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# MY MEETING NOTES

## Online Classes during COVID-19 Lockdown: Window of Opportunity

*In this Meeting Note, B Subrahmanyeswari and Mahesh Chander share their experiences of online lectures they organized for students during the COVID-19 lockdown.*

### CONTEXT

The COVID-19 pandemic led to the shutting down of most institutions, including schools, colleges and universities. All academic activities were suspended and all students were asked to leave the universities and vacate hostels. This would have taken a heavy toll on learning but for the online platforms now available, which are providing an opportunity to continue with teaching and learning. Under normal circumstances, many of us would not have cared to resort to online teaching but the lockdown compelled us to explore the wonderful world of online teaching. We say it's a blessing in disguise; we are not only able to familiarize ourselves with online teaching but also with organizing several classes online during this period.

Online lectures are very common in developed countries since a long time. But in the Indian context, especially in agricultural education, it is yet to become popular. The University Grants Commission (UGC) and the Indian Council of Agricultural Research (ICAR) have emphasized online learning to help out students whose academic activities have been seriously disrupted due to the pandemic (Box 1).
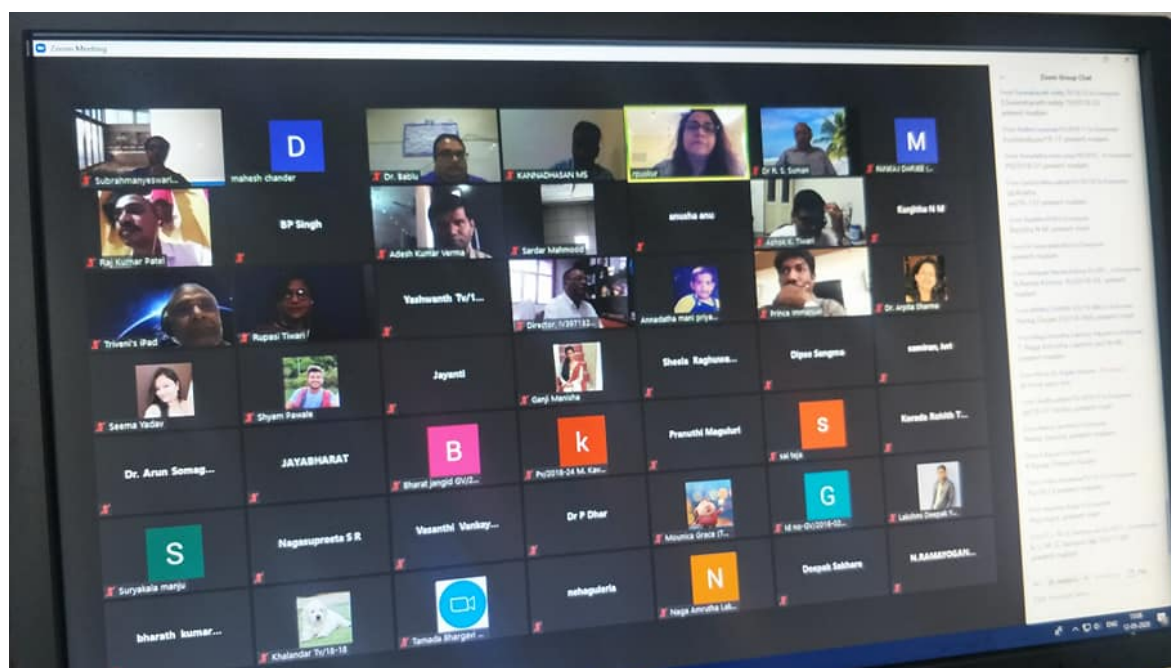
**Box 1. Government of India initiatives**

The University Grants Commission (UGC), has released a list of 10 initiatives of the Ministry of Human Resource Development (MHRD) UGC and its Inter University Centres (IUCs) - Information and Library Network (INFLIBNET) and Consortium for Educational Communication (CEC), using which the academic community can utilize their time during the lockdown caused by the coronavirus outbreak. The initiatives include SWAYAM, MOOCs, etc. The Commission said in a statement, "As we jointly combat COVID-19 by taking preventive and precautionary measures, maintaining social distancing and staying in the confines of our homes/hostels, we can utilize this time productively by engaging in On-line learning." The UGC has urged students to use their online education websites to study for free during the Coronavirus lockdown using the initiatives of HRD Ministry. Also, the UGC has constituted a committee to promote online learning amid the nationwide lockdown. The UGC Chairman opined that online education is the need of the hour for students, teachers, and for the education system as a whole in this situation.

The Annual Conference of Vice Chancellors of Agricultural Universities held on 10 April 2020, through video conferencing under the Chairmanship of Secretary, DARE and Director General, ICAR, stressed on the use of online tools and resources for teaching to reach all students and faculties, and thus providing technical guidance. Dr Trilochan Mohapatra, the Director General, stressed the need to conduct classes regularly and keep actively connected with the students.

In a letter (dated 7 April 2020) addressed to all Vice-Chancellors, the Education Division of ICAR, has discussed various options for the Online Classes. The online survey, which was circulated by Education Division of ICAR to all the Agricultural Universities through Google forms, revealed that about 81% of universities were already organizing online classes for the students during the COVID-19 crisis. This circular has also given some vital information about the various measures being adopted by universities during this stressful time.
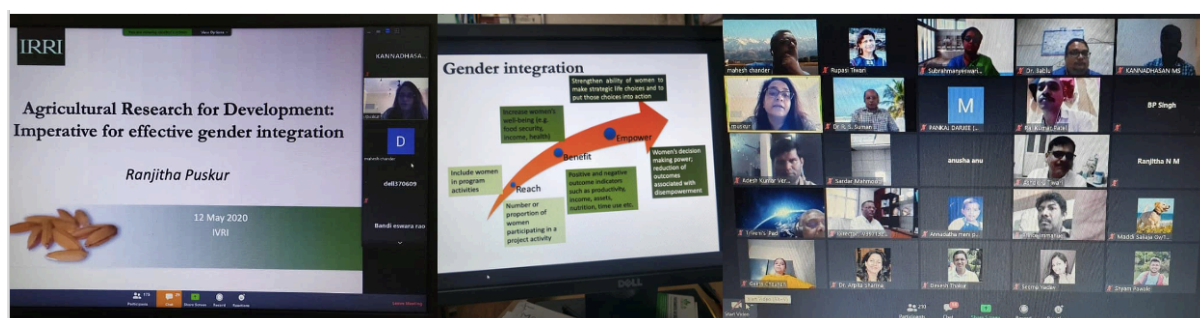


## WHAT ARE WE DOING?

Sri Venkateswara Veterinary University (SVVU), Tirupati, took the initiative by organizing undergraduate (UG) classes online from 9 to 14 April 2020, followed up again with different spells in April & May. The university issued a detailed circular vide University Memo No. 234/DVSC/2020 dated 8-4-2020 indicating date and timings of lectures by faculty from 10 to 14 April 2020. The university opted for zoom on payment basis so that there would be no limitation of time for lectures, since normally Zoom is free for 40 minutes only. There were several concerns and hesitation initially to deliver lectures online since most had no previous experience with it. But once we started doing it, experiences were shared and confidence gathered, we were able to continuously improve our skills leading to better proficiency with every new lecture (Table 1). The feedback from both peers and students was also helpful.
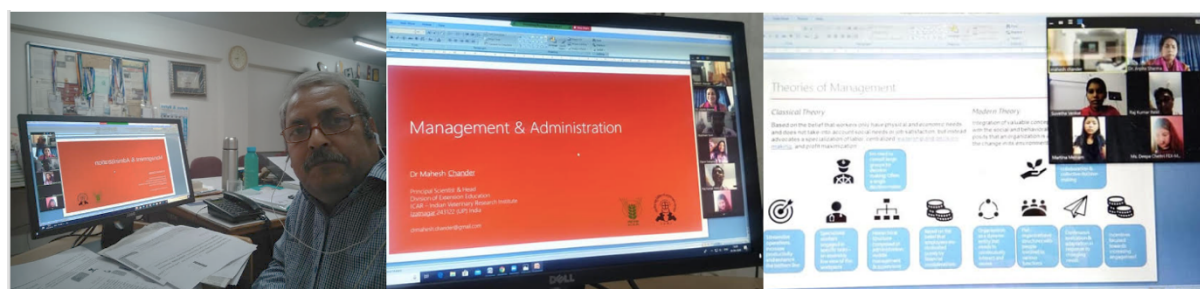
**Table 1: Speakers & Topics**

| Date | Topic | Faculty | No. of participants |
|---|---|---|---|
| 03/04/2020 | Extension Management: Management theories, and concepts of management & administration | Mahesh Chander, Head, Div. of Extension Education | 47 |
| 10/04/2020 | Livestock Entrepreneurship; Who are they, what are they, how they do | Mahesh Chander, Head, Div. of Extension Education | 220 |
| 12/04/2020 | Livestock Entrepreneurship: Theories & forms of Entrepreneurship | B. Subrahmanyeswari, Professor & Head, Dept. of Veterinary & A H Extension, NTR College of Veterinary Sciences (SVVU), Gannavaram (AP) | 188 |
| 13/04/2020 | Advances in research methodology in extension research | Sethuraman Sivakumar, Principal Scientist (Agricultural Extension), CTCRI, Thiruvananthapuram, Kerala | 35 |
| 14/04/2020 | Gender as a system | Arpita Sharma, Principal Scientist, ICAR-CIFE, Mumbai | 45 |
| 15/04/2020 | Empathy and Extensionists: An innate bond" | Kannadhasan, MS, PhD Scholar, Div. of Extension Education, IVRI, Izatnagar (UP) | 55 |
| 23/04/2020 | Emerging approaches in modeling adoption of agricultural technologies | Sethuraman Sivakumar, Principal Scientist (Agricultural Extension), CTCRI, Thiruvananthapuram, Kerala | 25 |
| 28/04/2020 | e-Extension: Amalgamation of ICT & conventional extension | Harshita Sood, PhD Scholar, Div. of Extension Education, IVRI, Izatnagar (UP) | 38 |
| 28/04/2020 | Design thinking & importance of Communication in Entrepreneurship Development | Ms Anjana, MVSc Student, NTR College of Veterinary Science (SVVU), Gannavaram (AP) | 35 |
| 29/04/2020 | Cyber extension & ICT tools in livestock production | Devesh Thakur, Assistant Professor, Dept. of Veterinary & AH Extension, College of Veterinary & Animal Sciences, CSK HPKV, Palampur (HP) | 180 |
| 30/04/2020 | Livestock economics: breakeven point, BCT, IRR, NPV | D Bardhan, Principal Scientist, Div. of Livestock Economics, Statistics & Information Technology, IVRI, Izatnagar (UP) | 191 |
| 03/05/2020 | Gender concepts & role of women in Agriculture & Animal Husbandry | B. Subrahmanyeswari, Professor & Head, Dept. of Veterinary & AH Extension, NTR College of Veterinary Sciences (SVVU), Gannavaram (AP) | 178 |
| 06/05/2020 | Persuasive Leadership & Team Building Strategies | Baharul Islam, Dean, Academics, IIM, Kashipur | 67 |
| 12/05/2020 | Agricultural Research for Development: Imperative for effective gender integration | Ranjitha Puskur, Senior Scientist, Lead, Research Program on Livelihoods, Gender and Nutrition, International Rice Research Institute (IRRI), Nairobi | 207 |
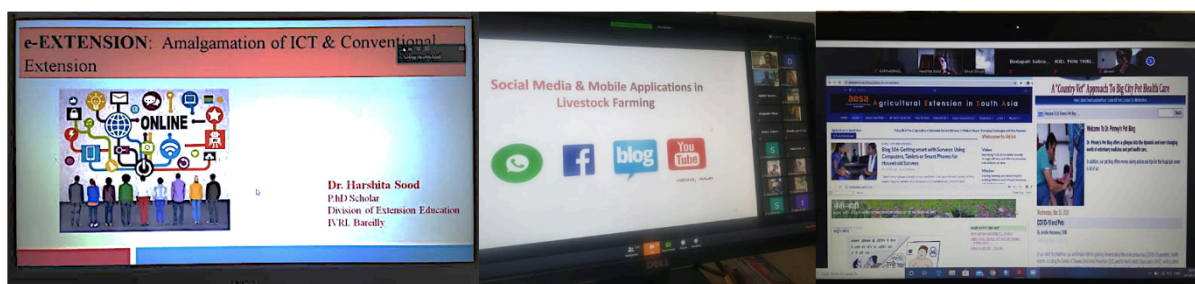
At ICAR-Indian Veterinary Research Institute (IVRI), apart from the invited and coordinated lectures, many scientists are taking lectures online in their respective disciplines. Also, all the faculty members of the Extension Education Division are taking classes online regularly. The online lectures are also being organized under The World Bank-funded National Agricultural Higher Education Project (NAHEP- CAAST-ACLH) at IVRI. Besides, we also encourage students to prepare presentations and deliver them online, just to make them familiar with online methods (Table 1). These lectures had participants from GBPUA&T, Pantnagar, CIFE Mumbai, IVRI, SVVU & JNKVV, Jabalpur and young faculty (mostly former IVRI students) from various SAUs/SVUs. We allowed students to discuss freely, so an energized discussion followed after the lecture to clarify some concepts. Many more lectures by both faculty and students have been scheduled for the coming days.
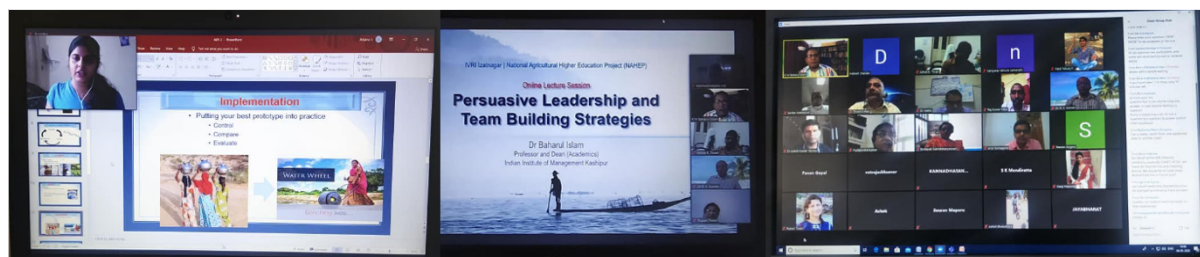


After considering the expertise of the resource persons, we invited them for the lectures for the benefit of the students and even offered honorariums in some cases. For instance, we invited Dr Baharul Islam (IIM , Kashipur) and Dr Ranjitha Puskur (IRRI) as distinguished speakers (as provisioned under National Agricultural Higher Education Project [NAHEP- Advanced Centre of Livestock Health CAAST-ACLH] under implementation at ICAR-IVRI). We collaborated and shared the online lectures across universities. Many faculty members from SAUs/SVUs and colleges are in touch with us to learn more about online lectures. Ms Sheela Raghuvanshi, Assistant Professor at College of Agriculture (JNKVV), Teekamgarh, Madhya Pradesh, is a very enthusiastic faculty who not only attended many of our lectures but also kept us informed about her feedback/experience, including on the online lectures she has been organizing.

We have been sharing photos/screenshots from every lecture on social media, particularly on professional Facebook groups like Agricultural Extension in India to spread awareness about online lectures/platforms being used and experiences thereof, so as to get feedback and improve our performance in subsequent lectures. We are collecting feedback from both faculty and students via WhatsApp as well.
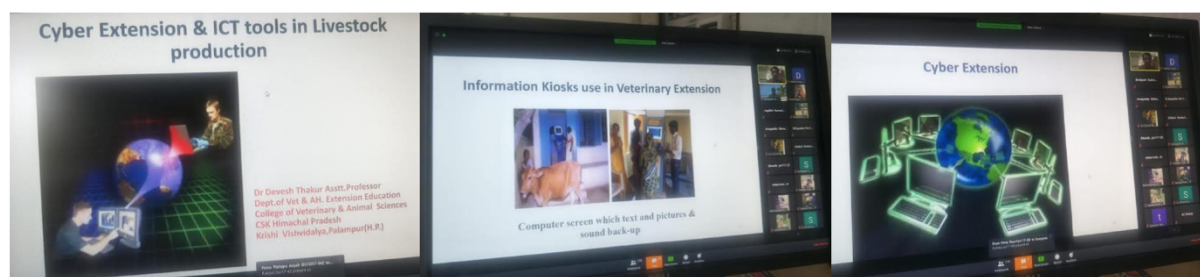
## HOW ARE WE DOING THIS?

We are using Zoom for delivery of lectures, since it is not only free and useful for large numbers of participants but also easy to get started and convenient in operating. In all our lectures, we had very good experience with lectures via Zoom, except for a few occasional disruptions. These rare disruptions were mostly due to handling at the user end, and not with Zoom itself. Due to its many favourable attributes, apart from government, businesses and corporates, more than 90,000 schools use Zoom across 20 countries for online lectures and meetings. For 40 minutes, Zoom is free. For secure longer duration, SVVU paid US$ 65 for 500 members/month which can be used anytime, while for 100 members, it was US$ 14/month, which is not expensive given the opportunity it offers while just sitting at home.
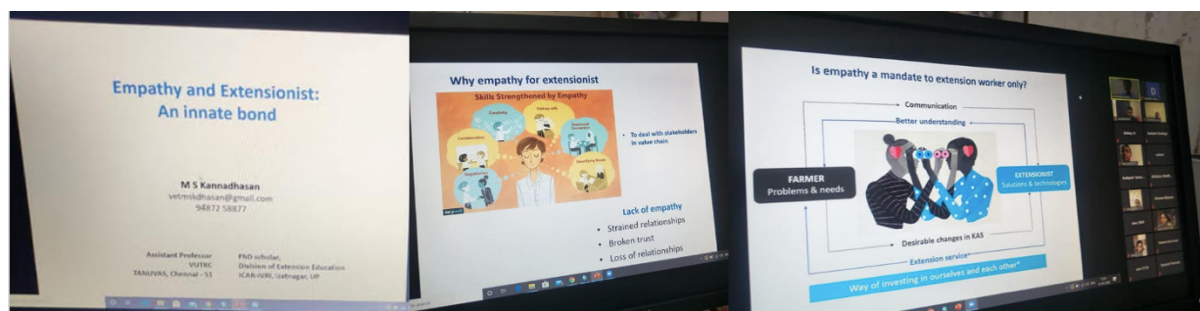


Of late, there have been controversies regarding use of Zoom for security reasons. The Government of India has not only restricted the use of Zoom for its own video meetings, but also issued an advisory which confirmed that Zoom video chats were not secure for personal or professional use. The Government of India's Cyber Coordination Center, or CyCord, and the Indian Computer Emergency Response Team (CERT-in) have issued advisories for safeguards while using zoom. So, many are avoiding it and looking for alternatives, but a lot, including public institutions, are still using it for the comfortable experience it offers. Our search and interactions with those engaged in online platforms confirm that all other online portals for lectures are not as good. We read an interesting article, "Zoom Is a Nightmare. So Why Is Everyone Still Using It?, which explains all the good and bad features of Zoom. In the meantime, the good news is that Zoom is Working With The Government of India to Solve Security Issues.
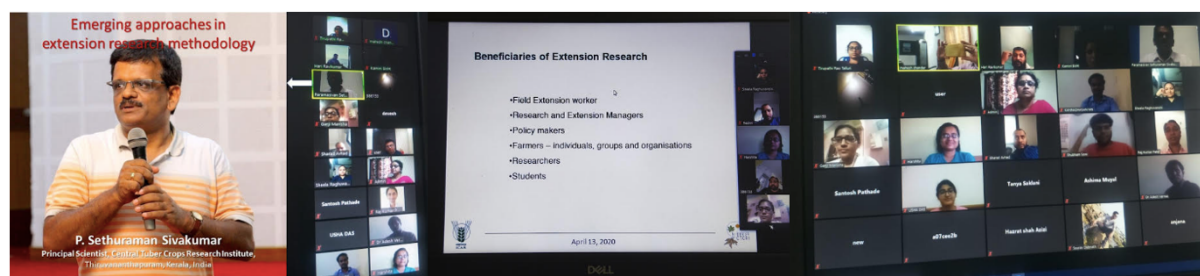


We noticed that some of the students were apprehensive of Zoom too, hesitating to attend classes. In such cases, the alternative platforms can be tried. But, all these different platforms have their own limitations of various types including some being fee-based, others having number of participants limitations, or other restrictive conditions, usually when participants are over 100 (Box 2). Of late, Google Classroom/Google Meet is attracting attention for its improved user friendly features.

The Education Division of ICAR, along with ICAR-IASRI, has decided to use Microsoft Teams software for the online classes. The IASRI has created IDs and passwords for IVRI faculty/scientists and students. ICAR-IVRI has requested ICAR-IASRI to develop an online platform for conducting examinations too. This, however, has not materialized yet. ICAR is still using Zoom for all of its meetings, well secured with end to end encryption on payment. This indicates once again that Zoom is being preferred over other platforms for its effectiveness, notwithstanding security issues raised from many quarters.
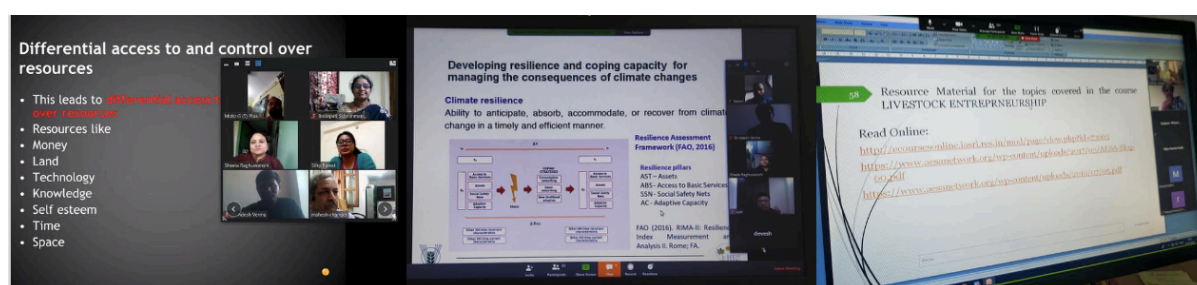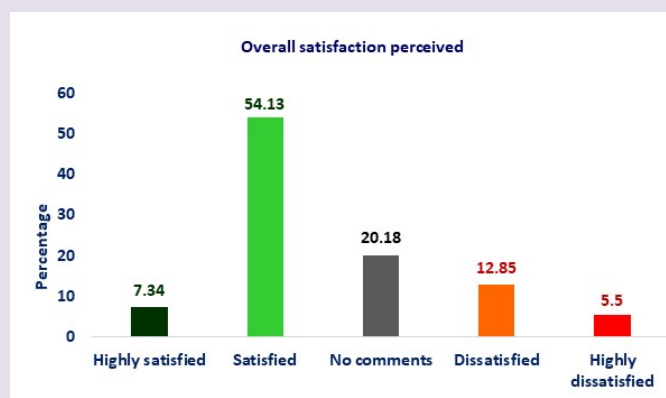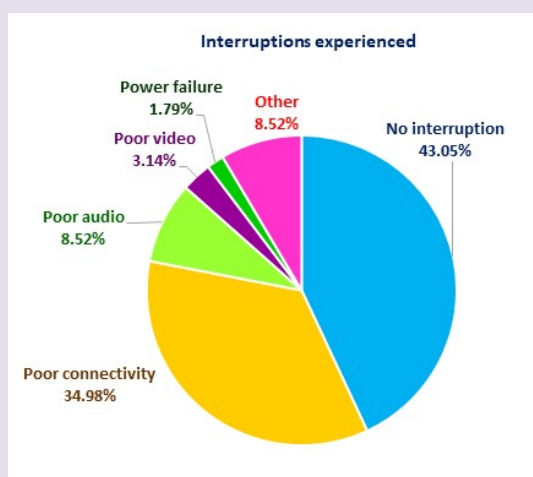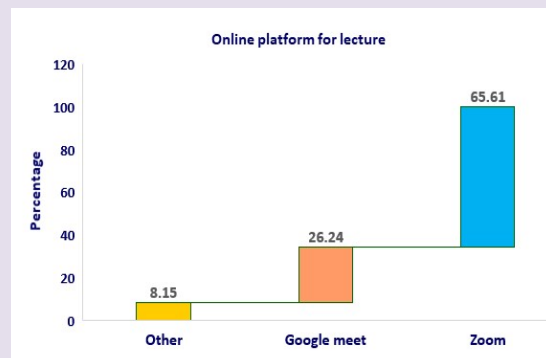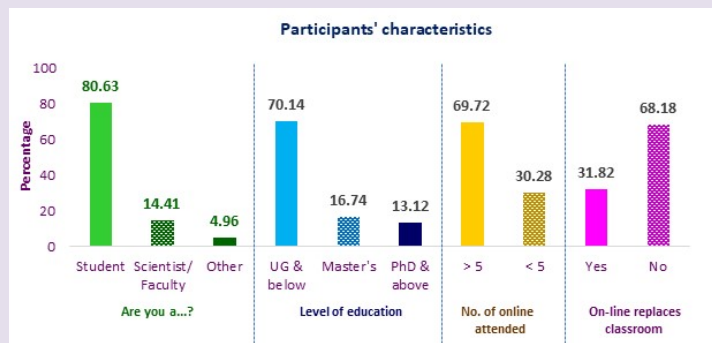


## FEEDBACK ON ON-LINE LECTURES

We designed an online survey using SurveyMonkey, to get feedback from students and faculty on online lectures. The online feedback survey saw participation from 222 respondents (80.63% students, 14.41% faculty and 4.96% others). Majority of the survey participants (70.14%) were pursuing UG degrees, while 16.74% were Master's and 13.12% PhD scholars. A large number of respondents (69.72%) had attended more than five online lectures, and 30.28% had attended less than five lectures; 65.61% of the survey participants had used Zoom, 26.24% Google Meet, and 8.15% had attended lectures via other platforms like Cisco WebEx, WhatsApp, Google Classroom, etc. The majority of the respondents (43.05%) experienced no interruptions, while 34.98% faced connectivity problems, and a small number of participants faced problems such as poor audio, video, power failure, mobile phones getting over heated and shutting off, host not admitting due to late joining, etc. Most of the participants (68.18%) opined that online lectures cannot replace classroom lectures, while 31.82% respondents believe that online lectures can replace classroom lectures. Interestingly, those who said it cannot replace classroom lectures reported varied reasons (Box 3). The satisfaction level of participants with the online lecture system revealed that 54.13% were satisfied, 7.34% were highly satisfied, while 12.85% were dissatisfied, and 5.5% were highly dissatisfied.

The results of the survey are presented in Box 3 and feedback from students and faculty is presented in Box 4.

**Box 3. Results of survey**



Participants' characteristics



Online platform for lecture



Interruptions experienced



Overall satisfaction perceived

## LESSONS WE LEARNT

There are varied opinions on online lectures. Even those who feel these online lectures can't replace classroom experience agree that under the lockdown situation this is the best we can do for teaching. We can make online lectures a very satisfying experience if we take note of the following lessons we have learnt so far:

1. Both students and faculty need to have proper logistics (earphones, laptop/desktop, android phone with system updated for the platform being used for online lecture) to have useful experience. We experienced disruptions due to power failure, connectivity issues, and poor sound/audio occasionally.
2. The safe use of an online platform and its operating procedure should be familiarized with well in advance, possibly by organizing mock exercises. The mock exercise in advance is helpful for smooth delivery of online lectures.
3. Information on a lecture, like online platform being used for lecture, date, time, meeting id/link/password should be notified well in advance. The students should report well on time so that they can all be admitted to the class in the beginning of the lecture itself.
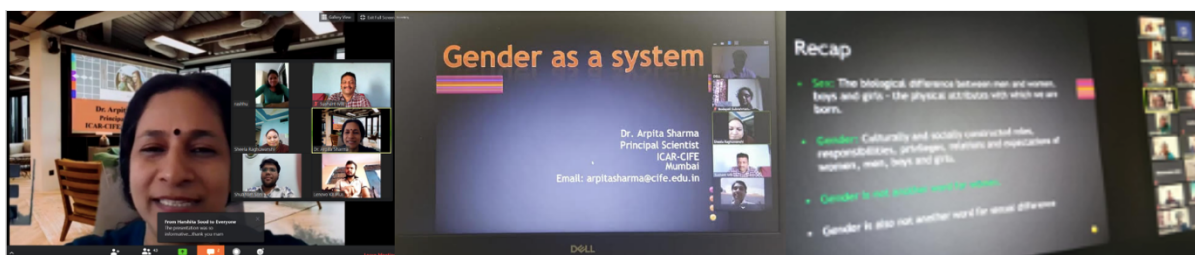
**Box 4. Feedback of students & faculty**

*Feedback from students*

- *I was more attentive in classroom lecture. All my doubts and queries were clarified by my teacher on the spot without any disturbance from any kind of materials, voices or persons, power cut, reconnecting the lecture, poor audio, poor video and less interruption by anything. During online class there was a lot of noise and voices were not clear at all. I was unable to hear the teacher properly and clearly.*
- *Clean downloadable videos or audio must be provided, with pdf notes of each lecture.*
- *I am in a village area so due to "network problem" can't attend all classes properly.*
- *Training should be there for teachers as well as students.*
- *As a student who had faced so many problems during online class sessions, I just want to say that for effective online class the following is important: (1) Teachers must team up the students into groups. This will reduce noise and provide good concentration and peace to students in listening and asking questions well with the teacher. Different groups of students have different experience interacting with the teacher – either on the same day or with a different teacher. (2) 1-2 online class must take place within a week apart from classroom lecture so that students get familiar in taking online lectures. (3) Online class is not a big thing, just that because we started it late we are finding it a big thing. This must be practiced in every school and college in India similar to classroom lectures within a week, so that students get familiar with the techniques of online classes and develop skills to deal with the same. (4) It is necessary to ensure that every student has proper bandwidth and network to access these online resources. In a developing country like India, it is still not possible for every student to have these things. (5) Proprietary software or secure open source software should be used to conduct online classes. I believe these things will improve online lectures in future.*
- *Please make the lecture notes available to students after class is completed – then one can revise and understand the subject properly.*
- *Students are living in villages...and there is connectivity problem...we can't attend any classes or do anything related to our research.*

*Feedback from faculty*

- *Online lectures can be complementary to class room teaching but cannot be substituted.*
- *We don't know whether the students are listening or not, shortage of time prevents us from knowing whether they have any doubts they can't ask. If the network is poor they may not able to listen to the class, if the teacher has poor connectivity the whole scheduled class will be interrupted, and there will not be any teacher-students interaction which is of utmost importance in teaching. Ours is a professional course which needs practical experience that may not be possible here. If one teacher teaches and if the paper is set by another teacher students are the ultimate sufferers which affect their grade.*
- *The actual interaction between students and faculty can't be established in online lectures and the students can't concentrate and tend to miss things.*
- *Effective PowerPoint presentations with animations may be helpful. But whatever we do, 50 percent students will not listen to class through online lecture.*
- *For extension, and veterinary extension subjects, it's sufficient to teach students online, but in subjects like anatomy and physiology, it may not be that much effective. So for enhancing efficiency in online classes, especially in science subjects, better to use 3D model videos for demonstration and make these videos available to students online.*
- *Most of the students are logging-in for attendance purpose and after marking their attendance they are simply leaving. So first students should get used to online classes by knowing the seriousness and the efforts of their teachers behind this. And effective discussion sections should be conducted after each session, and it should be mandatory to take feedback and active participation from students at the end of each session.*
- *More secure and institutionally customized online platforms can be used for better and uninterrupted lecture classes.*
- *Special online class room is needed to take online classes in every college. Extension departments should train the staff and students on taking online classes.*
- *Proper synchronization of the functions to be performed by both faculty and students are called for – like when to mute or unmute, and how to write properly and neatly on shared screen dashboard, etc. I mean to say that both faculty and all students should have proper knowledge about functions available in applications and how to use it and when to use it or when not, also knowledge of when and when not to mute or unmute mic should be there in order to prevent noise and for good audio experience.*
- *Online classes cannot be incorporated as part of regular course curriculum as regular curriculum will include practicals and cannot be dealt with online. Instead, university should encourage faculty to design their own interactive course structure on a topic where the faculty perceives that he can supplement theoretical knowledge of the student.*

4. PPTs should have short sentences/bullets supported by some photos/diagrams. Online lectures on the topics which need practicals for better comprehension of concepts require more attention on visuals. The visuals and diagrams need to be very much reflective so as to make them close to the real experience as far as possible. Online resources/study materials should be shared during the lectures (web links) or as follow-up emails.

5. Students' feedback should be essentially taken in the beginning, during, and at the end of the lecture. Online classes could be a very exciting experience, if we are able to make it interactive by asking students' feedback during and at the end of the class. To overcome monotony, instructors can ask questions in between so that students remain alert and attentive throughout the lecture. Also, students may be asked questions individually by name, if s/he has any question. In some lectures, we conducted quizzes at the end of the class, based on the content covered in the lecture.

6. The role of the session host in conducting the sessions is very important. S/he should be familiar with how chat box and microphone can be used simultaneously for making sessions effective, how to reduce noise during lectures by keeping all the participants muted while the speaker is speaking, use of 'raise the hand' option, and sharing of PPTs, photo, and other documents through screen sharing. Use of interactive white board can also be explored. This is to attain the best online lecture experience resulting in satisfaction among the learners.

The experience of online lectures gained during lockdown can be utilized by making them more effective. We can brush up our skills in lecturing online, it's a matter of practice too. As we go along we are learning and improving, and we are confident that we will be able to make up academic loss via online lectures to some extent, if not completely.

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