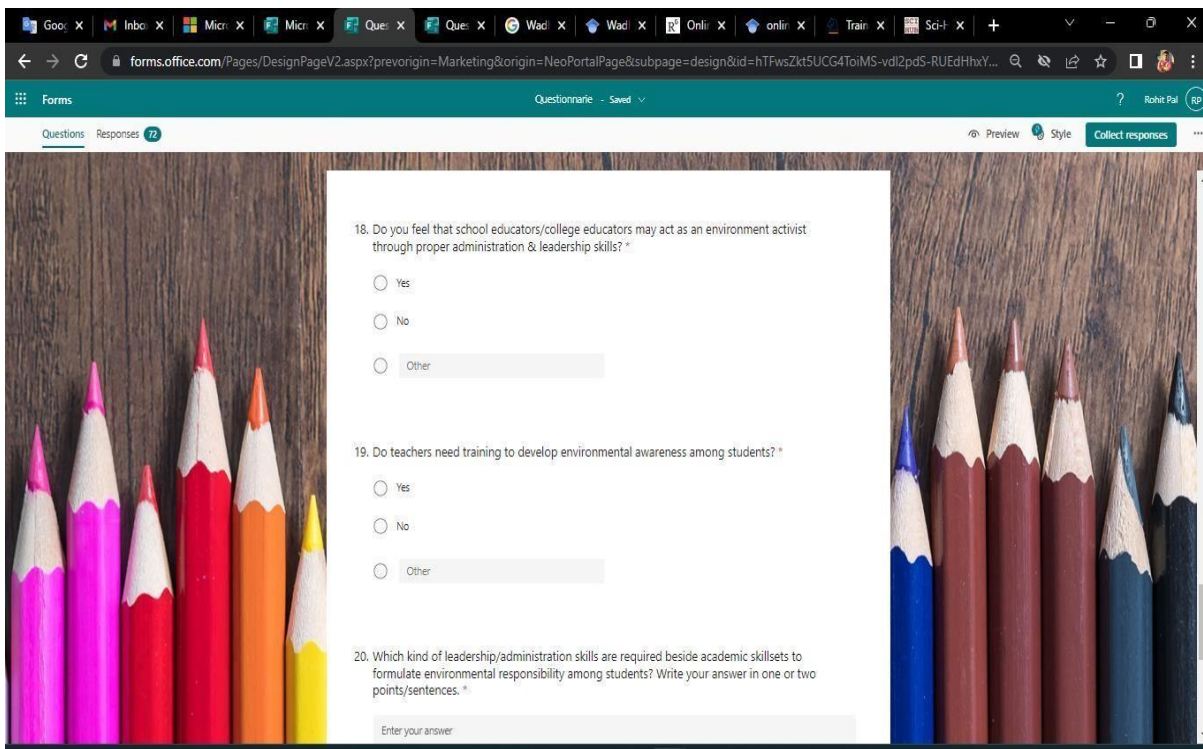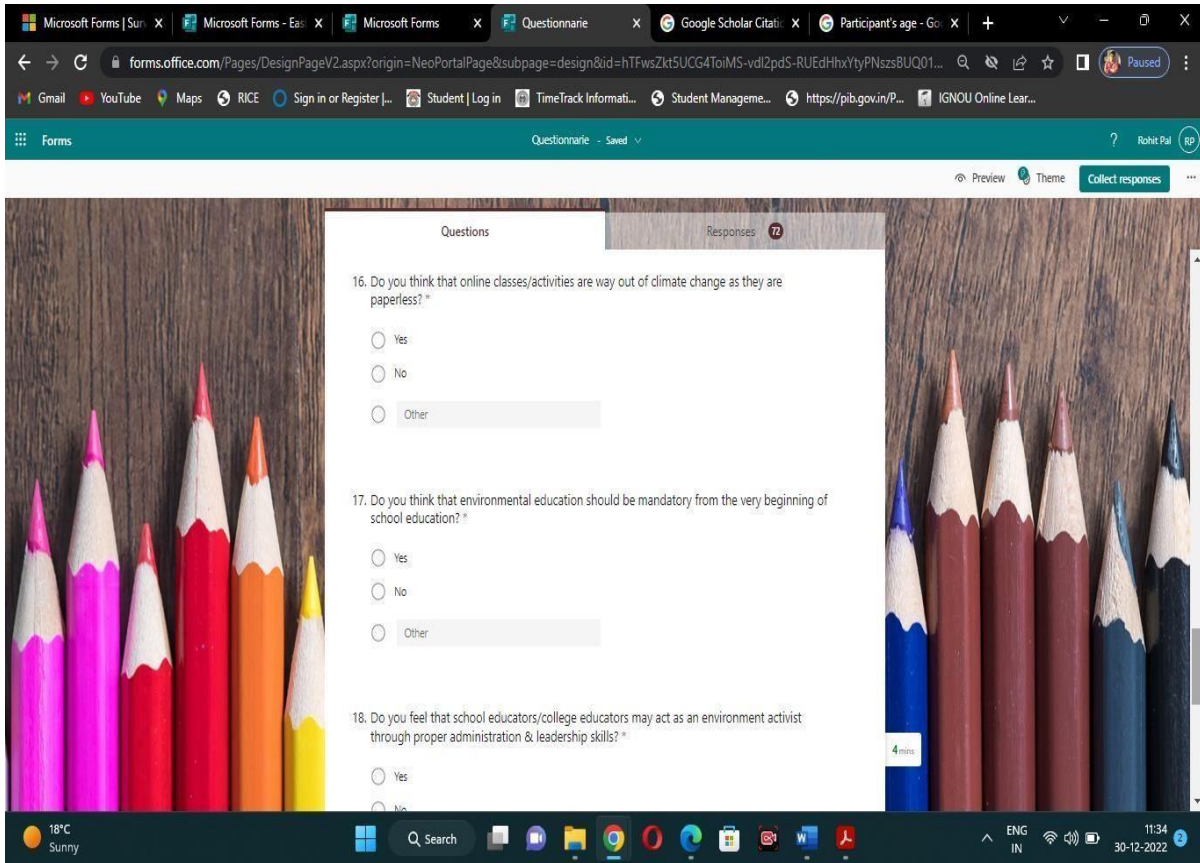
To analyze the viewpoint of students, teachers, and parents about online teaching, to find relative awareness of the concept of online education and offline education, and to analyze the drawbacks of implementing online education and its correlation to environmental issues werethe ideas behind this study.

CHAPTER FIVE

RESULTS ANALYSIS

The result of the online survey is as follows.

A total 72 participants were taking part in this survey. Out of them 37 were females and rest 35 are males.
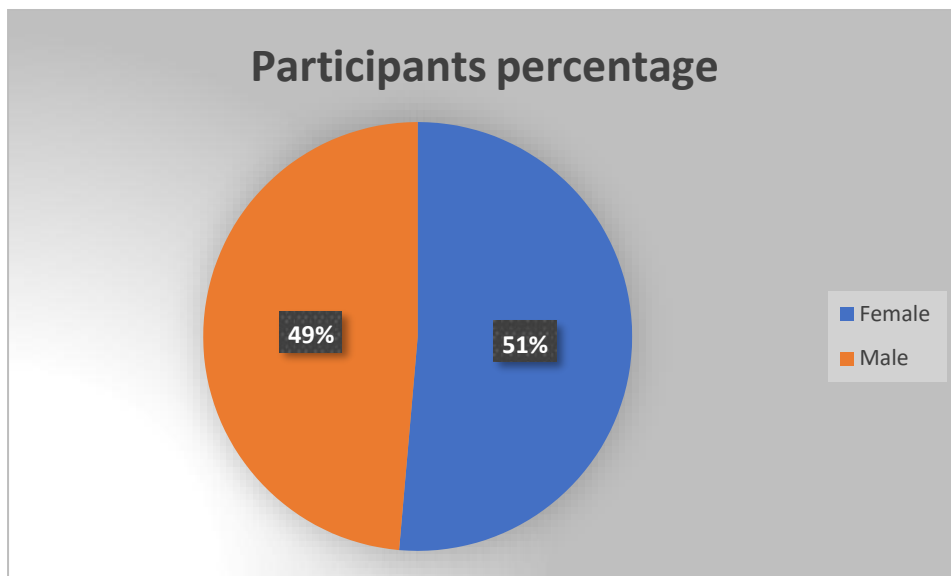
Result analysis Figure 1. Participants Percentage

Out of 72 participants, 33 were students, 30 were working educators, and 9 marked them as others.
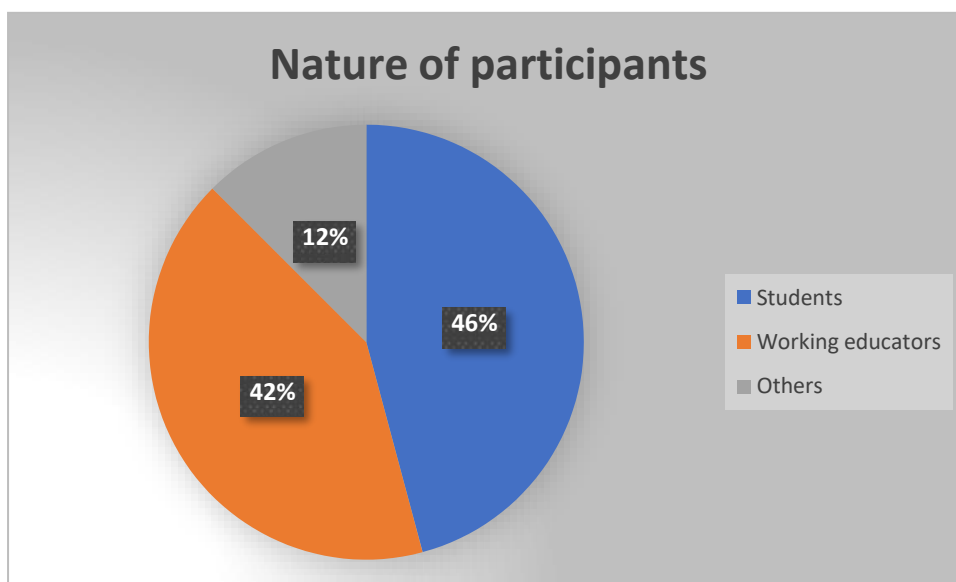

Result analysis Figure 2. Profession/occupation of Participants (Percentage wise)

Out of 72 participants, 25 responses were collected from the Howrah district, 16 from Kolkata, 6 from East & West Burdwan, 4 from Purulia, 6 from East & West Midnapore, 4 from Malda,1 from Murshidabad, 1 from Nadia, 2 from Siliguri of Darjeeling, 3 from South & North 24 Parganas & 4 from Hooghly district of West Bengal, India.
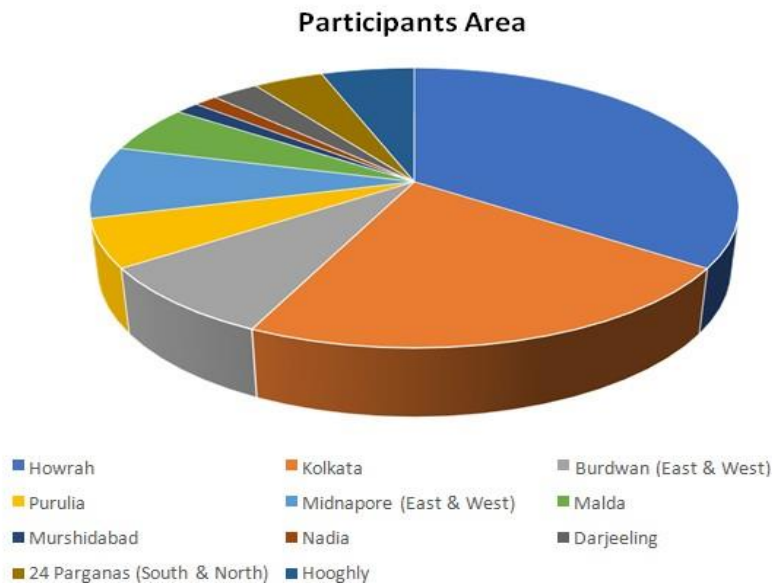
Result analysis Figure 3. Area of West Bengal where from responses were collected
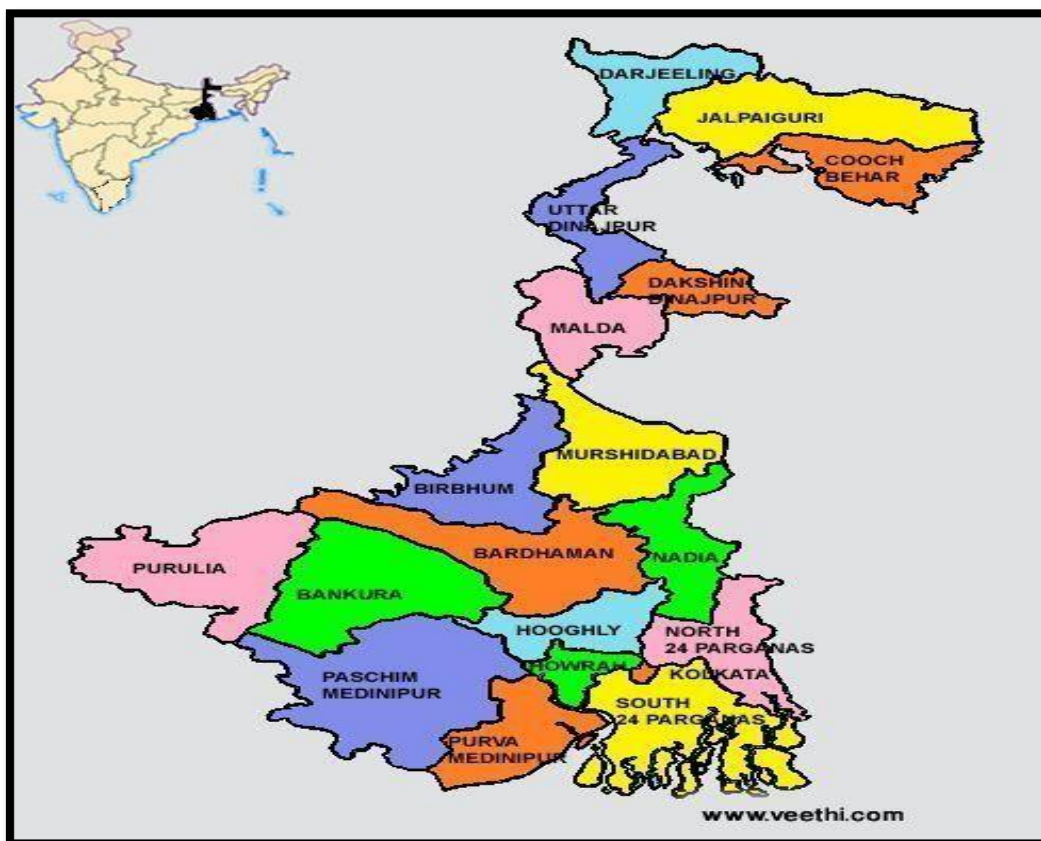
Figure 5: District-wise map of West Bengal, India

Out of 72 participants, 70 people said they have smart phones whereas the rest 2 people do not have a smartphone.
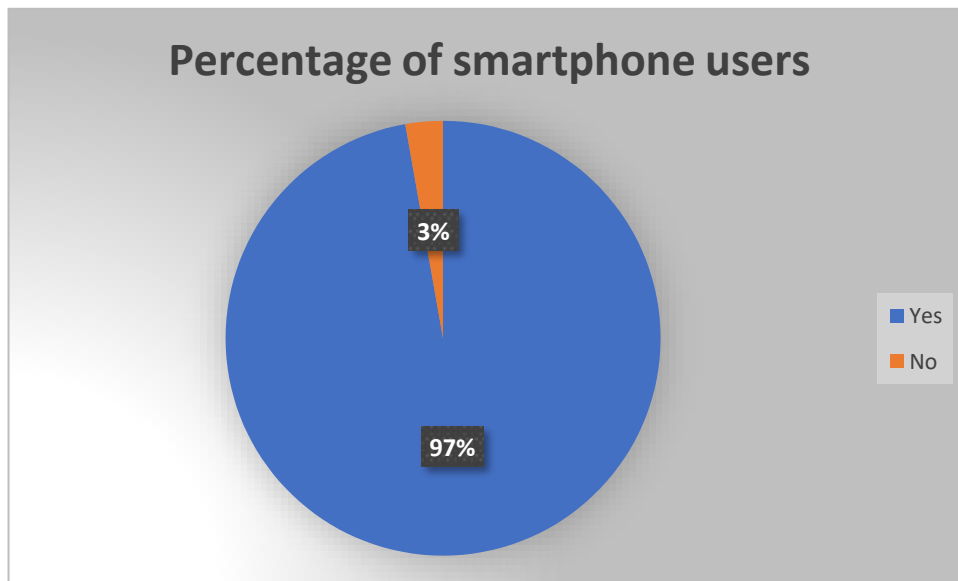
Result analysis Figure 4. Smartphone users among the participants

Among the participants, 62 people have reported that they have a stable internet connection whereas rest 10 people do not have stable internet connection.
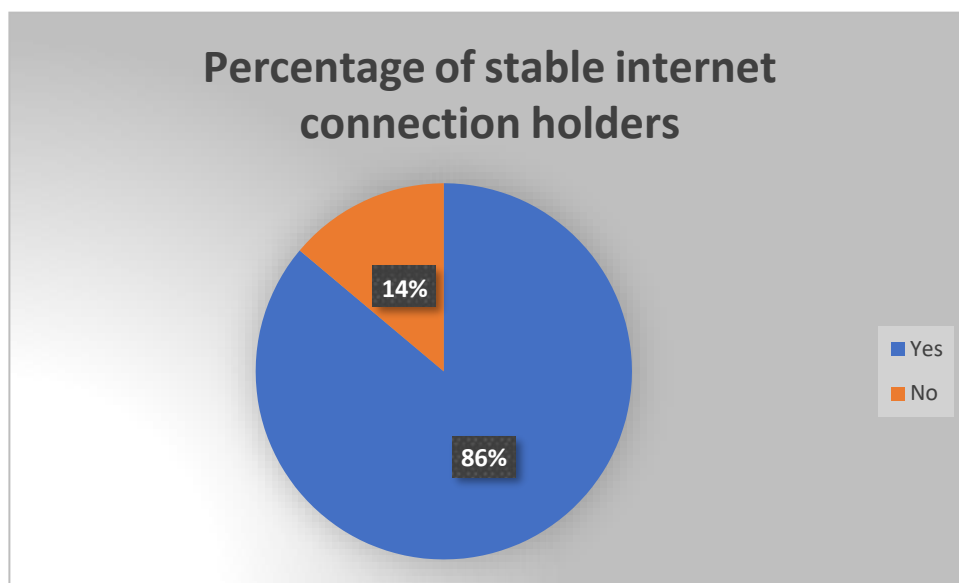
Result analysis Figure 5. Percentage of stable internet connection holders among participants

60 participants responded that they are familiar with online meetings whereas the rest 12 people are not familiar with various online meeting platforms like Zoom, G-meet, Cisco-Webex, MS-Teams, etc.
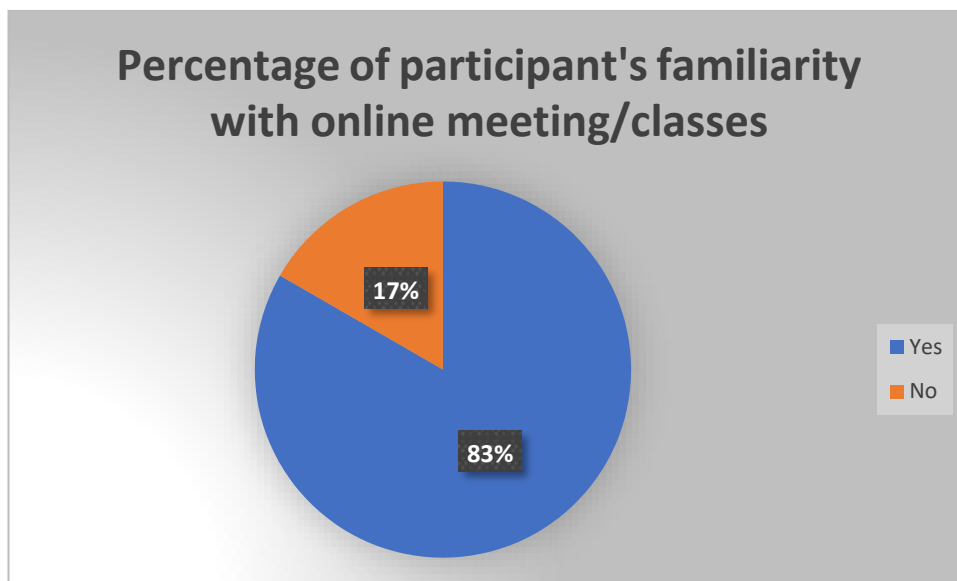
Result analysis Figure 6. Percentage of participant's familiarity with online meetings

To know participants' engagement with online internet activity four options were set in the Microsoft form. They were 1 hr, 3hr, 5 hr, and more than 5 hrs. 28 people have responded that they are using the internet for more than 5 hrs a day, 31 people have responded 5 hrs a day, while 10 people are using it for almost 3 hrs a day and 3 people said they are using it for 1 hr.
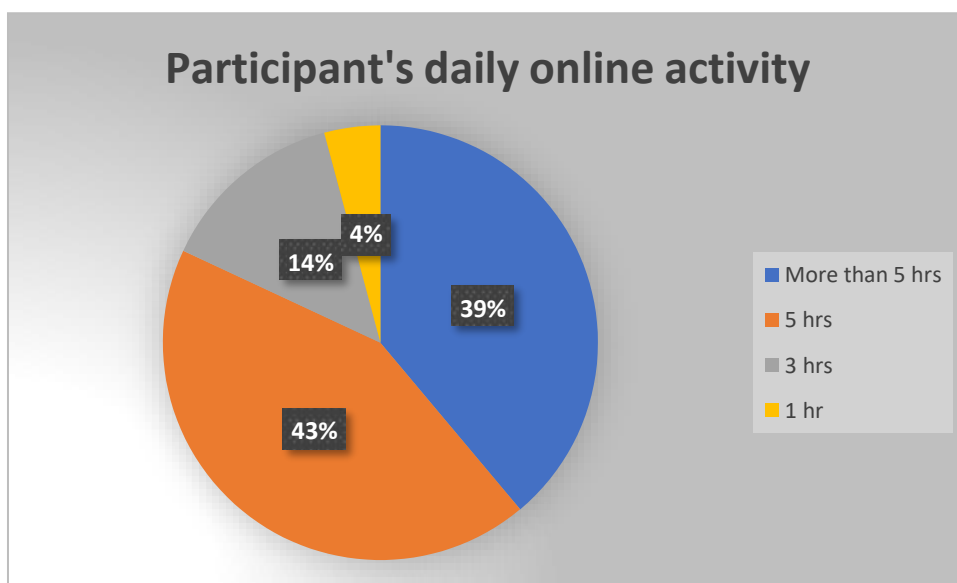
Result analysis Figure 7. Percentage of participant's engagement with online activities

To know about participant's view about online classrooms a question was also set. 59 people have said it is good whereas 13 people have said it is bad.
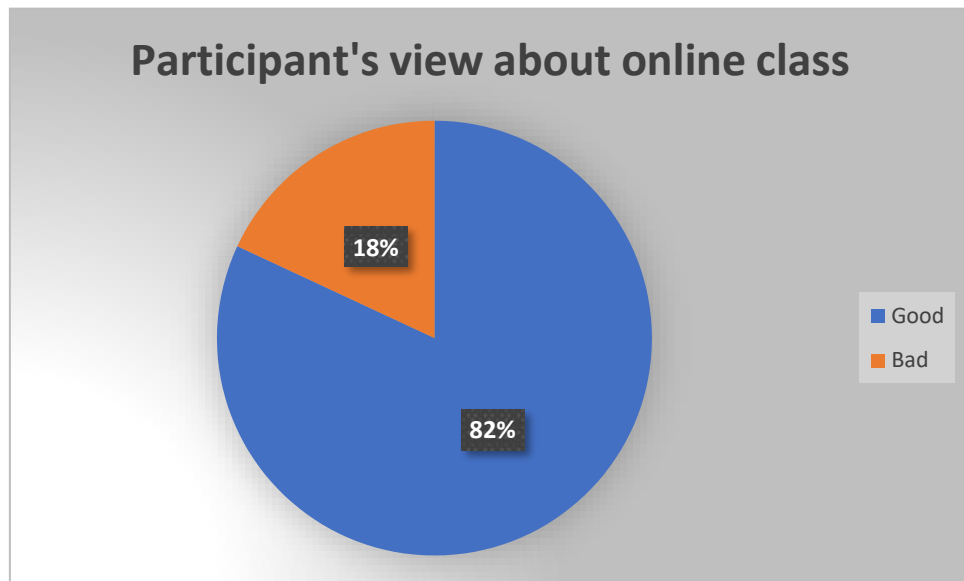
Result analysis Figure 8. Views about online classroom system

A comparison question for both online & offline classroom systems was also set. For that question, 50 people responded that an offline classroom system is more effective and better rather than an online classroom system.
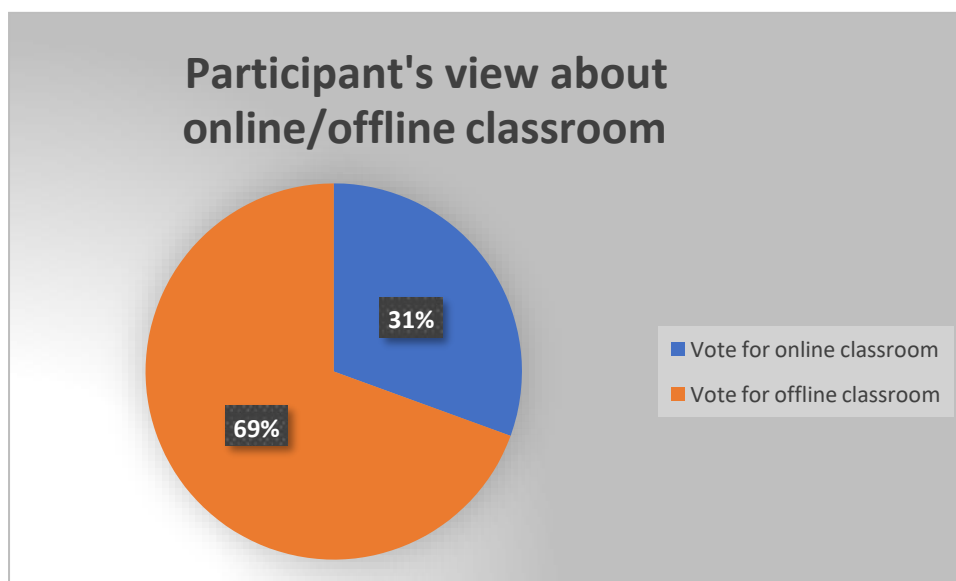
Result analysis Figure 9. Views about the effectivity of offline/online classroom system

To know about participants' views on climate change issues a question was also set. Out of 72,63 people said that they are aware of climate change issues whereas 9 are not aware of it. Moreover, a question was also set to know about participants' views on sustainability and sustainable development goals. 58 out of 72 has responded that they are aware about sustainability whereas rest are not aware. 53 respondees are also aware about the goals of sustainable development proposed by UN.
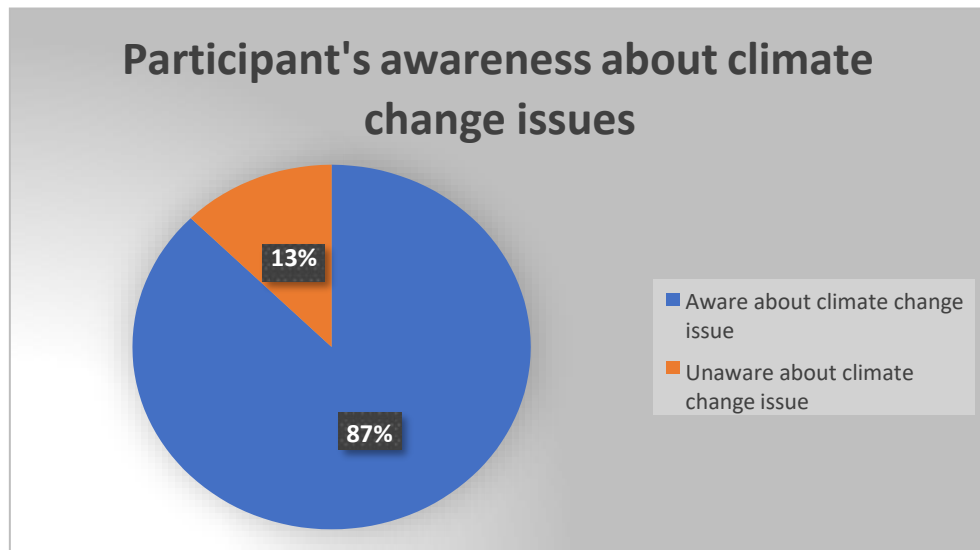
Result analysis Figure 10. Views about the climate change issues among participants
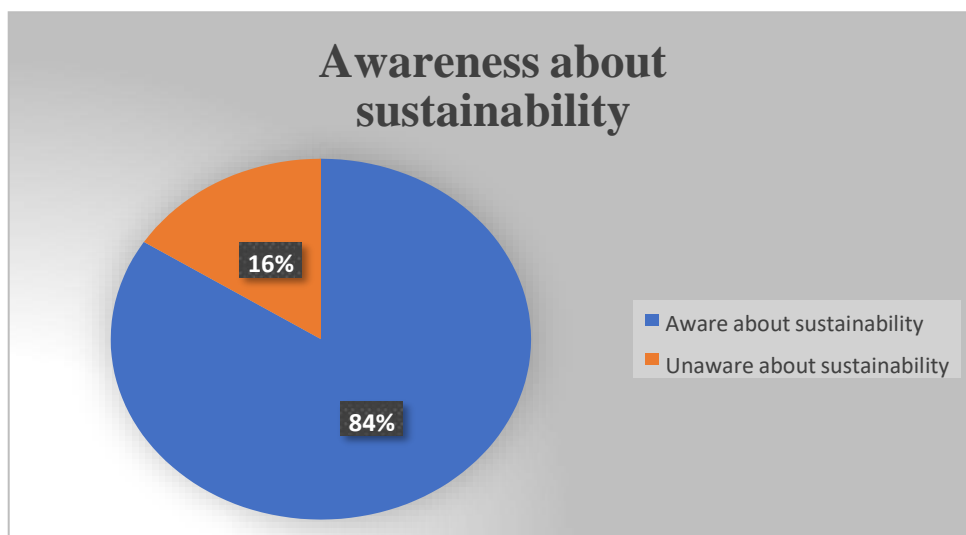
Result analysis Figure 11. Awareness about the term "Sustainability" among participants
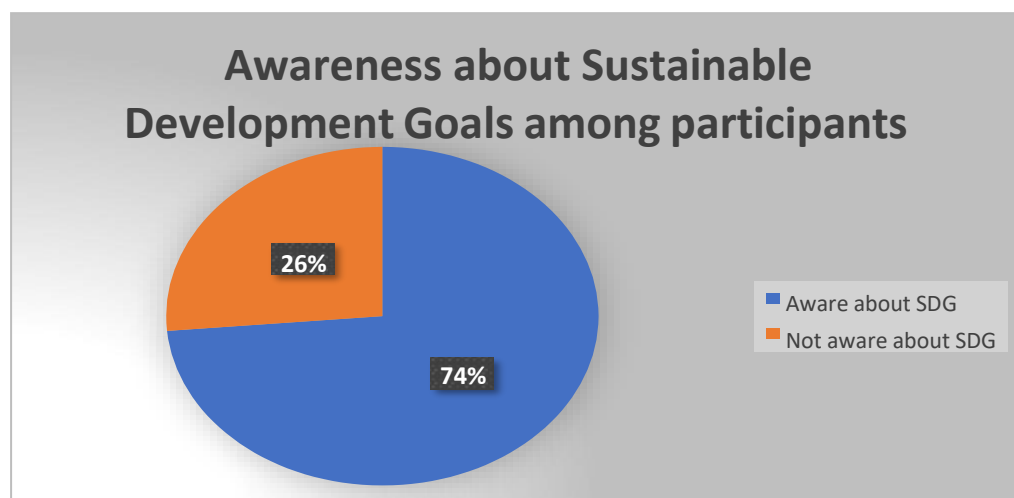
Result analysis Figure 12. Awareness of "Sustainable Development Goals" among participants

To know about the activities of the participants about environment a question was also set. 54 of them have said yes, they perform something to save our environment. This includes planting trees, recycling various materials, accessing public & sharable cars instead of using private cars, maintaining a roof garden, becoming vegetarian, refusal of plastic bags, using bio-degradable elements etc.
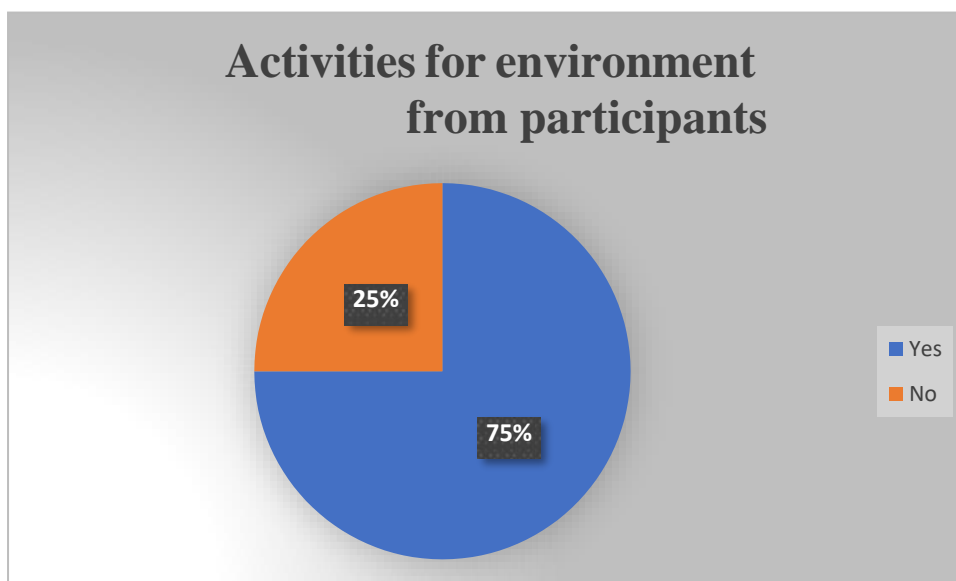
Result analysis Figure 13. Percentage of participants who are doing something for our environment

As we all know, paper is produced from trees so online classes can reduce the usage of paper. To know people's views a question was set again. 62 participants said that they think online education is a way of sustainable practice. But to implement something, we all know that a habit is required. So, 65 participants said that they think environmental education is required from the very beginning of the school level. Not only that, 66 participants said that school educators/college educators may act as environment activists through proper administration & leadership skills.
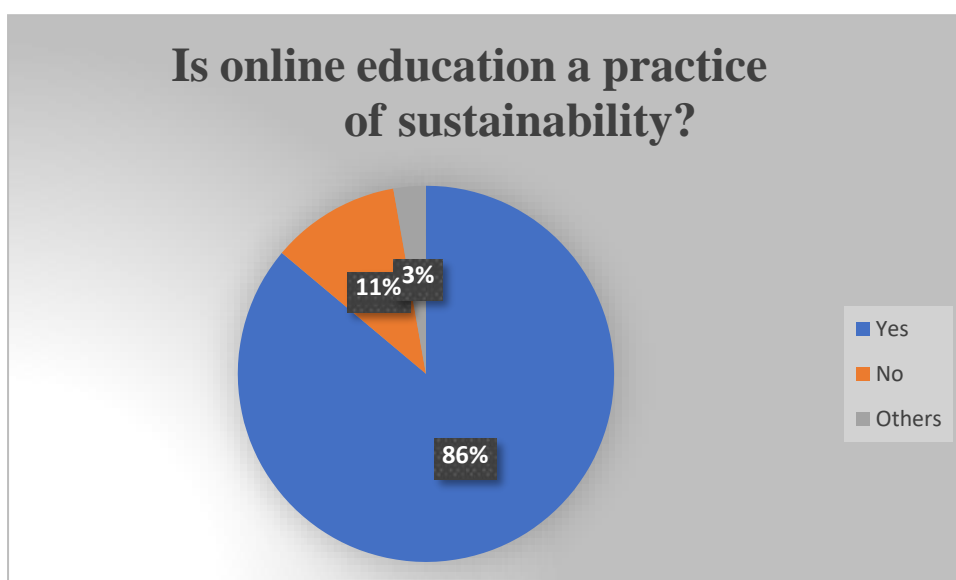
Result analysis Figure 14. Participants view about online education & concept of sustainability
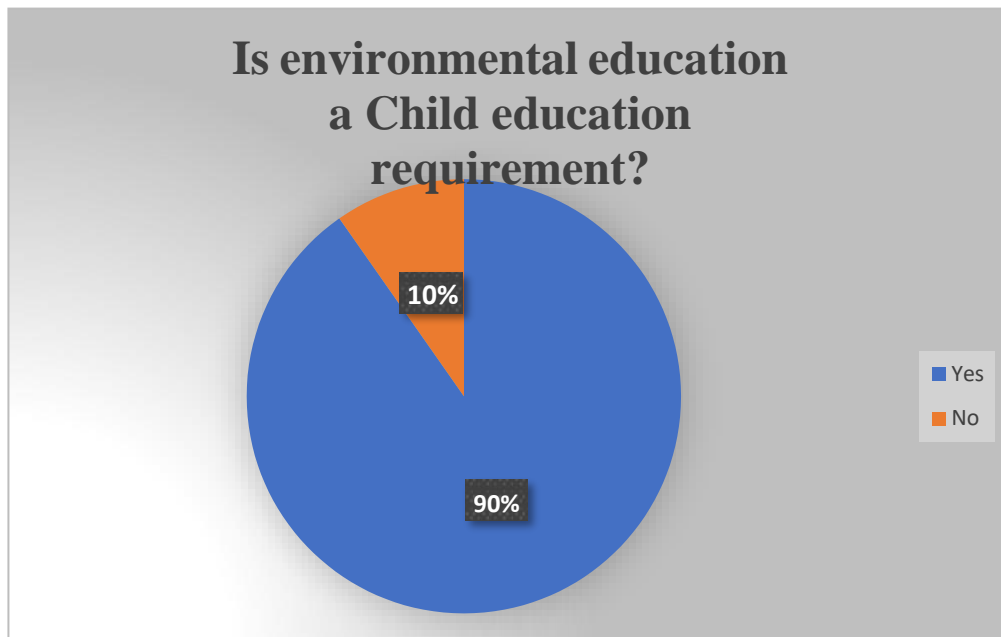
Result analysis Figure 15. Participants view about the need of environmental education from childhood
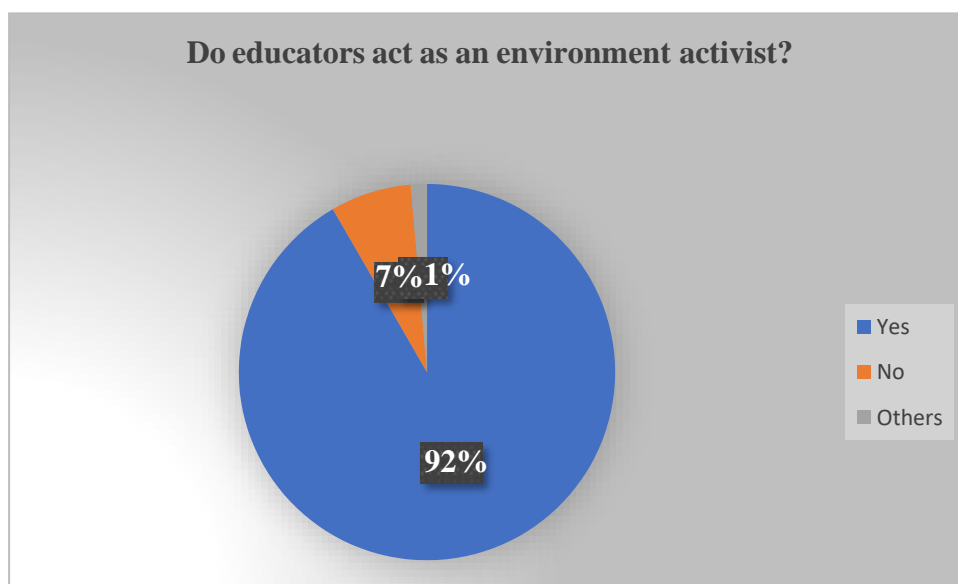
Result analysis Figure 16. Do educators act as an environmental activist?
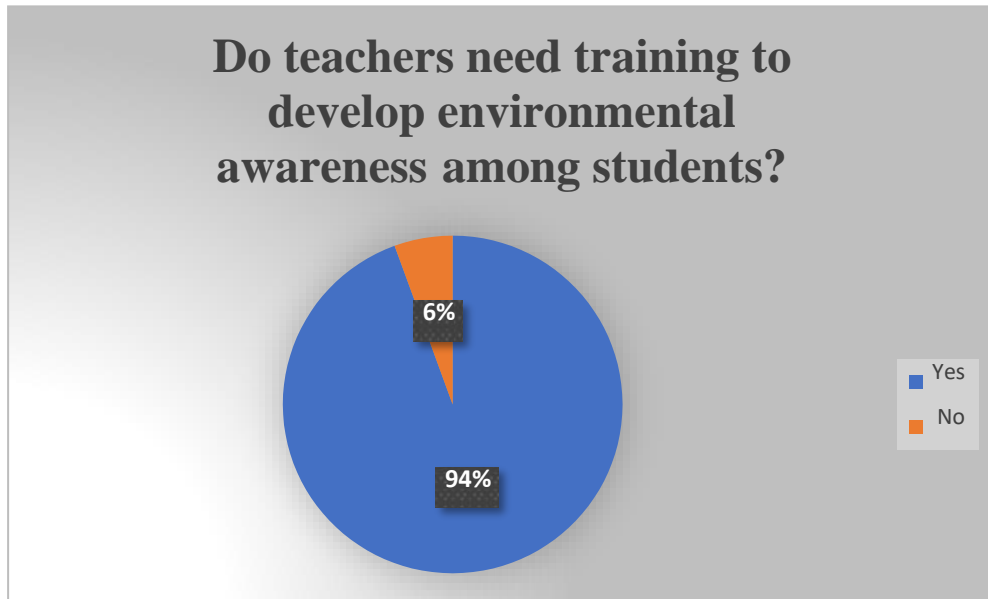
Result analysis Figure 17. Do teachers need training to develop environmental awareness among students?

CHAPTER SIX

DISCUSSION

Distance learning as well as online education can continue as the new normal in education [33]. Nowadays, busy professionals are also increasing various soft skills for their job or industrial needs. In our study, 97% of the participants are smart phone users. Specifically, after the lockdown smartphone usage has increased all across the globe [34]. As per a study, the eyes are most affected by the use of smartphones because the blue light emitted by the screens is responsible for disturbing the sleep cycle. Excessive screen usage was linked with various diseases like high blood pressure, diabetes, vision loss, and joint issues in children and adolescents [35]. But to cope with the new normal, examinations pattern & office work many of us have installed a 24*7 internet service to make ourselves alive during the pandemic. In my study, I found that 86% of the people have a stable internet connection in their homes & 83% of people are familiar with various online meeting platforms for class/meeting purposes. Moreover, 39% of people need internet for more than 5 hrs in a day & out of that 82% of people are flexible and reported good feedback about the online classes/meetings. Though 46% of participants are students and they reported offline space is more effective than online. Many research also reported that, for the student community as well as for the growing learners offline is more effective than online as it is live interactive and the way of learning something is much more impactful in offline space [36]. Online education is a new need but I think we all know that it has no such paperwork. Papers are made from trees. So, by practicing online education, online exam, etc. we can make education and resource consumption very cost-effective which is of utmost necessity for a sustainable future. Moreover, online education can lead to a new horizon for the economy of a specific country [37]. To know more about the concept of climate change among participants a question was also set. 87% of people are aware of various climate change issues whereas 84% of people are aware of the concept of sustainability. 74% are also aware of various sustainable development goals. 75% of people are involved in various environmental protection activities. 86% think that online education is one kind of practice of sustainability and 90% think that environmental education is a need of childhood education also. The role of a teacher gets diversified when it comes to online teaching, he or she needs to be a content creator, subject matter expert, mentor, and course designer too [38]. In a study, it was observed that students who were taught through the blended mode of education i.e. combination of offline and online modes had significantly better results than students who were solely taught in classrooms by traditional methods [39]. Moreover, my study is based on new-age education for sustainability. some questions were set to know the view of participants about the role of educators in environment protection. 92% of participants say that educators may act as environmental activists whereas 94% of people thought that teachers must need training to develop environmental awareness among his/her student's community. As per an article published by Mercedes Varela-Losada, Azucena Arias-Correa & Pedro Vega-Marcote [40], Higher Education needs to be redirected to train citizens to be able to make responsible decisions and act in a sustainable way. This requires educational initiatives promoted by educational institutions to redirect teacher training toward sustainability. In a study performed in Spain, Mercedes Varela-Losada & others have also shown how can teachers be encouraged to commit to sustainability [41]. One article published in the Gurdian showed about protests made by teachers to demand the national curriculum be reformed to make the climate and ecological crisis an educational priority [42].

CHAPTER SEVEN

LIMITATION

Not all teachers are the same. They want to work for our society, for our environment & for our children. But there are so many political, financial, societal as well as infrastructural barriers so they can't work. Further study is required to emphasize these issues and their mitigation for a green world. Moreover, full online education for sustainable practice and its impact on learning or its acceptance in the job market is not reflected in my study. The impact of fully offline, fully online as well as blended learning must be studied separately in a careful way to give an effective and visionary message to every part of our society. On the other hand, pure online is not a solution as a project done by Joana Mall named CO2GLE displays the amount of CO2 emitted on each second to the global visits to Google.com. (https://www.janavirgin.com/CO2/CO2GLE_about.html). This need to be analyzed furthermore.

CHAPTER EIGHT

CONCLUSION

As of now, environment protection is a matter of concern to all the countries of the world. To save the world from rapid degradation, resource consumption and various other issues, teachers can play a very important role in our society. Online education can act as a powerful tool to make our mother Earth sustainable. New-age teachers must be a good leader as well as good administrator. For that purpose, they must need training. Based on my study, a teacher leader must have the following qualities for a sustainable World.

- He/she must be a strategic thinker.
- Must have a mission & vision.
- Well communicator.
- Must have deepened professional knowledge & refine skills.
- He/She must be enthusiastic, respected & viewed by his/her colleagues, hard-working and must have the ability to manage workload.
- A teacher-leader must develop a sense of the value of the environment among his/her team members.
- A teacher-leader must be concerned about various environmental issues to formulate his/her goals.
- A teacher-leader must have the ability to convince all the students of his team to work toward a common goal.
- His/her students must practice some eco-friendly work & practices for the environment.
- He/She must share incidents or case studies that can encourage students to protect the environment.

The teacher who follows the above-mentioned points easily becomes an environmental activist as well as a savior of our mother nature besides his/her academic skill sets. Last but not the least, undoubtedly teachers are the one who can empower/motivate today's youth to meet tomorrow's challenges.

REFERENCES

[1.] WHO Coronavirus Disease (COVID-19) Dashboard. Retrieved on June 3, 2020. From https://covid19.who.int/

[2.] Wadha Naman, Sunita Khatak, Poonam (July 2020) Online versus Offline Mode of Education -Is India ready to meet the challenges of Online Education in lockdown? Journal of Social Sciences. Volume 48; Issue 3; Page No. 404-413

[3.] Pravat Kumar Jena (June 2020). Impact of covid-19 on higher education in India. International Journal of Advanced Education and Research (www.alleducationjournal.com) Volume 5; Issue 3; Page No. 77-81

[4.] John Nycz (Jan 2019). Knowing Where Your Paper Comes from: Sustainability is Critical https://www.woodlandpaper.com/2019/01/where-paper-sustain/

[5.] United Nations Educational Scientific and Cultural Organization (UNESCO), & United Nations Environment Programme (UNEP). (2011). Climate change starters guide book. Paris: an issues guide for education planners and practitioners. ISBN:978-92-3-101001-9

[6.] Apeksha R Kanojiya (Nov 2020): The Impact of Online Learning during Covid-19 Pandemic: Students Perspective Maharashtra, India, International Journal for Research in Applied Science & Engineering Technology (IJRASET) ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.429 , Volume 8 Issue XI

[7.] R. Jadhav, V., R. Aswale, S., & D. Bagul, T. (2020). COVID-19 Era: Students' Role to Look at Problems. International Journal of Research and Review, 7(5),22–27. https://www.ijrrjournal.com/IJRR_Vol.7_Issue.5_May2020/Abstract_IJRR0049.html

[8.] Singh, D., Gautam, A. S., Patni, B., & Nautiyal, A. (2020). Impact assessment if covid-19 outbreak on higher education in India. International Journal of Management (IJM), 11(9), 429– 434. https://doi.org/10.34218/IJM.11.9.2020.040

[9.] Shrivastav, S., Singh, P., & Singh, V. P. (2020). Impact of COVID-19 on Education Systemin India: A Review. ICONIC RESEARCH AND ENGINEERING JOURNALS, 4(1), 1–7. https://issuu.com/irejournals/docs/ire1702399

[10.] Bisht, R.K., Jasola, S. and Bisht, I.P. (2020), "Acceptability and challenges of online higher education in the era of COVID-19: a study of student's 'perspective", Asian Education and Development Studies,
Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/AEDS- 05-2020-0119

[11.] Moore, J. L., Dickson-Deane, C., & Galyen, K. (2011). e-Learning, online learning, and distance learning environments: Are they the same? The Internet and Higher Education, 14(issue 2), 129–135. https://doi.org/10.1016/j.iheduc.2010.10.001.

[12.] Kundu, Dr.Nath Dey.K.(2018), A Contemporary Study on the Flourishing E-learning Scenarios in India, IJCRT Journal, Volume 6, Issue 02, April, https://www.researchgate.net/publication/327671945

[13.] Verma, A., Verma, S., Garg, P., & Godara, R. (2020). Online Teaching During COVID- 14: Perception of Medical Undergraduate Students. Indian Journal of Surgery, 8(3), 299–300. https://doi.org/10.1007/s12262-020-02487-2/Publishedonline:27June2020

[14.] Singhal,S. (2017) 7 ways classroom teaching is better than online education. India Today.https://www.indiatoday.in/educationtoday/featurephilia/story/classroom-teaching- better-thanonline-education-984387-2017-06-23

[15.] Dutta, D. A. (2020). Impact of Digital social media on Indian Higher Education: Alternative Approaches of Online Learning during COVID-19 Pandemic Crisis. International Journal of Scientific and Research Publications, 10(5), 604–6011. https://doi.org/10.29322/IJSRP.10.05.2020.p10169

[16.] Lissak,G.(2018).Adverse physiological and psychological effects of screen time on children and adolescents: Literature review and case study. Environmental Research, 164, 149–157.

[17.] Chang, F. C., Chiu, C. H., Chen, P. H., Miao, N. F., Chiang, J. T., & Chuang, H. Y. (2018). Computer/mobile device screen time of children and their eye care behavior: the roles of risk perception and parenting. Cyberpsychology, Behavior, and Social Networking, 21(3), 179-186.

[18.] Moravec, T., Štěpánek, P., & Valenta, P. (2015). The influence of using e-learning tools on the results of students at the tests. Procedia-Social and Behavioral Sciences, 176, 81-86.

[19.] Liaw, S. S. (2008). Investigating students' perceived satisfaction, behavioral intention, and effectiveness of e-learning: A case study of the Blackboard system. Computers & education, 51(2), 864-873.

[20.] Kulkarni, S. M., & Bhore, N. R. (2019). Assess the Effects of Electronic Gadgets(Television, Mobile Phone and Computer) on Health Status among Secondary School Students in the Selected Districts of Maharashtra, International Journal of Health Sciences and Research, 9(4), 149-155.

[21.] Martin, F., Budhrani, K., Kumar, S., & Ritzhaupt, A. (2019). Award-winning faculty online teaching practices: Roles and competencies. Online Learning, 23(1), 184-205.

[22.] etyawan, Harits. "Blended Method: Online-Offline Teaching And Learning, On Students' Reading Achievement." English Education: Jurnal Tadris Bahasa Inggris 12.1 (2019): 22-33.

[23.] Sun, A., & Chen, X. (2016). Online education and its effective practice: A research review. Journal of Information Technology Education, 15.

[24.] Robert B. Stevenson & Jennifer Nicholls & Hilary Whitehouse (2017): What Is Climate Change Education? DOI 10.1007/s41297-017-0015-9

[25.] Daniel Olsson, N. Gericke & J. Boeve-de Pauw (2022) The effectiveness of education for sustainable development revisited – a longitudinal study on secondary students'action competence for sustainability, Environmental Education Research, 28:3, 405-429, DOI:10.1080/13504622.2022.2033170

[26.] Taylor J., Machado M. (2006) Higher education leadership & management: From conflict to interdependence through strategic planning. Tertiary Education and Management (2006) 12: 137–160, Springer 2006 DOI 10.1007/s11233-006-0003-3

[27.] Shailendra Palvia, Prageet Aeron, Parul Gupta, Diptiranjan Mahapatra, Ratri Parida, Rebecca Rosner & Sumita Sindhi (2018) Online Education: Worldwide Status, Challenges, Trends, and Implications, Journal of Global Information Technology Management, 21:4, 233- 241, DOI: 10.1080/1097198X.2018.1542262

[28.] Tilbury, Daniella. (Jul 2006). Environmental Education for Sustainability: defining the new focus of environmental education in the 1990s, Environmental Education Research: Taylor & Francis online, Pages 195-212. DOI- https://doi.org/10.1080/1350462950010206

[29.] Tilbury, Daniella (2004). Environmental Education for Sustainability: A Force for Change in Higher Education. Higher Education and the Challenge of Sustainability, 2004. ISBN : 978-1-4020-2026-1

[30.] Huckle, John. Environmental education and sustainability: A view from critical theory. Chapter 3 (pp. 43 – 68 from Environmental Education: a pathway to sustainability, John Fien (editor), Deakin University, 1993)

[31.] Bonnett, Michael (2002). Education for sustainability as a frame of mind. Environmental Education Research (2002), Taylor & Francis online. 8(1), pp. 9–20 DOI- https://doi.org/10.1080/13504620600942683

[32.] Tilbury, D., Coleman, V., & Garlick, D. (2005). A National review of environmental education and its contribution to sustainability in Australia: school education. (A National Review of Environmental Education and its Contribution to Sustainability in Australia). Department of the Environment and Heritage.

[33.] Online education is the new normal: https://elearningindustry.com/online-distance- learning-the-new-normal-in-education

[34.] Smartphone usage increases during pandemic: https://indianexpress.com/article/technology/tech-news-technology/smartphone-usage-2020- increase-mental-health-worry-vivo-study-7103348/

[35.] Lissak,G.(2018).Adverse physiological and psychological effects of screen time on children and adolescents: Literature review and case study. Environmental Research, 164, 149–157.

[36.] Padmalini Singh, Rupesh Sinha, Wei Lun Koay, Kok Ban Teoh, Prajna Nayak5, Chung Hong Lim6, Avinas Kumar Dubey, Abhijit Das, Iqbal Faturrahman, DwiNita Aryani (2021) International Journal of Tourism & Hospitality in Asia Pasific (IJTHAP); Vol. 4 No. 3, 102- 114.

[37.] Corlane Barclay, Derrick Logan (2013): Towards an Understanding of the Implementation& Adoption of Massive Online Open Courses (MOOCs) in a Developing Economy Context; Proceedings of SIG GlobDev Sixth Annual Workshop, Milano, Italy; 1-14

[38.] Martin, F., Budhrani, K., Kumar, S., & Ritzhaupt, A. (2019). Award-winning faculty online teaching practices: Roles and competencies. Online Learning, 23(1), 184-205.

[39.] Setyawan, Harits. "Blended Method: Online-Offline Teaching And Learning, On Students' Reading Achievement." English Education: Jurnal Tadris Bahasa Inggris 12.1 (2019): 22-33.

[40.] Varela-Losada, M., Arias-Correa, A., Vega-Marcote, P. (2018). Training Teachers Committed to Climate Change Mitigation. In: Azeiteiro, U., Leal Filho, W., Aires, L. (eds) Climate Literacy and Innovations in Climate Change Education. Climate Change Management. Springer, Cham. https://doi.org/10.1007/978-3-319-70199-8_18

[41.] Varela-Losada, Mercedes, Azucena Arias-Correa, Uxío Pérez-Rodríguez, and Pedro Vega- Marcote. 2019. "How Can Teachers Be Encouraged to Commit to Sustainability? Evaluation of a Teacher-Training Experience in Spain" Sustainability 11, no. 16: 4309. https://doi.org/10.3390/su11164309

[42.] Teachers to join climate protests to demand curriculum reform- https://www.theguardian.com/environment/2019/feb/21/teachers-to-join-climate-protests-to- demand-curriculum-reform

Image references

[1.] Difference between traditional education & online education. https://kajabi.com/blog/top- 20-advantages-of-online-learning-and-digital-courses

[2.] Advantages & disadvantages of online education. https://quranforkids.com/benefits- drawbacks-online-learning/

[3.] Sustainable Development Goals https://www.un.org/sustainabledevelopment/blog/2015/12/sustainable-development-goals-kick-off-with-start-of-new-year/

[4.] Causes & effects of climate change https://www.globalgiving.org/learn/cost-to-end-climate- change/

[5.] District-wise map of West Bengal, India https://images.app.goo.gl/jnhLBpcjZbPAAtqz6

ANNEXURES

Response Sheet part-1 (Participants name, profession, location)

What is your name?	What is your age?	Are you a student/ Working educator/others?	You are from which location?
Debashrita Adak	18+	Student	Howrah
Bidisha Ghosh	17	Student	Howrah, kadamtala
Sudeshna Shee	17	Student	Howrah
Sagnika Pal	18	Student	Howrah
Sayantani Pal	25	Working educator	Howrah
Sagnikbrata Mitra	18	Student	Howrah
Saheli Batabyal	17	Student	Howrah
Soham Gupta	19	Student	Howrah Maidan
Ritika Hazra	18	Student	Tantipara
Samik Banerjee	27	Working educator	Howrah, West Bengal
Shatavisha Neogi	18+	Student	Howrah, Kadamtala
Debarati	16	Student	Howrah
Sreya Pal.	18	Yes,a Student	Ramrajatala Howrah
Rupanwita Palodhi	18	Student	Howrah
Parnali Bhattacharjee	27	Working educator	Howrah
Debobrata Basu	40	Working educator	Kolkata
Melody Mukherjee	18	Student	Howrah
Prathama mohish	17	Student	Howrah
Debojyoti Panda	40	Working educator	Burdwan
Anuva Das	35	Working educator	Siliguri
Prasanta Pal	58	Working educator	Howrah
Shankhapani Dutta	72	Others	Kolkata India
Rohit Kumar Pal	27	Working educator	Howrah, India
Shreya Dasgupta	23	Student	KALYANI, NADIA, WEST BENGAL
Sanjoy Dey	45	Working educator	Purulia, West Bengal
Debarpita Datta	22	Student	Kolkata
Shabnam Dutta	22	Student	Kolkata
Anwesha Pal	35	Others	Hooghly
Prantika Deb	38	Others	Howrah
Partha Pratim Bajpayee	45	Working educator	East Midnapore, West Bengal
Sanatan Ganguly	55	Working educator	Hooghly
Ahana Mallick	23	student	Kolkata
Diptarka Roy	34	Working educator	Kolkata
Chandana Banerjee	28	Working educator	Kolkata
Rohit Pal	28	Working educator	Howrah/India
Sayan Basak	35	working educator	Burdwan
Indrani Mukherjee	36	Others	Hooghly

Prachi Sharma	28	Student	Hooghly, West Bengal, India
Karabi Mukherjee	38	Working educator	Kolkata
Chandrakanta Pal	45	Working educator	Kolkata
Sreyoshi Banerjee	28	Student	Kolkata
Pooja Bhandari	24	Student	Malda, West Bengal
Sangita Mondal	39	Others	Burdwan
Satyajit Das	42	Working educator	Kolkata
Krishna Ghosh	25	Student	Medinipur, West Bengal
Debayan Pal	30	Working educator	Medinipur
Bikram Pal	24	Student	Howrah
Suman Chatterjee	47	Working educator	South 24 Parganas
Aheri Bhattacharya	29	WORKING PROFESSIONAL-Research scholar cum educator	kOLKATA
Puja Banik	22	Students	Siliguri
Shreyasi Ghosh	35	Others	South 24 parganas
Biplab Sarkar	32	Working educator	Kolkata
Taniya Mitra	25	Student	Medinipur
Debayan Pal	30	Working educator	Medinipur
Debarati Saha	26	Student	Kolkata
Sandipta Majumdar	29	Student	Burdwan
Sumanjyoti Pahari	38	Working educator	South 24 Parganas
Preety Mandal	30	Working educator	Kolkata
Anjali Banerjee	28	Working educator	Kolkata
Champarani Dey	31	Working educator	Malda
Subhankar Sarkar	32	Working educator	Howrah, India
Surashree Rakshit	37	Others	Burdwan
Sumi Dey	27	Student	Malda, India
Dharmendra Hansda	24	Student	Purulia
Sohan Murmu	27	Working educator	Purulia
Rituparna Tudu	22	Student	Purulia, Inida
Hrichik Bardhan	29	student	Medinipur
Payel Das	28	Others	Howrah, India
Aakash Ghosh	48	Working educator	Burdwan
Md Selim	38	Working educator	Howrah, India
Abdus Salam	23	Student	Murshidabad
Satyajit Baroi	26	Student	Malda

RESPONSE SHEET PART-2

(about smartphones, stable internet connection, familiarity with online classes/meetings)

What is your name?	Do you have a smartphone?	Do you have a stable internet connection?	Are you familiar with onlineclasses/ meetings?
Debashrita Adak	Yes	Yes	Yes
Bidisha Ghosh	Yes	Yes	No
Sudeshna Shee	Yes	Yes	Yes
Sagnika Pal	Yes	Yes	Yes
Sayantani Pal	Yes	Yes	Yes
Sagnikbrata Mitra	Yes	Yes	Yes
Saheli Batabyal	Yes	Yes	No
Soham Gupta	Yes	Yes	Yes
Ritika Hazra	Yes	Yes	Yes
Samik Banerjee	Yes	Yes	Yes
Shatavisha Neogi	Yes	Yes	Yes
Debarati	Yes	Yes	No
Sreya Pal.	Yes	Yes	Yes
Rupanwita Palodhi	Yes	Yes	No
Parnali Bhattacharjee	Yes	Yes	Yes
Debobrata Basu	Yes	Yes	Yes
Melody Mukherjee	Yes	Yes	Yes
Prathama mohish	Yes	Yes	Yes
Debojyoti Panda	Yes	Yes	Yes
Anuva Das	Yes	Yes	Yes
Prasanta Pal	Yes	Yes	No
Shankhapani Dutta	Yes	No	No
Rohit Kumar Pal	Yes	Yes	Yes
Shreya Dasgupta	Yes	Yes	Yes
Sanjoy Dey	Yes	No	No
Debarpita Datta	Yes	Yes	Yes
Shabnam Dutta	Yes	Yes	Yes
Anwesha Pal	Yes	Yes	Yes
Prantika Deb	Yes	Yes	Yes
Partha Pratim Bajpayee	Yes	Yes	Yes
Sanatan Ganguly	Yes	Yes	Yes
Ahana Mallick	Yes	Yes	Yes
Diptarka Roy	Yes	Yes	Yes
Chandana Banerjee	Yes	Yes	Yes
Rohit Pal	Yes	Yes	Yes
Sayan Basak	Yes	Yes	Yes
Indrani Mukherjee	Yes	Yes	Yes

Prachi Sharma	Yes	Yes	Yes
Karabi Mukherjee	Yes	Yes	Yes
Chandrakanta Pal	Yes	Yes	Yes
Sreyoshi Banerjee	Yes	Yes	Yes
Pooja Bhandari	Yes	No	Yes
Sangita Mondal	Yes	No	Yes
Satyajit Das	Yes	Yes	Yes
Krishna Ghosh	Yes	Yes	Yes
Debayan Pal	Yes	Yes	Yes
Bikram Pal	Yes	Yes	Yes
Suman Chatterjee	Yes	Yes	Yes
Aheri Bhattacharya	Yes	Yes	Yes
Puja Banik	Yes	Yes	Yes
Shreyasi Ghosh	Yes	Yes	Yes
Biplab Sarkar	Yes	Yes	Yes
Taniya Mitra	Yes	Yes	Yes
Debayan Pal	Yes	Yes	Yes
Debarati Saha	Yes	Yes	Yes
Sandipta Majumdar	Yes	Yes	Yes
Sumanjyoti Pahari	Yes	Yes	Yes
Preety Mandal	Yes	Yes	Yes
Anjali Banerjee	Yes	No	No
Champarani Dey	Yes	Yes	Yes
Subhankar Sarkar	Yes	Yes	Yes
Surashree Rakshit	Yes	Yes	Yes
Sumi Dey	Yes	No	Yes
Dharmendra Hansda	Yes	No	Yes
Sohan Murmu	No	No	No
Rituparna Tudu	No	No	No
Hrichik Bardhan	Yes	Yes	Yes
Payel Das	Yes	Yes	No
Aakash Ghosh	Yes	Yes	No
Md Selim	Yes	No	Yes
Abdus Salam	Yes	Yes	Yes
Satyajit Baroi	Yes	Yes	Yes

RESPONSE SHEET PART-3

(about online activity, online education system & effectivity of classroom system)

What is your name?	Your online/internet activity in a day is -	What do you think aboutthe online education system? Is it -	Which one is better & moreeffective in your opinion?
Debashrita Adak	More than 5 hrs	Good	Offline classroom
Bidisha Ghosh	5 hrs	Bad	Offline classroom
Sudeshna Shee	More than 5 hrs	Bad	Offline classroom
Sagnika Pal	More than 5 hrs	Good	Offline classroom
Sayantani Pal	More than 5 hrs	Bad	Offline classroom
Sagnikbrata Mitra	More than 5 hrs	Bad	Offline classroom
Saheli Batabyal	5 hrs	Good	Offline classroom
Soham Gupta	More than 5 hrs	Bad	Offline classroom
Ritika Hazra	More than 5 hrs	Good	Offline classroom
Samik Banerjee	More than 5 hrs	Good	Online classroom
Shatavisha Neogi	3 hrs	Good	Offline classroom
Debarati	3 hrs	Good	Offline classroom
Sreya Pal.	More than 5 hrs	Bad	Offline classroom
Rupanwita Palodhi	3 hrs	Bad	Offline classroom
Parnali Bhattacharjee	More than 5 hrs	Good	Offline classroom
Debobrata Basu	More than 5 hrs	Good	Online classroom
Melody Mukherjee	5 hrs	Good	Offline classroom
Prathama mohish	5 hrs	Good	Offline classroom
Debojyoti Panda	5 hrs	Good	Online classroom
Anuva Das	3 hrs	Good	Online classroom
Prasanta Pal	5 hrs	Bad	Offline classroom
Shankhapani Dutta	3 hrs	Bad	Offline classroom
Rohit Kumar Pal	More than 5 hrs	Good	Online classroom
Shreya Dasgupta	More than 5 hrs	Good	Online classroom
Sanjoy Dey	1 hr	Good	Offline classroom
Debarpita Datta	More than 5 hrs	Good	Offline classroom
Shabnam Dutta	3 hrs	Bad	Offline classroom
Anwesha Pal	5 hrs	Good	Online classroom
Prantika Deb	3 hrs	Good	Offline classroom
Partha Pratim Bajpayee	5 hrs	Good	Online classroom
Sanatan Ganguly	More than 5 hrs	Good	Offline classroom
Ahana Mallick	More than 5 hrs	Good	Online classroom
Diptarka Roy	More than 5 hrs	Good	Online classroom
Chandana Banerjee	5 hrs	Good	Offline classroom
Rohit Pal	More than 5 hrs	Good	Offline classroom
Sayan Basak	More than 5 hrs	Good	Offline classroom

Indrani Mukherjee	More than 5 hrs	Good	Online classroom
Prachi Sharma	More than 5 hrs	Good	Offline classroom
Karabi Mukherjee	More than 5 hrs	Good	Offline classroom
Chandrakanta Pal	5 hrs	Good	Offline classroom
Sreyoshi Banerjee	More than 5 hrs	Good	Offline classroom
Pooja Bhandari	5 hrs	Bad	Offline classroom
Sangita Mondal	3 hrs	Good	Offline classroom
Satyajit Das	More than 5 hrs	Good	Online classroom
Krishna Ghosh	5 hrs	Good	Online classroom
Debayan Pal	5 hrs	Good	Offline classroom
Bikram Pal	5 hrs	Good	Offline classroom
Suman Chatterjee	5 hrs	Good	Offline classroom
Aheri Bhattacharya	5 hrs	Good	Offline classroom
Puja Banik	3 hrs	Good	Online classroom
Shreyasi Ghosh	5 hrs	Good	Offline classroom
Biplab Sarkar	More than 5 hrs	Good	Online classroom
Taniya Mitra	5 hrs	Good	Offline classroom
Debayan Pal	5 hrs	Good	Offline classroom
Debarati Saha	5 hrs	Good	Online classroom
Sandipta Majumdar	5 hrs	Good	Online classroom
Sumanjyoti Pahari	5 hrs	Good	Online classroom
Preety Mandal	5 hrs	Good	Online classroom
Anjali Banerjee	5 hrs	Good	Offline classroom
Champarani Dey	5 hrs	Good	Online classroom
Subhankar Sarkar	5 hrs	Good	Offline classroom
Surashree Rakshit	5 hrs	Good	Offline classroom
Sumi Dey	5 hrs	Good	Online classroom
Dharmendra Hansda	3 hrs	Good	Offline classroom
Sohan Murmu	1 hr	Bad	Offline classroom
Rituparna Tudu	1 hr	Bad	Offline classroom
Hrichik Bardhan	5 hrs	Good	Online classroom
Payel Das	5 hrs	Good	Offline classroom
Aakash Ghosh	More than 5 hrs	Good	Offline classroom
Md Selim	5 hrs	Good	Offline classroom
Abdus Salam	More than 5 hrs	Good	Offline classroom
Satyajit Baroi	More than 5 hrs	Good	Offline classroom

RESPONSE SHEET PART-4

(about climate change awareness, familiarity with sustainability & its goals)

What is your name?	Are you aware about climate change issues?	Are you familiar withthe term sustainability?	Are you familiar with the goals of sustainability?
Debashrita Adak	Yes	Yes	Yes
Bidisha Ghosh	No	Yes	Yes
Sudeshna Shee	Yes	Yes	Yes
Sagnika Pal	Yes	Yes	Yes
Sayantani Pal	Yes	Yes	Yes
Sagnikbrata Mitra	Yes	Yes	Yes
Saheli Batabyal	Yes	No	Yes
Soham Gupta	No	Yes	Yes
Ritika Hazra	No	No	No
Samik Banerjee	Yes	Yes	Yes
Shatavisha Neogi	Yes	Yes	Yes
Debarati	No	No	No
Sreya Pal.	Yes	No	Yes
Rupanwita Palodhi	Yes	Yes	Yes
Parnali Bhattacharjee	Yes	Yes	Yes
Debobrata Basu	No	Yes	No
Melody Mukherjee	Yes	Yes	No
Prathama mohish	No	Yes	No
Debojyoti Panda	Yes	Yes	Yes
Anuva Das	Yes	No	No
Prasanta Pal	Yes	No	No
Shankhapani Dutta	Yes	Yes	Yes
Rohit Kumar Pal	Yes	Yes	Yes
Shreya Dasgupta	No	Yes	Yes
Sanjoy Dey	Yes	Yes	No
Debarpita Datta	Yes	Yes	Yes
Shabnam Dutta	No	A little	No
Anwesha Pal	Yes	Yes	Yes
Prantika Deb	Yes	Not so	No
Partha Pratim Bajpayee	Yes	Yes	Yes
Sanatan Ganguly	Yes	Yes	Yes
Ahana Mallick	Yes	Yes	Yes

Diptarka Roy	Yes	Yes	Yes
Chandana Banerjee	Yes	Yes	Yes
Rohit Pal	Yes	Yes	Yes
Sayan Basak	Yes	Yes	Yes
Indrani Mukherjee	Yes	Yes	Yes
Prachi Sharma	Yes	Yes	Yes
Karabi Mukherjee	Yes	Yes	Yes
Chandrakanta Pal	Yes	Yes	Yes
Sreyoshi Banerjee	Yes	Yes	Yes
Pooja Bhandari	Yes	Yes	No
Sangita Mondal	Yes	No	No
Satyajit Das	Yes	Yes	Yes
Krishna Ghosh	Yes	Yes	Yes
Debayan Pal	Yes	Yes	Yes
Bikram Pal	Yes	Yes	Yes
Suman Chatterjee	Yes	Yes	Yes
Aheri Bhattacharya	Yes	Yes	Yes
Puja Banik	Yes	Yes	Yes
Shreyasi Ghosh	Yes	Yes	No
Biplab Sarkar	Yes	Yes	Yes
Taniya Mitra	Yes	Yes	Yes
Debayan Pal	Yes	Yes	Yes
Debarati Saha	Yes	Yes	Yes
Sandipta Majumdar	Yes	Yes	Yes
Sumanjyoti Pahari	Yes	No	Yes
Preety Mandal	Yes	Yes	Yes
Anjali Banerjee	Yes	No I do not have any idea	No
Champarani Dey	Yes	Yes	Yes
Subhankar Sarkar	Yes	Yes	No
Surashree Rakshit	Yes	Yes	No
Sumi Dey	Yes	Yes	Yes
Dharmendra Hansda	Yes	No	No
Sohan Murmu	Yes	No	No
Rituparna Tudu	Yes	No	No
Hrichik Bardhan	No	Yes	Yes
Payel Das	Yes	Yes	Yes
Aakash Ghosh	Yes	Yes	Yes
Md Selim	Yes	Yes	Yes
Abdus Salam	Yes	Yes	Yes
Satyajit Baroi	Yes	Yes	Yes

RESPONSE SHEET PART-5

(Participants and their activity for our environment)

What is yourname?	Do you perform anykind of activity to save our environment?	If yes, please mention it in one or two lines. Which kind of environmental activitieshave you performed?
Debashrita Adak	Yes	Plant trees in different occasions, using energy saving products
Bidisha Ghosh	No	
Sudeshna Shee	Yes	1.Planting trees 2. Not wasting water
Sagnika Pal	No	
Sayantani Pal	Yes	Using recyclable plastics, using biodegradable products
Sagnikbrata Mitra	Yes	Not using plastic bags
Saheli Batabyal	No	
Soham Gupta	Yes	I plant trees in my home I know it is a very small contribution but if everyone contribute it would be so big
Ritika Hazra	No	
Samik Banerjee	Yes	I have little garden beside my house. I love to plant new trees there.
Shatavish aNeogi	Yes	I'm trying to plant more plants like, Mint, Basil, Coriander, Aloevera and other flower's plants in our roof top to create a good supply of oxygen. And always try to save water. Idon't use any kind of Air conditioner or purifier machine. I'm use to with ceiling fan only 😄
Debarati	No	
Sreya Pal.	Yes	Participating in some environmental activities...or tree plantations...
Rupanwita Palodhi	No	
Parnali Bhattacharjee	No	
Debobrata Basu	No	
Melody Mukherjee	No	
Prathama mohish	Yes	Using recyclable plastics
Debojyoti Panda	Yes	Planting trees
Anuva Das	No	

Prasanta Pal	No	
Shankhapani Dutta	No	
Rohit Kumar Pal	Yes	I do not use plastic bags. I always try to use disposable elements.
Shreya Dasgupta	Yes	Practicing the way to eliminate the usage of non-biodegradable pollutants in daily households
Sanjoy Dey	No	
Debarpita Datta	No	
Shabnam Dutta	Yes	Making environment trash free, using recyclable plastic and tree plantation
Anwesha Pal	Yes	1. Try to reuse my house products, 2. I don't use non-biodegradable plastics
Prantika Deb	Yes	Try to give proper lesson to my kids
Partha Pratim Bajpayee	Yes	In my business activity, I try to follow some manners that are good for our environment
Sanatan Ganguly	Yes	Trying to develop sense of environment among my kids by some practices
Ahana Mallick	Yes	Handover different kind of waste materials to the respective authority
Diptarka Roy	No	
Chandana Banerjee	Yes	Tree plantation in my house and sometimes in locality based on some occasion
Rohit Pal	Yes	
Sayan Basak	Yes	Plant trees, Don't use plastic bags
Indrani Mukherjee	Yes	I am using separate bins for both biodegradable & non-biodegradable plastics in my hose & advising my children to follow the same
Prachi Sharma	Yes	Not using car to reduce my carbon footprint
Karabi Mukherjee	Yes	I am using biodegradable plastics for my households
Chandrakanta Pal	Yes	I am trying to plant trees in different areas when I usually get time
Sreyoshi Banerjee	Yes	I do not use plastic bags; I always try to use biodegradable elements
Pooja Bhandari	Yes	Using Biodegradable products
Sangita Mondal	Yes	Plant trees on various occasions
Satyajit Das	Yes	I am an IT professional. Therefore, trying to recycle e-wastes generated from time totime
Krishna Ghosh	Yes	I am taking part in different kind of environmental campaigning programmes organized by our school/university from time to time
Debayan Pal	Yes	Apart from my job, I am running small business of biodegradable products
Bikram Pal	Yes	I am maintaining a home garden of various crops to meet the goal of sustainable agriculture
Suman Chatterjee	Yes	I am trying to remove plastics from my locality when I actually get time apart from my job

Aheri Bhattacharya	Yes	I am trying to use biodegradable products for my daily use
Puja Banik	Yes	I represent my college in various seminar/conferences about their activity to save our environment
Shreyasi Ghosh	Yes	I am trying to develop habits among my childrens to save the environment in a responsible manner
Biplab Sarkar	Yes	Always trying to recycle various kind of non-biodegradable products from my house
Taniya Mitra	No	I am trying to take part in various environmental campaigning programs from my locality/ area whenever I get time
Debayan Pal	Yes	Apart from my job, I am running small business of biodegradable products
Debarati Saha	Yes	Plant trees in various part of my locality whenever I get time
Sandipta Majumdar	Yes	I am doing postering about various environmental issues in my locality/area whenever I get time
Sumanjyoti Pahari	Yes	I am trying to develop a roof top garden in my house
Preety Mandal	Yes	I am trying to plant trees in my location whenever I get time
Anjali Banerjee	No	I am trying to use various kind of biodegradable products for my various purposes
Champarani Dey	Yes	Apart from my job I am doing a small business with various biodegradable products to develop sense of sustainability among people
Subhankar Sarkar	Yes	I am not using plastic bags for any kind of purposes
Surashree Rakshit	Yes	I am trying to educate my children about environment protection & they are doing several activities for it
Sumi Dey	Yes	Yes I am presenting various environmental issues in public seminar/workshops to aware people
Dharmendra Hansda	Yes	I am not using any kind of vehicles which is controlled by fuel
Sohan Murmu	Yes	I am a farmer so I am trying to recycle crop residues
Rituparna Tudu	No	
Hrichik Bardhan	Yes	I am not eating fish & meat
Payel Das	Yes	I am trying to give proper lesson to my children so that he can actively take part in environment protection
Aakash Ghosh	Yes	I hand over various kind of e wastes/ non biodegradable wastes to the respective authority to save our environment
Md Selim	Yes	I do not use non-biodegradable products
Abdus Salam	Yes	I am presenting my college/university in different seminars/webinars about their environmental activities
Satyajit Baroi	Yes	Using recyclable products

RESPONSE SHEET PART-6

(Response about online classes, environmental education, educators as climate activist)

What is your name?	Do you think that online classes/activities are wayout of climate change as they are paperless?	Do you think that environmental education should be mandatory fromthe very beginning of school education?	Do you feel that school educators/college educators may act as an environment activist through proper administration & leadership skills?
Debashrita Adak	Yes	Yes	Yes
Bidisha Ghosh	Yes	Yes	Yes
Sudeshna Shee	Yes	Yes	Yes
Sagnika Pal	No	Yes	No
Sayantani Pal	Yes	Yes	Yes
Sagnikbrata Mitra	Yes	Yes	Yes
Saheli Batabyal	Yes	Yes	Yes
Soham Gupta	Yes	Yes	Yes
Ritika Hazra	Yes	Yes	Yes
Samik Banerjee	Yes	Yes	Yes
Shatavisha Neogi	Yes	Yes	Yes
Debarati	No	Yes	No
Sreya Pal.	Yes	Yes	Yes
Rupanwita Palodhi	Yes	Yes	Yes
Parnali Bhattacharjee	No	Yes	Yes
Debobrata Basu	Yes	No	No
Melody Mukherjee	Yes	Yes	Yes
Prathama mohish	Yes	Yes	Yes
Debojyoti Panda	Yes	Yes	Yes
Anuva Das	No	No	No
Prasanta Pal	No	Yes	Yes
Shankhapani Dutta	Yes	Yes	Yes
Rohit Kumar Pal	Yes	Yes	Yes
Shreya Dasgupta	Yes	Yes	Yes
Sanjoy Dey	No	No	No
Debarpita Datta	No	Yes	Yes
Shabnam Dutta	Not sure	Yes	Yes
Anwesha Pal	Yes	Yes	Yes
Prantika Deb	Yes	Yes	Yes
Partha Pratim Bajpayee	Yes	Yes	Yes
Sanatan Ganguly	Yes	Yes	Yes

Ahana Mallick	Yes	Yes	Yes
Diptarka Roy	Yes	No	Yes
Chandana Banerjee	Yes	Yes	Yes
Rohit Pal	Yes	Yes	Yes
Sayan Basak	Yes	Yes	Yes
Indrani Mukherjee	Yes	Yes	Yes
Prachi Sharma	Yes	Yes	Yes
Karabi Mukherjee	Yes	Yes	Yes
Chandrakanta Pal	Yes	Yes	Yes
Sreyoshi Banerjee	Yes	Yes	Yes
Pooja Bhandari	Yes	No	Yes
Sangita Mondal	Yes	Yes	Yes
Satyajit Das	Yes	Yes	Yes
Krishna Ghosh	Yes	Yes	Yes
Debayan Pal	Yes	Yes	Yes
Bikram Pal	Yes	Yes	Yes
Suman Chatterjee	Yes	Yes	Yes
Aheri Bhattacharya	Yes	Yes	Yes
Puja Banik	Yes	Yes	Yes
Shreyasi Ghosh	Yes	Yes	Yes
Biplab Sarkar	Yes	Yes	Yes
Taniya Mitra	Yes	No	Yes
Debayan Pal	Yes	Yes	Yes
Debarati Saha	Yes	Yes	Yes
Sandipta Majumdar	Yes	Yes	Yes
Sumanjyoti Pahari	Yes	Yes	Yes
Preety Mandal	Yes	Yes	Yes
Anjali Banerjee	Yes	Yes	Yes
Champarani Dey	Yes	Yes	Yes
Subhankar Sarkar	Yes	Yes	Yes
Surashree Rakshit	Yes	Yes	Yes
Sumi Dey	Yes	Yes	Yes
Dharmendra Hansda	Yes	Yes	Yes
Sohan Murmu	No idea	Yes	No idea
Rituparna Tudu	No	Yes	Yes
Hrichik Bardhan	Yes	Yes	Yes
Payel Das	Yes	Yes	Yes
Aakash Ghosh	Yes	No	Yes
Md Selim	Yes	Yes	Yes
Abdus Salam	Yes	Yes	Yes
Satyajit Baroi	Yes	Yes	Yes

RESPONSE SHEET PART-7

(Views about educators as leaders & leadership skills)

What is your name?	Do teachers need training to develop environment alawareness among students?	Which kind of leadership/administration skills are required beside academic skillsets to formulate environmental responsibility amongstudents? Write your answer in one or two points/sentences.
Debashrita Adak	Yes	
Bidisha Ghosh	Yes	Less usage of plastic and do planting
Sudeshna Shee	Yes	Anything about environmental activity.
Sagnika Pal	Yes	
Sayantani Pal	Yes	
Sagnikbrata Mitra	Yes	Having a good sense of what's right and wrong, standing for what is right, encouraging each other to do the right things
Saheli Batabyal	Yes	Perhaps the most important skill a leader needs — and what really distinguishes leaders from managers — is to be able tothink strategically.
Soham Gupta	Yes	Through the text books environmental responsibility is given but we need a separate practical course for this awareness
Ritika Hazra	Yes	Plant more trees
Samik Banerjee	Yes	1.Communication 2. Problem solving 3.Creativity 4.Decision Making
Shatavisha Neogi	Yes	I think that everyone should learn about environment. As a student of Envs. I think we are very knowledgeable but not applicable person. So I think as the other boards (CBSC and ICSC)our WB board also can include a book of EVS since class 5. And more survey and eco-friendly activities can change our mindset. 😄
Debarati	No	Nothing
Sreya Pal.	Yes	Having the potential of understanding of what is right or wrong step for save the environment or taking the environmental responsibility.On that way student also grow there understanding or will make the bond between them and the Nature. When they will start realising about the environmental responsibility by these steps from the respected teacher community.
Rupanwita Palodhi	Yes	

Parnali Bhattacharjee	Yes	To share incidents that can encourage students to protect environment
Debobrata Basu	Yes	1. Vision, 2. Mission
Melody Mukherjee	Yes	I don't know
Prathama mohish	Yes	Good
Debojyoti Panda	Yes	1. Communication, 2. Teamwork, 3. Multitasking
Anuva Das	No	Its a matter of sense, nothing is required
Prasanta Pal	No	Faculty should have the ability to motivate his/her students for the sake of environment
Shankhapani Dutta	Yes	A teacher must practice the process of sense development among his/her students beside his/her academic capability
Rohit KumarPal	Yes	A teacher must be knowledgeable about various environmental issuesso that he/she can develop the sense of environmental awareness among his/her students
Shreya Dasgupta	Yes	communication skill, social awareness skills
Sanjoy Dey	No	I think its completely a different job
Debarpita Datta	Yes	Organization of awareness camps, making habit in student s from beginning
Shabnam Dutta	Yes	Make the students understand the cons of human activities in simple language so that the students come forward next time.
Anwesha Pal	Yes	I think it is not one person's job. For a greater result, multiple people needs to work together and they actually need to focus on small projects to get success.
Prantika Deb	Yes	He/She needs to aware about the environmental issues and give lesson accordingly
Partha Pratim Bajpayee	Yes	They should follow some ethical principles regarding our environment and they must try to implement them within their student community
Sanatan Ganguly	Yes	They must know the problem. They need to identify the root cause and have proper strategic mindset as well as skillset to solve the problem out
Ahana Mallick	Yes	1. A teacher must be compassionate about his/her are of awareness work 2. He/She must focus about the outcome among his/her students
Diptarka Roy	Yes	He/She must develop the idea of strong discipline about daily habits among his/her students
Chandana Banerjee	Yes	His/her students must practice some eco friendly work & practices for the environment
Rohit Pal	Yes	He/She must develop the idea of environmental problems and future of environment as well as Earth among them. So they can feel the need to save our environment.
Sayan Basak	Yes	He/She must be visionary abut his/her student community about goals

Indrani Mukherjee	Yes	He/She must be strict, disciplined about the activities of his/her students
Prachi Sharma	Yes	He/She must be strategic to achieve his/her goals
Karabi Mukherjee	Yes	He/She must have an idea to formulate any kind of goal to complete his/her objectives
Chandrakanta Pal	Yes	He/She must be well planned for his/her goals
Sreyoshi Banerjee	Yes	Leaders must have vision and mission to obtain their goals
Pooja Bhandari	Yes	Must be visionary about his/her goals
Sangita Mondal	Yes	he/she must be strategic/influential to obtain his goals
Satyajit Das	Yes	A leader must be visionary to complete his/her goals in the concerned field
Krishna Ghosh	Yes	A leader must be disciplined in various activities to complete his/her specific goals
Debayan Pal	Yes	A leader must be a motivator to his/her team members to complete his/her own goals
Bikram Pal	Yes	Must be a good listener to his/her team members for solving the problems arise
Suman Chatterjee	Yes	The skill that is required is quality of leadership. He/She must be strategic to complete his/her goals
Aheri Bhattacharya	Yes	A teacher/leader must be strict to complete his goals
Puja Banik	Yes	The major administrative skillset required are- time to time data collection, analysis & formulation of the data and represent them through a proper way
Shreyasi Ghosh	Yes	Leadership skill that is required to complete a specific task is strict about vision, mission and goals
Biplab Sarkar	Yes	a leader must be a concerned about various environmental issues to formulate his/her goals
Taniya Mitra	Yes	Strong communicators, Focus on collaboration, adaptable, engaging, real world learners as well
Debayan Pal	Yes	A leader must be a motivator to his/her team members to complete his/her own goals
Debarati Saha	Yes	A leader must develop the sense of value of environment among his/her team members
Sandipta Majumdar	Yes	A leader must be a good philosopher about the outcomes of his/her own karma
Sumanjyoti Pahari	Yes	A leader must be a good communicator
Preety Mandal	Yes	A leader must be good to formulate strategy
Anjali Banerjee	Yes	A leader must be specific to obtain his project goals
Champarani Dey	Yes	Leader must have specific vision & mission to complete his/her own goals

Subhankar Sarkar	Yes	A leader must have strong communication, schedule maintainence skills and he/she must be strong to handle his/her team that they are working for common goal
Surashree Rakshit	Yes	A teacher-leader must be visionary
Sumi Dey	Yes	A teacher must be knowlegeable about various kind of environmental issues
Dharmendra Hansda	Yes	He/She must be enthusiastic, respected & viewed by his/her colleagues, hard working and must have ability to manage work load
Sohan Murmu	Yes	No idea
Rituparna Tudu	Yes	By his/her visionary skills he can manage his team members
Hrichik Bardhan	Yes	He/She must have the skills of strategic planning to complete his/her team goal
Payel Das	Yes	Teachers circle to plan, develop & assess practices with technology
Aakash Ghosh	Yes	Deepen professional knowledge & refine skills
Md Selim	Yes	Teacher learning from practice- action research with technology
Abdus Salam	Yes	Without teaching & leadership skills, how can we move to save our own Earth where there is crisis of various resources
Satyajit Baroi	Yes	A teacher must have the ability to convince all the students of his team to work for a common goal