# Research on efficacy of webinars organized for faculty during lockdown of COVID-19

Krishna Chythanya Nagaraju[1], Karanam Madhavi[1] and Jandhyala N. Murthy[1]

[1]*Gokaraju Rangaraju Institute of Engineering & Technology, Bachupally, Survey No. 288, Nizampet Rd, Kukatpally, Hyderabad, Telangana 500090, India*

### Abstract

Online Faculty Development Programs/Webinars are the two buzzing words, which have become viral next to corona among the teaching fraternity during the lockdown period of pandemic situation caused by COVID-19. This work intends to throw light on, the reason for the outbreak of FDPs/ Webinars, their efficiency and the attitude of the participating faculty during the lockdown period from 16th March to 15th June 20. Information is gathered through an online survey having 31 research questions answered by 683 participants across India. The new found tool of online teaching has become the accepted norm and the urge to lead the bandwagon by each and every stakeholder in the education sector resulted in a sudden spurt of webinars and FDPs in such a short period. Study observed that global reach at no cost plus freedom of working from home spurred many faculty to experiment this mode and 40% from them have been found to be juggling with many courses simultaneously for certificate sake only, 45.1% attended on mandatory instructions and 38% have not even initiated the work. Quizzes and Polls during sessions besides assignments were found to be suitable active learning mechanisms to improve the efficacy of the online knowledge transfer methods.

## 1. Introduction

In the current dynamically trending disruptive technological world, it is essential to possess relevant skills, in tune with the changes in learning environment. However, nobody expected that the life in this world as it enters 2020 will be disrupted by a nano sized virus called corona, so violently that the World Health Organization (WHO) declared Corona Virus Induced Disease, COVID-19 as a pandemic. Initial measures to contain the spread of virus had resulted in compulsory lockdown across various parts of Globe and across India from 22 March 2020. The compulsion to be home bound in the lockdown coupled with the uncertainty in the minds of regulators in education domain in rescheduling academic calendar, has provided ample free time to faculty and students to learn through the only available medium i.e. online mode.

Stakeholders, including regulators like AICTE, respective state higher education wings, premier institutions like IITs, NITs, industry associations like CII, NASCOM, software, hardware industries, edutech companies and all professional institutions have offered FDPs (Faculty Development Programmes) and webinars on all topics. The most sought after besides subject are

CEUR Workshop Proceedings (CEUR-WS.org)

the domains related to Research and Patenting, Industry 4.0 technologies, pedagogical changes, future of education and industry incase pandemic situation persists for longer periods. Thus there has been a sudden spurt in this activity across the nation and luring the participants with digital certificates with no registration fees to attract wider participation. All the presentation platforms, hitherto, commonly used by the industry especially by the software industry for discussions across their onshore, offshore teams, have entered the homes of all teaching faculty. Digital migrants also joined the fray with the digital natives to teach as well as learn. The student in the faculty has woken up and is exposed to sudden spurt of activities. This lead to pertinent questions about the efficacy of these activities including motive of the participants and problems faced. The answers could add to the smooth introduction of new normal procedure of online mode of information dissemination.

## 2. Background and motivation

There is a lot of literature available on online mode of teaching used for academics to find the learning effectiveness at various levels of schools, higher technical education or universities with much focus at students' perception. Not much work is published on effectiveness of delivering short courses through FDPs and seminars via web called webinars with the audience being teaching faculty. "A systematic search of the research literature from 1996 through July 2008 identified more than a thousand empirical studies of online learning. Analysts screened these studies to find those that a) contrasted an online to a face-to-face (F2F) condition, b) measured student learning outcomes, c) used a rigorous research design, and d) provided adequate information to calculate an effect size" [1]. One can find works comparing students reading achievements through online and off line modes in article by Setyawan [2]. In the work carried out by the Baig [3], researcher tried to prove the effectiveness of Online Learning Environment (OLE). The experiment was carried out targeting school children of tenth standard, where in the effective learning of students in the subject of Physics in OLE and F2F is evaluated and proved that on line teaching is more effective if done with animations, videos with high interactivity that motivates context of learning. The experimentation was done considering 40 students of which 20 were subjected to get trained in online mode and 20 were trained using Face 2 Face mechanism. Where as in the work done by Pusuluri Srihari [4], 88 engineering and English course students' perception was considered and it was identified as most of the students prefer only 30% online and 70% Face to Face teaching in blended learning. The researchers interested in this area can also see work by Chen and Guthrie [5]

An interesting experiment was conducted by Madhavi et al [6] where 5000 engineering students and 320 faculties were probed to identify the importance of Learning Management System-Moodle and ICT practice in TLP. The acceptance of GRIET-Moodle was identified using adapted Technological Acceptance Model (TAM) in their study. Lall and Sing [7] through their study on 200 students of Graphic Era Hill University – Uttarakand, report that 74% of their respondents were enjoying e-learning. The above mentioned works motivated authors of this paper to carry out research in the area of on-line teaching learning environment and in contrary to the above experimental situations of students and small samples considered, the authors choose to study the efficacy of digital environment based knowledge transfer in case of large

number of faculty attending webinars, FDPs where personal interaction of resource person with all individual participants is highly impossible.

# 3. Proposed work

With the intention to support teachers understand pain points of participants as well as get insights of multitude and myriad problems prevalent in the field of online education, authors proposed to conduct an online survey to check for efficacy of online FDPs and Webinars for faculty of different colleges across India.

An online survey was developed using Google Forms and is rolled out with 31 questions pertaining to different dimensions of the problem. Authors were jubilant to see 683 faculty responding to the survey till the time of write up. The target group comprised of the faculty mainly from engineering colleges and a few from degree colleges. https://tinyurl.com/yajye9cv was the survey link, which was shared using emails and WhatsApp groups.

## 3.1. Demographic analysis and duration considered for survey data

For the demographics, data collected is limited to Location, State, and Age. The anonymity was promised to respondents to make them feel comfortable in giving unbiased response. Authors are happy to note that the respondents' representation is from pan India, making it possible to get inputs from participants of different mindsets. The age group of respondents ranged from 22 to 67 years, which enabled us to get inputs from fresh faculty members to richly experienced people of field as participant.

Focus was on the period of lockdown, as rate of conduction and attending to online FDPs/webinars was high in that duration. Hence the respondents were asked to furnish the information pertaining to the three month interval from $16^{th}$ March to $15^{th}$ June 2020.

## 3.2. Categories of research questions

In order to understand the efficacy of the FDPs and webinars during the considered period from the point of view of the faculty who are learning, it is necessary to analyze the status of the learner in all aspects of teaching-learning in addition to their physical, mental and financial status. These aspects are categorized so as to develop appropriate Research Questions (RQs) as elaborated below:

a) Online Teaching Learning Process Effectiveness
b) Intention of Participant
c) Health/Household Impediments
d) Online Platform Effectiveness
e) Device and Service Provider Support
f) Financial Aspect

RQs are meticulously structured to get unbiased and definite information and are optimized to 31 in number, so that the time spent by the respondents for the survey is also reasonably low.

Category wise RQs, along with the survey data and their analysis are elaborated in the following section.

## 4. Results and discussion

### 4.1. Online TLP effectiveness

In general, faculty are expected to attend at least one FDP and a couple of webinars in a semester, but the spurt in activities have attracted nearly fifty percent of the respondents to attend 10 or more in the short period of three months as evident from data received and summarized in table 1 for RQ1, making them to be attempting multiple sessions on the same day. This is corroborated by RQ2 shown in table 1, that nearly 50% are anxious about losing concepts due to divided attention. The overdose of information however did have a positive impact of majority initiated to effectively put the new knowledge into practice. This is evident by RQ3 data as shown in table 1, as only 38.5% of participants have not yet initiated their work in the direction of concepts discussed in the sessions. One of the reasons for not initiating could be due to absence of involvement of participant during the session, which is indirectly supported by the data of RQ4 as recorded in table 1, that around 28.8% of participants either never or rarely raised doubts in sessions. The self involvement of participant also gets reflected in the confidence with which the participant solves on their own a Quiz/Assignments given post the session and the same is probed with RQ5 and surprisingly only 44.5% respondents as observed from figure 1, confess that quiz/assignment solutions were never shared among friends, with approx.55% accepting to share the solutions among the peers.

How many times have you helped/ taken help from your friends to attempt Quiz/Assignment ? RQ5

683 responses
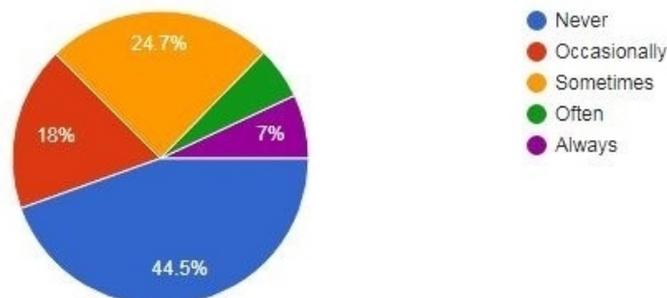


**Figure 1:** Analysis of respondents' data for RQ5.

A participant of online sessions has to respect the honor code and refrain from copying or sharing answers with/from others else can indicate that participants haven't learnt effectively in online mode. This observation once again unearths the caveat that majority of participants are not taking assignments given after the session seriously but taking help from others in

**Table 1**
Respondents' data for RQ1-RQ10 (excluding RQ5)

RQ1. How many webinars and/or FDPs you attended during lockdown period using Digital platform? Approximate number.

| Option | 1-5 | 5-10 | 10-20 | 20-30 | >30 |
|---|---|---|---|---|---|
| Response in % | 15.7 | 21.4 | 28.8 | 22.4 | 11.7 |

RQ2. How many times you were anxious of loosing subject concepts being delivered in one session as you are listening side by side to another session at that moment?

| Options | Never | Sometimes | Quite Often | All Sessions attended |
|---|---|---|---|---|
| Response in % | 41.4 | 46.3 | 7 | 5.3 |

RQ3. Have you practiced/implemented/ developed/adopted concepts discussed during any session you attended?

| Options | Not Yet | Initiated | Need more training |
|---|---|---|---|
| Response in % | 23.1 | 61.5 | 15.4 |

RQ4. How many times you raised the hand for doubts/questions?

| Options | Sometimes | Regularly | Rarely | Never raised the hand |
|---|---|---|---|---|
| Response in % | 56.3 | 15.8 | 21.7 | 6.2 |

RQ6. Have you categorically maintained all the information sources like PPTs/Recorded links shared to you for the sessions you attended?

| Options | Yes | No |
|---|---|---|
| Response in % | 82.1 | 17.9 |

RQ7. Which of the following methods can maximize the efficacy of online sessions?

| Options | None | Assignment | Poll Questions | Quiz |
|---|---|---|---|---|
| Response in % | 13.5 | 19.9 | 29.3 | 47.3 |

RQ8. What is the optimum duration you think an on line webinar/FDP session should be without break and excluding Q&A session?

| Options | 45 min | 60min | 90min | 120min |
|---|---|---|---|---|
| Response in % | 45.1 | 34.6 | 15.1 | 5.2 |

RQ9. What is the maximum number of days an online FDP should be conducted, as per your opinion?

| Options | 2-Week | 1-Day | 2-Day | 3-Day |
|---|---|---|---|---|
| Response in % | 2.9 | 5.8 | 8.9 | 24.3 |

RQ10. In summary, what is the utility of online courses during lock down?

| Options | Yes,100% useful | Yes, Somewhat Useful | No, This format is not useful |
|---|---|---|---|
| Response in % | 60.3 | 38.1 | 9.6 |

completion of same affecting the overall learning in online mode, the same has also been

observed by the respondents' data for RQ7 as recorded in table 1, asserting that Assignments are less preferred way to improve the overall efficacy of online FDP/Webinar and suggested Quiz (47.3%) followed by Poll Questions (29.3%) during session to improve the overall efficacy. However, the positive side of coin lies in the fact observed by analyzing responses of RQ6 mentioned in table 1, where in 82.1% of participants has categorically maintained the shared content like PPTs/Datasets/Recorded versions of session so as to enable them to refer back again. With the advent of disrupting technologies, it is evident that concentration levels of human being are drastically reducing day by day and too long session of around 120 min doesn't permit the participant to gain much. The same can be observed from the data of RQ8 recorded in table 1, where only 5.2% suggesting the effective duration of webinar session without a break could be as 120 min. whereas 45.1% has opted for 45 min. as optimum time duration. Also, in the opinion of participants, the duration of FDP in days is not expected to exceed one week as evident by the analysis of data for RQ9 shown in table 1, exhibiting 58.1% opting for 1-week long FDP and another 24.3% have supported for conducting 3 day FDP. It's encouraging to see from the data analysis in table 1 having data for RQ10; around 60% of participants feel the overall utility of online courses during lock down is 100% useful. Yet, a good 39% of participants feel it is somewhat useful or a minor part as this format is not useful indicating scope of improvement in this format to enhance efficacy of online sessions being held.

## 4.2. Intention of participant

Though the sudden rise of online activities have given ample chance to attend, yet multiple sessions being attended by any participant on a single day will leave the participants in a confusing state than helping in gaining knowledge and also too many online sessions on a single day indicate the greediness of the participant to gain more certificates. The analysis of data from table 2 for RQ11 shows that 87.5% of respondents have attended maximum three webinars or online sessions on a single day, which is quite comfortable for a learner to acquire knowledge or concentrate on online session on a single day. The question would be whether they attended sessions one after other or logged in to multiple sessions in which case the efficacy of learning drastically goes down.

Logging in to too many sessions at once using multiple devices or attending too many webinars in short span only precipitates intention of bagging a certificate rather than knowledge. RQ12, RQ13, RQ17 & RQ19 try to address this issue. The data of respondents for RQ12 shown in table 2 straight away points that only 43.3% of respondents were having self policing and limited themselves to login in to only single online session at a given time. The data projects that greater than half of respondents (56%) logged in into multiple online classes using different digital platforms using same or different devices, raising a strong point on efficacy of online sessions being held in identifying whether participant is there for certificate sake or showing keen interest in assimilation of concepts being delivered. This does warrant need of some mechanisms to stop such lapse. RQ13 helps us to identify from the data shared by respondents; only 33.4% have chosen the option of always single platform as depicted in figure 2. In the sense, around 67.6% respondents have chose to attend sessions simultaneously that can lead to a deep nose dive in the content assimilation of what is being discussed in the online sessions attended side by side.

**Table 2**
Analysis of respondents' data for RQ11, RQ12, RQ14, RQ16, RQ19, RQ20

RQ11. What is the maximum number of webinars and/ or FDP sessions you attended on a single day?

| Options | 1 | 2 | 3 | >3 |
|---|---|---|---|---|
| Response in % | 19.8 | 41.1 | 26.6 | 12.5 |

RQ12. How many times you logged in into multiple online classes at once using different digital platforms (on same or different device)?

| Options | 0 | Not more than 3 times | Some times | Quite often |
|---|---|---|---|---|
| Response in % | 43.3 | 16.7 | 30.3 | 9.7 |

RQ14. What % of overall webinars/FDPs you attended, do you think are completely relevant to or interesting topic of your choice?

| Options | 0 | 20 | 40 | 80 | 100 |
|---|---|---|---|---|---|
| Response in % | 0.7 | 7.8 | 17.3 | 57.1 | 17.1 |

RQ16. Do you feel you are over burdened with webinars/FDPs during this period?

| Options | Definitely Overburdened | Somewhat over burdened | No, enjoyed |
|---|---|---|---|
| Response in % | 10.1 | 40.1 | 49.8 |

RQ19. Mention number of on-line sessions you attended where participation certificate was not offered__

| Options | 0 | Only 1 | Between 1 to 5 | Between 5-10 |
|---|---|---|---|---|
| Response in % | 26.1 | 18.7 | 43.2 | 12 |

RQ20. Do you really think the certificate you earned by attending online webinars/FDPs during lock down period helps you in future?

| Options | Yes | No | Don't bother me |
|---|---|---|---|
| Responses in % | 77.2 | 8.8 | 14 |

The data for RQ17 as depicted in figure 4 shows on an average each respondent has got around 20 certificates and the values for certificates gained by each respondent range from 0 to 200. It is observed around 24 people who received more than 75 certificates. 39 respondents received more than 50 certificates and 114 respondents mentioned they received more than 30 certificates during the observation period. Even if we consider the total days of duration excluding weekends, it comes to be around 67 days. In 67 days, advisably one can cover a maximum of 13, 5 day FDPs. We observe from the data of table 2 for RQ19, that only 26.1% of candidates have attended in range of 5 to 10 sessions that did not offer certificates and around 73% of respondents have attended in range of 0 to 5 sessions which did not offer a certificate, irrespective of speaker, organization conducting, or the topic of session. The count of certificates obtained by respondents does hint that certificate was a major driving force for individuals to attend sessions and also people seem to be engaged in a race to collect more certificates for myriad reasons. We can just imagine the number of people, who would attend if all the webinars conducted during lockdown period had not offered a certificate!

Which are all the Digital Platforms you have used for simultaneously attending the sessions? (Select all applicable) RQ13
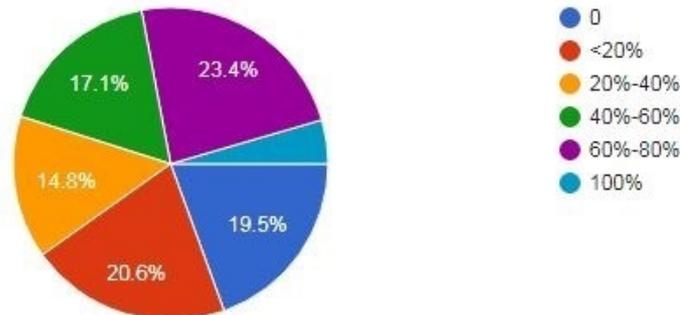
683 responses
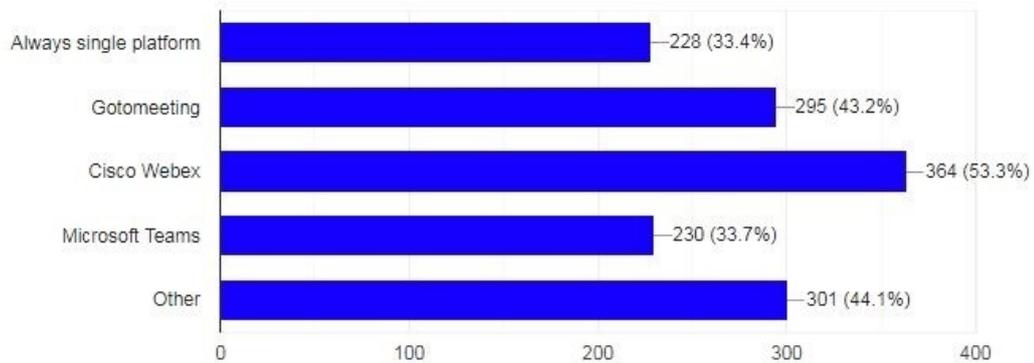


**Figure 2:** Analysis of respondents' data for RQ13.

What % of online sessions were made mandatory for you to attend by authority / some external force? RQ15

683 responses



**Figure 3:** Analysis of respondents' data for RQ15.

The data gathered as shown in table 2 for RQ14, it can be observed that around 74.2% of overall respondents have attended in range of 80%- 100% of online sessions relevant or interested topic of their choice. This also indicates that around 26%, i.e. almost quarter of respondent confess that majority of sessions they attended were not of their choice of interest or relevant in which case the degree of knowledge gain can be assumed to be very less, raising a question on online session's efficacy once again. The data collected for RQ15 unearths a raw fact that great number of people are attending the online session out of compulsion from some external force but not voluntarily. From the collected responses shown in figure 3, it was evident that around
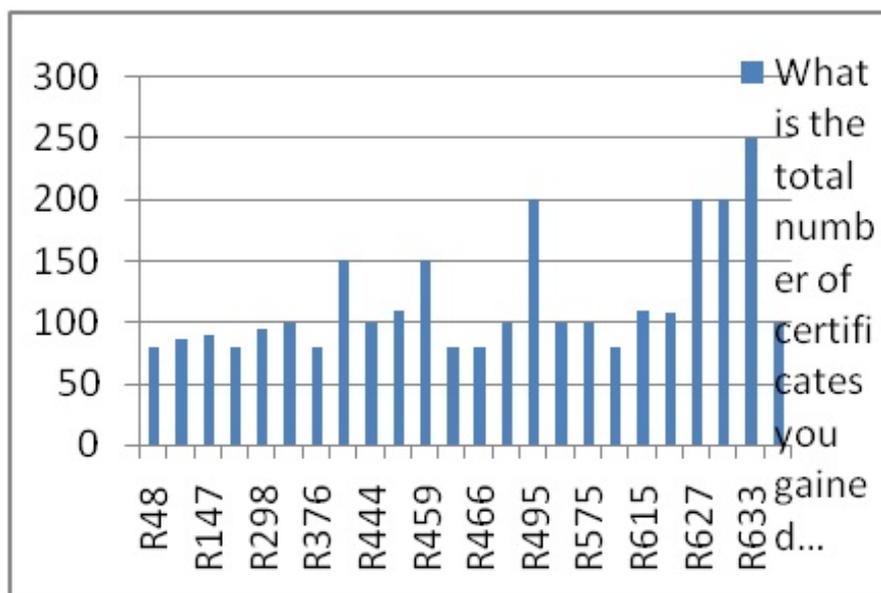
**Figure 4:** Analysis of respondents' data for RQ17 with respondents being represented as R1 to R683 on $X$-axis and number of certificates each one obtained on $Y$-axis.

30% of respondents confess that in range of 60-100% out of total sessions they attended were on some compulsive force. In such case the learning factor of the candidate can be expected to be very low or even for name and certificate sake the candidates might have logged in. Only 19.5% of respondents feel that 0% of their total sessions attended were made mandatory and a fraction of approx. 7% respondents confess that 100% of all sessions they attended were because they were made mandatory by some external force. From the table 2 data for RQ16, the response for this question is almost evenly distributed with "No, enjoyed" option being opted by 49.8%, which is almost 50% and remaining 50% consider they are somewhat over burdened with webinars or online FDPs. This response does open horizons for interested researcher to explore TLP so as to reduce the mental stress of participants and make them free from the feeling of *somewhat overburdened or Definitely overburdened.*

It is very clearly visible from the figure 5 for data of RQ18, that Research and Patenting sessions were most sought after sessions for maximum participants other than technical topics in the process of holistic approach of knowledge gaining. Quality related sessions pertaining to NBA, NAAC procedures etc were next in demand, where participants were keen to attend. The value perception of certificate by the respondent would bring in more interest for participating candidate and enhance involved learning by the participant. The respondents' data for RQ20 showed in table 2, once again emphasis on the importance of certificate in their view point. It could be observed that a total of 77.2% of respondents feel the certificate they earned would fetch them some returns in near future. There are only fractions of approx. 14% of respondents who are not bothered whether the certificate they gained is helpful or not on future but it is for the sake of knowledge gaining and honing their skills they attended online sessions.

RQ18.What categories of webinars/FDPs, other than on technical topics, were quite interesting for you to attend? (select all applicable)

**Figure 5:** Analysis of respondents' data for RQ18.

## 4.3. Health/household impediments

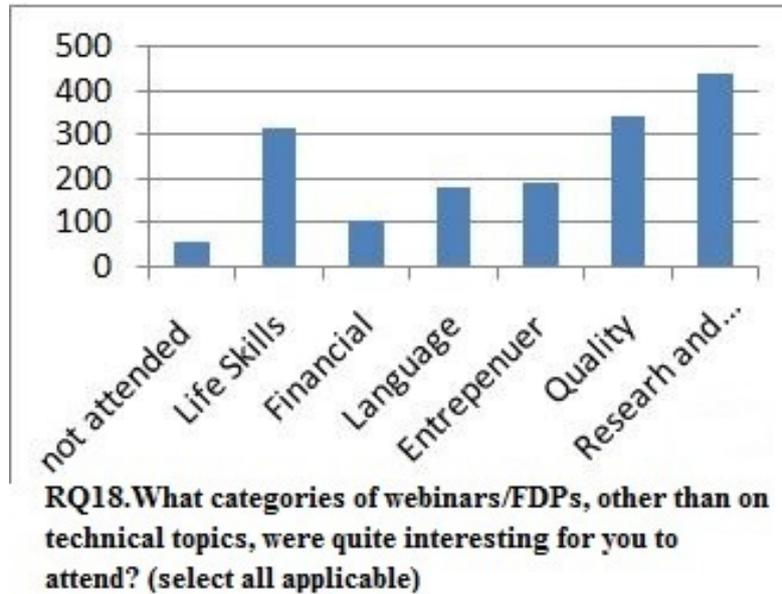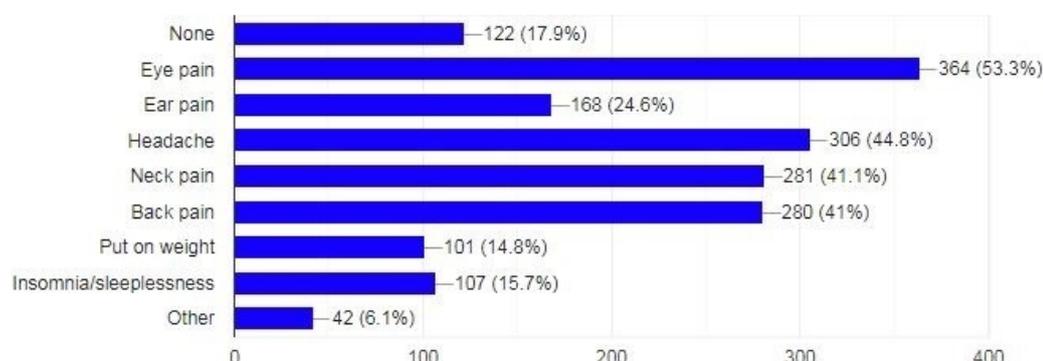It is a known fact that a healthy, calm mind can concentrate on the session, apply his thought process in gaining more insights of the subject as well as participate actively in solving quiz or assignment etc tasks. The analysis of data received for RQ21 through survey as depicted in figure 6, points out that majority of people are suffering with one or more ailments owing to continuous screen exposure and a good 53.3% of respondents have mentioned they suffered Eye pain and putting it on top of health concerns that can arise because of too many online sessions, The problem of headache was next to eye pain with 306 out of 683 respondents claiming they suffered with the problem. In the decreasing order of maximum respondents facing problem the issues can be listed as Eye pain, headache followed by Neck pain and Back pain almost being reported by same number of respondents. The authors opine that dwindled efficacy of online TLP is possible once participant feels sick that distracts the concentration. Hence this issue needs further consideration by researchers of Human Computer Interaction field.

Majority of the respondents opine that Home is suitable place to attend online webinars/FDPs, where as approx. 35% respondents feel both home and Office are effective in attending the online sessions as observed in the table 3 having data of RQ22. It is observed from the table 3 of data for RQ23 that a good 41.6% of respondents were able to concentrate throughout the session despite chaotic pandemic situations at home but that leaves around 58% of respondents who could not concentrate on session at a stretch owing to issues at home front. In this 58%, 25% were able to concentrate for about 50 min. This analysis once again points out the requirement of smaller online sessions at a stretch.

Which of the following health issues you experienced owing to long screen time exposure,with or with out headphones?(Select all applicable) **RQ21**

683 responses

- None — 122 (17.9%)
- Eye pain — 364 (53.3%)
- Ear pain — 168 (24.6%)
- Headache — 306 (44.8%)
- Neck pain — 281 (41.1%)
- Back pain — 280 (41%)
- Put on weight — 101 (14.8%)
- Insomnia/sleeplessness — 107 (15.7%)
- Other — 42 (6.1%)

**Figure 6:** Analysis of respondents' data for RQ21.

**Table 3**
Analysis of respondents' data for RQ22, RQ23

| RQ22. Specify your location preference for attending the Webinar/FDP? | | | | |
|---|---|---|---|---|
| Options | Home | Work Place | Both are effective | Both are ineffective |
| Response in % | 48.8 | 11.6 | 38.5 | 2.1 |

| RQ23. How long you were able to concentrate at a stretch on any session attended? | | | | |
|---|---|---|---|---|
| Options | 50min | 45min | 30min | Throughout the session |
| Response in % | 25 | 19.2 | 14.2 | 41.6 |

**Table 4**
Analysis of respondents' data for RQ26

| RQ26. Which device you generally prefer to use for attending online sessions? | | | |
|---|---|---|---|
| Options | Smart Phone | Laptop | Tablet | Desktop |
| Response in % | 46.6 | 46.7 | 6.7 | |

## 4.4. Online platform effectiveness

Choice of Digital Platform is the prerogative of organizers, but user experience is sought from the learners on various platforms. The ease of usage of any platform does act as a hygiene factor that, its absence readily felt in promoting ineffectiveness of the entire proceedings. Data received for RQ24& RQ25 from the respondents as shown in the figure 7 and figure 8 respectively points out that, in spite of concerns, majority of respondent preferred ZOOM platform (51.7%) to attend sessions. Cisco-Webex(21.7%) was next sought after platform by many organizers in conducting online sessions. Similar observation can be done in the work of Sreehari [4].
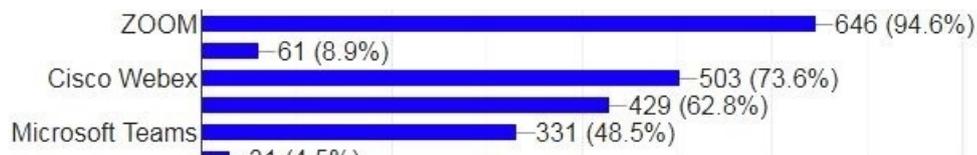
**Table 5**
Analysis of respondents' data for RQ30

| RQ30. How many online sessions pertaining to your area of interest/research have you registered for which there was a nominal registration fee of say Rs.100/- or Rs.200/- or more, during this lock down period? | | | | | |
| --- | --- | --- | --- | --- | --- |
| Options | 0 | 1 | 2 | 3 | >3 |
| Response in % | 30.2 | 18.6 | 22.4 | 11.9 | 17 |

What are the different online platforms you got exposed to during this lock down period? (Select all applicable) **RQ24**
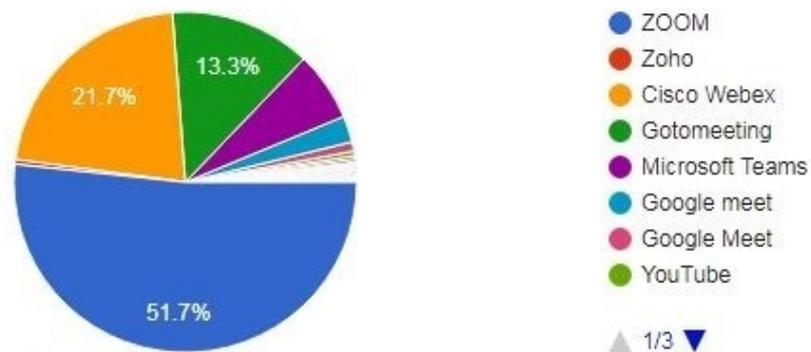
683 responses



**Figure 7:** Analysis of respondents' data for RQ24.

Which one online platform you think gave you high comfortable experience? **RQ25**

683 responses



**Figure 8:** Analysis of respondents' data for RQ25.

## 4.5. Device and service provider support

The receiving or/and concentration levels of a participant in case of online sessions would be highly dependent on the comfortable display screen and audio output mechanisms the opted device is providing. RQ26 has a focal point on this aspect. The data by respondents for RQ26 gets categorized almost equally between Laptop and Smart Phone with only a minor percentage

of people opting for Desktop and a very small percentage opting for Tablet as can be observed from table 4. The choice of Smart Phone by 46.6% does have a say on the health issues observed earlier and also 46.7% respondents using Laptop also adds to it, suggesting avoidance of these 6" or less screen device so as to reduce health effects that can further have a say on overall concentration of participant of online session.

Network quality is the next major hygiene factor, that its absence will immediately break the continuity in reception and hence concentration of the learner. The RQ27 focuses on the pains respondent proactively has taken to continue learning despite of blockages owing to network issues. The data collected for RQ27 needed cleansing as many respondents did not mention the service provider name. Authors received only 385 responses which clearly mentioned the name of service provider or respondent has faced no issue related to service. The analysis of available data is depicted in the figure 9.
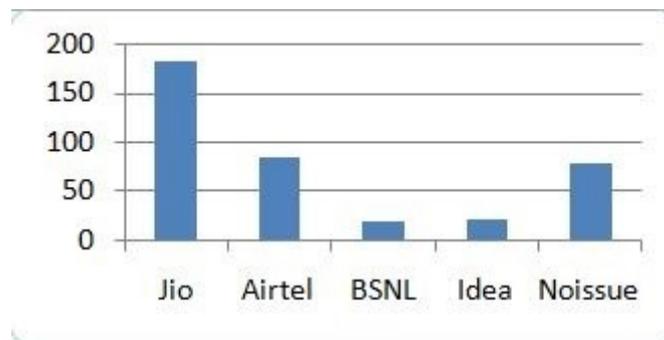


RQ27. How many times you struggled to re login/rejoin into session, owing to poor network connection and also Name the network provider you were using then?

**Figure 9:** Analysis of respondents' data for RQ27 considering only 385, those who mentioned the name of service provider or no issue.

The authors hope respective network service provider takes this as a respectable opinion of respondents so that some corrective measures can be done in improving network issues, which in turn can improve the TLP without intermittent service. It is very encouraging to see from respondents' data for RQ28 as depicted in Figure 10 below, that around 243 people have mentioned as 0 times they lost the session due to Limited Data Plan being Used but that comes to be only 35% of total respondents, which means around 65% of people have faced data limit problems and lost session ranging from 1 time to multiple times. This issue needs to be addressed and we hope Data providers would come out with an economical data plans for online webinars and FDPs interested candidates without causing much financial burden to participant.

### 4.6. Financial aspect: willingness to pay/spend

RQ29 of survey, aiming to know the money spent for rectifying repairs/ buying a device/ spending a small registration amount of not more than Rs.500/-, to attend online sessions in

How many times you lost the session due to Limited Data Plan being used? RQ28

683 responses
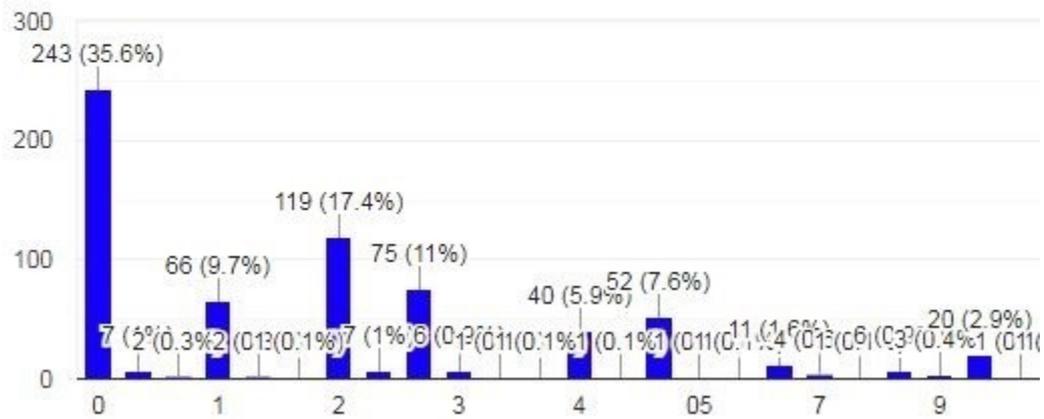


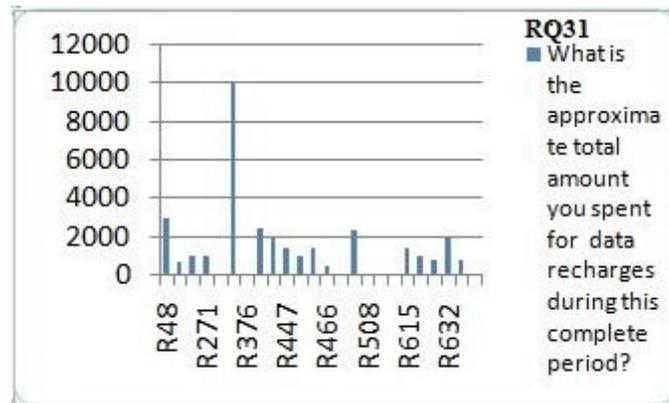**Figure 10:** Analysis of respondents' data for RQ28.

process of skill enhancement helps us in knowing that average amount spent by respondents as shown in figure 11, stands at Rs.3130.43 with a small set of outlier cases where respondents have mentioned of spending around Rs.10000/-. This is really appreciable point on the part of faculty fraternity as during lockdown period the income sources were much dysfunctional. As per the data collected a whooping amount of Rs 2,138,090/- in total has been pumped in to lockdown market by 683 teaching fraternity to enable them to attend online FDPs/Webinars.
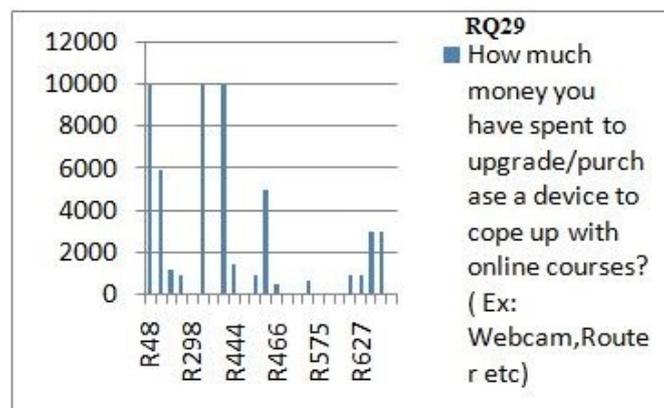


**Figure 11:** Analysis of respondents' data for RQ29.

It is a point of concern that from data for RQ30 shown in Table 5 below, 30% of the respondents has confessed that they never (0 times) registered for an event with nominal fee even though it fit in to the area of interest, despite in certain cases the sessions were conducted by organizations

like NITT, NITs during the period considered. Only 17% of the total respondents mentioned as, they attended more than 3 such events by paying nominal registration fee. The average amount spent for data recharges by each respondent to attend online webinars/FDPs, as evident from the data submitted in survey for RQ31, comes to be Rs.1306.99/-. The authors did observe a single outlier case of Rs.10000/- being spent as depicted in figure 12.



**Figure 12:** Analysis of respondents' data for RQ31.

## 4.7. Major observations

From the above analysis the following major observations were made:

- Participants feel Pools and Quiz would improve efficacy of online sessions. (RQ7)
- Many participants are not confident to start work with the concepts learning through online. (RQ3 – 38%)
- Participants are juggling by attending sessions parallel. (RQ2 – 58.6%, RQ12 – 40%)
- Very small fraction of participants opted to pay for Online FDPs (RQ30 – >3 – only 17%)
- Participants opine that an FDP or webinar is best to be for 50 min and can be organized for 1 week. (RQ&RQ9)
- 25% of participants opine they have attended irrelevant sessions but received certificate. (RQ14)
- 45.1% of respondents have attended majority of sessions on mandatory instructions. (RQ15)
- 50.2% of respondents opine either they are somewhat or definitely overburdened by webinars. (RQ16)
- Around 490 participants out of 683 respondents have opted to attend Research and Patents related sessions besides Technical sessions. (RQ18)
- 45% of respondents haven't shown interest to attend sessions which doesn't offer certificate. (RQ19)
- Around 53.3% respondents have complained of Eye pain. (RQ21)

Based on the analysis made above for all questions and the strapping results observed, the authors would like to advocate following mechanisms to further strengthen the efficacy of online FDP/Webinar sessions:

1. Conduction of sudden Quiz on the screen and attendance marking for those who complete the Quiz within given short stipulated time.
2. In case of FDP, besides above recommendation, small day-wise assignment based on the topics delivered on a specific day.
3. Strongly recommending participants to switch on their Video camera and once in a while during sessions it is better if the resource person picks up couple of names and address the participants by name so that everyone becomes alert.
4. Issuing of Certificate subject to clearing a final graded quiz for an FDP, which also considers day wise quiz as a part of Internal marks.
5. In case of FDPs, by 2nd or 3rd day, forming groups of participants and giving them group assignment and one hour session being dedicated to discuss which group responded, which has not submitted.
6. In a country like India where the economic levels are so varying, authorities have to make the availability of effective network at affordable costs spreading to every rural corner of the country.
7. Even the authors of this article suggest the organizers to rethink on Two Week FDPs and reschedule those as One Week FDPs with sessions of 45 min. as observed earlier so as to improve the learning factor of participants.

## 5. Conclusion

Culminating the analysis of data gathered from 683 respondents of different regions, backgrounds across India in this work, it is clear that on-line mode of Webinars/FDPs for working people during pandemic COVID circumstances did help in gaining a bit of skill set, but, is not completely effective as it was presumed. It was observed, respondents of around 40% were juggling with other activities, 45.1% attended on mandatory instructions and 38% have not even initiated the work, Learners still want knowledge transfer to happen free only, as only 17% are willing to pay and certificate is a sure attraction for greater participation. As online mode of teaching for students or conduction of Webinars/FDPs for faculty is indispensable in inevitable social distancing situations that can prevail further for months to come, this research work has contributed in bringing to day light the more competent mechanisms as need of hour for efficient online sessions and also suggested a few. Further this work can be extended by categorizing the respondents based on age or experience as the young faculty opinions may not agree with the digital migrant or older professionals in the field and also webinars that are to be targeted to attract fresher would vary from those targeted at more experienced professionals. The analysis can be extended based on predictive analysis approach of machine learning to cross check the results obtained in this work.

## Acknowledgments

## References

[1] U.S. Department of Education, Evaluation of evidence-based practices in online learning: A meta-analysis and review of online learning studies, 2010. URL: http://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf.

[2] H. Setyawan, Blended method: Online-offline teaching and learning, on students' reading achievement, English Education: Jurnal Tadris Bahasa Inggris 12 (2019) 22–33. URL: https://doi.org/10.24042%2Fee-jtbi.v12i1.4432. doi:10.24042/ee-jtbi.v12i1.4432.

[3] M. A. B. and, A critical study of effectiveness of online learning on students' achievement, i-manager's Journal of Educational Technology 7 (2011) 28–34. URL: https://doi.org/10.26634%2Fjet.7.4.1391. doi:10.26634/jet.7.4.1391.

[4] P. Sreehari, Online learning during the COVID-19 lockdown: Learners' perceptions, Journal of Critical Reviews 7 (2020) 300–307. doi:10.31838/jcr.07.19.36.

[5] Z. Chen, M. Guthrie, Measuring the effectiveness of learning resources via student interaction with online learning modules, 2019. arXiv:1903.08003.

[6] K. Madhavi, J. N. Murthy, N. V. G. Raju, G. S. Kumar, J. Praveen, K. V. S. Raju, Facilitating and adapting learning management system: A novel experimental study, SSRN Electronic Journal (2019). URL: https://doi.org/10.2139%2Fssrn.3375708. doi:10.2139/ssrn.3375708.

[7] S. Lall, N. Singh, CoVid-19: Unmasking the new face of education, International Journal of Research in Pharmaceutical Sciences 11 (2020) 48–53. URL: https://doi.org/10.26452%2Fijrps.v11ispl1.2122. doi:10.26452/ijrps.v11ispl1.2122.