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Informetrics of Webinars Through Video Conferencing Platforms for Teaching and Learning by Different LIS Professional During COVID-19 Period: An Evaluative Study

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Informetrics of Webinars Through Video Conferencing Platforms for Teaching and Learning by Different LIS Professional During COVID-19 Period: An Evaluative Study

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Abstract:
Now-a-days education and educational resources are open to all but we are facing a terrible epidemic situation due to Corona virus (COVID-19), so we need different electronic learning platforms for e-learning. In this present study, authors have explained, how many webinars are organized by Library and Information Science (LIS) professional during this period April 2020 to June 2021, distribution of webinars based on month capacity, how many web conferencing platforms used in LIS related webinars, distribution of types of organizers of webinars, distribution of webinars based on the respective region, distribution of webinars by time duration and time schedule. The outcomes of the research articles show that total 460 webinars were conducted during this COVID-19 period from April 2020 to June 2021 in between these 15 months, May and June 2020, these two months placed top time for webinars 131 (28.47 %), July 2020, 52 (11.30 %), September 2020, 46 (10.00 %). It is experimental that thirteen types of webinar platforms are used in the current study, the most usable web conferencing platforms are YouTube 195 (39.79 %), Zoom 85 (17.34 %) and Cisco Webex 76 (15.51%). This research article analyses and evaluates current technological development & detailed information of webinars through video conferencing platforms for teaching and learning by different LIS professional during COVID-19 period.

Keywords: Informetrics, Webinars Video Conferencing Platforms, Library and Information Science, COVID-19 period.

1. Introduction:

COVID-19 is a novel corona virus recognized on 31st December 2019 in city of Wuhan (China). This virus is extremely infectious and has a death rate that is various times higher than the one of seasonal flu, fever, a dry cough, shortness of breath and extreme tiredness. The virus affects quite a lot of countries around the world. All educational institutes, schools and universities are closed due to this critical condition. During this lockdown period, educational institutions all over the world are adapting distance learning methods and shifting towards online courses. In this main time, every library plays a pivotal role to provide better informational services to their respective users and as a gateway to distribute the online probable information & educational assistance throughout in this terrific situation of the whole World. The word 'Webinar' consist of two terms, i.e. 'Web' and 'Seminar', which is held virtually and that isattended completely by an online. In webinars, the participants can join via a personal computer, tablet, smartphone and also can see and hear. Besides, the

PowerPoint presentation can also be broadcasted. Informetrics which is the perusal of quantitative perspective of information encircles the production, dissemination and use of all types of information. Nacke, who first used the word "Informetrics", described it as the "application of mathematical methods to the content of information science"(Nacke, 1979).

In this present study, the authors have investigated how many webinars are organized of Library and Information Science (LIS) by professional during this period April 2020 to June 2021, distribution of webinars based on month capacity, how many web conferencing platforms used in LIS related webinars, distribution of types of organizers of webinars, distribution of webinars based on the respective region, distribution of webinars by time duration and time schedule

2. Review of Literature:

In this recent years review of literature mainly highlights the research studies on and Informetrics of webinars through video conferencing platforms for teaching and learning by different LIS professional during COVID-19 period and these studies are arranged chronologically from present to past. For instance,

Anene & Idiedo (2021) in their article examined the level to which librarians in Nigeria occupied in proficient development workshops in the time of COVID-19. The studies follow up a survey method using an online questionnaire.

Idhalama, Igbinovia & Ezeabasili (2021) in their article expressed the stage of librarians' Information and Communication Technology (ICT) skills about webinar contribution is high, and the greater part of Library and Information Science (LIS) professionals deliberate in Nigeria used smart phone and laptop accessories for webinar participation, followed by tablets. The maximum webinars participant used Zoom side by side followed by YouTube platforms.

Asif & Singh (2020) in their article showed that, at present technical development and protective actions were taken in order to improve the information of library professionals to encourage library property and services during COVID-19 pandemic situation.

Bilawar (2020) in this article analyzed Corona virus, lockdown period and collection of online education programs by several academic institutions during the lockdown period from 25.03.2020 to 30.06.2020, which served as information sources, to attract students and teachers in their teaching, education and extension processes in India with more stress on Library and Information Science online seminar.

Deepika, Soundariya & Kalaiselvan (2020) in their paper briefly described the methods and tools in e-learning that can modify the conventional habits of content delivery, record protection, evaluation and reaction.

Dhiman & Singh (2020) in their paper examined total 38 webinars value and analysis during the COVID-19 period from 27.4.2020 to 12.8.2020. It also defined title wise list of webinars, speaker wise list of the webinar, organizer wise list of the webinar, list of the webinars organized etc.

Dhawan (2020) in this paper evaluated the value of online teaching learning process in the time of pandemic and in addition this study also suggested for educational institutions of how to deal with challenges related with online learning.

Ishtiaq, Sehar & Shahid (2020) in their paper focused on the role of university libraries of Sindh, Pakistan providing the information services during the lockdown period. In this paper 29 private university libraries of Pakistan were investigated online, where 79.3% of the university library provided the online library services but few libraries are providing conventional services in this lockdown period.

Sidpra et al. (2020) in their study expressed total number of 50 most useable web based video conferencing platforms and preferred the most appropriate platforms from these based features of per month cost, memory, ease of access, safety and conference length.

Badia & Colosimo (2013) discussed that the present study has been conducted to additional ways in which web conferencing software is being used to recommend library services, such as involving people with experts, take steps space for social relations, virtual office hours, information skills sitting, research support and expert improvement for librarians. It also explained the progress and distribution of information literacy webinars that effort to construct and maintained an engaging environment, deliberations, elements of webinars transferred over from the conventional classroom.

3. Objectives:

The major objectives of this present study are-

I.   To identify how many webinars are organized of Library and Information Science (LIS) professional during this period April 2020 to June 2021;

II.   To specify the number of web conferencing platforms used in webinars;

III.   To identify the prominent LIS professionals organizers who have conducted the webinars;

IV.   To know the webinars by which state or country they are conducted;

V.   To point out the time duration of the webinars organized;

VI.   To point out the time schedule of the webinars organized;

VII.   To evaluate the level of training and development of LIS professionals;

4. Scope and Coverage:

The scope and coverage of the present study has been confined various national and international webinars from this period April 2020 to June 2021 when lockdown was on its peak hours.

5. Methodology:

The data for the present Informetrics study has taken from online events information hosted over lisworld.in, LIS link, Whatsapp groups, Facebook, Telegram channel and also from the email received personally for attending the webinars. Total 460 national and international webinars were collected from the various online sources. All collected data were tabulated and analyzed according to the above mentioned objectives for this study. Hence, this study is confined to the webinars arranged in the field of Library and Information Science (LIS) professionals.

6. Importance of Webinar for Teaching and Learning during COVID-19 and Lockdown Period:

Now-a-days webinars are very helpful for teaching and learning process during this pandemic period. Different features are associated with the webinars are given below-
- ✓ Online atmosphere;
- ✓ Live event;
- ✓ Contribution by invitation only;
- ✓ Save point in time and money;
- ✓ Dealings with participants (Audio, Chat, Quizzes, Whiteboard etc.);
- ✓ The participants can join via a personal computer, tablet, smartphone and can see the video and hear the audio;
- ✓ Professional improvement of library personnel.

7. Brief Notes on Video Conferencing Platforms:

At present many types of video conferencing platforms used for webinars. These are-
- ▪ **YouTube-** American online video sharing and social media platform is a YouTube. It owned by Google. It was established on 14th February 2005 by Steve Chen, Chad Hurley and Jawed Karim. It is most of the popular visited website. Approximately one billion monthly users jointly watch YouTube.
- ▪ **Zoom-** Zoom meeting software established in 2011. It's headquarter are situated in San Jose, California. Zoom meetings everybody commonly used Zoom. It is could host video teleconferencing software developed by Zoom video communications. The free plan allows up to 100 simultaneous participants, with a 40-minute time limit. The highest plan supports up to 1,000 simultaneous participants for meetings lasting up to 30 hours, it is paid plan.
- ▪ **Cisco Webex-** Cisco Webex is an American company. It is web conferencing and videoconferencing software. Webex established in 1995 by Subrah Iyar and Min Zhu. Its headquarters are in Milpitas, California. It's opening public offering in July 2000.
- ▪ **Google Meet-** Google Meet in earlier times known as Hangouts Meet. It is a video communication service. It is developed by Google. Google Meet launched in March 2017. It has started with a web app, an Android app and an iOS app. Google Meet time range 60 minute limit for unpaid accounts.
- ▪ **GoTo Webinar-** GoTo Webinar enables webinar hosting for up to 3000 people for dealings such as marketing, training and business communication. Its features are flexible scheduling, automatic reminder emails, instant join links, interactive engagement tools, webinar performance insights.
- ▪ **GoTo Meeting-** GoTo Meeting was established in July 2004 with the remote access and screen sharing technology. GoToMeeting created and marketed by LogMeIn. It is web hosted services and online meeting, desktop sharing, video conferencing software.
- ▪ **Microsoft Teams-** Microsoft Teams was established in 14th March 2017. It is an ownership business communication platform developed by Microsoft. Microsoft Teams is a web based desktop software. Microsoft has announced that Microsoft Teams will replace Microsoft Classroom in Office 365 Education on 3rd May 2017.

Microsoft notified a free version of Microsoft Teams, most of the platform's communication options at no cost but limiting the number of users and file storage faculty.

- **Facebook Live-** Facebook launched Facebook Live on April 2016. Facebook Live is a characteristic of the Facebook social network that uses the camera on a computer, mobile device to transmit actual time video to Facebook.
- **BlueJeans-** BlueJeans is a cloud based video conferencing service. This software established in 2009 by Krish Ramakrishnan and Alagu Periyannan. It's headquarter are situated in San Jose, California.
- **Blizz-** Blizz software partnership buddy Team Viewer. It is video, voice, instant chat messaging, screen sharing and more on any device. Blizz is a free and easy to use online meeting and cooperation tool for remote or global teams. Easy to get to from any desktop, mobile device, the platform support online meeting for up to 300 participants.
- **Own Website-** The organizing team held their own webinar on their own website through video recording or live program.
- **Google Classroom-** Google Classroom was established on 6th May 2014 by Google. It is publicly open on 12th August, 2014. Google Classroom is a free blended learning study platform. Google Classroom covers Google Docs, Google Sheets, Google Slides, Gmail and Google Calendar. The most important purpose of Google Classroom is to simplify the method of allocation files between teachers and students.In 2020 Google included Google Meet.
- **Swecha-** Swecha is a non-profit organization. It is a free software establishment Andhra Pradesh in 2005. Swecha is part of the free software movement in India.

8. Data Collection and Analysis:

In this study, an effort has been made by the authors to analyze the data collected for the study to construct the analysis more significant.

Table 1: Distribution of Webinars Based on Month Capacity:

Sl. No.	Month of the webinars	Total number of webinars contribution	Percentage (%)	Rank
1	April, 2020	2	0.43 %	15
2	May, 2020	131	28.47 %	1
3	June, 2020	131	28.47 %	2
4	July, 2020	52	11.30 %	3
5	August, 2020	32	6.95 %	5
6	September, 2020	46	10.00%	4
7	October, 2020	11	2.39 %	7
8	November, 2020	4	0.86 %	10
9	December, 2020	4	0.86 %	11
10	January, 2021	2	0.43 %	14
11	February, 2020	3	0.65 %	12
12	March, 2021	7	1.52 %	8

13	April, 2021	3	0.65 %	13
14	May, 2021	5	1.08 %	9
15	June, 2021	27	5.86 %	6
Total		**460**		

Table 1 shows the distribution of webinars based on month capacity during COVID-19 lockdown from April 2020 to June 2021. Ranking of the month capacity was done based on the total number of webinars contribution and their percentage. It is especially clear from the data presented in table 1 that in total 460 webinars were organized during this COVID period by different academic institutions, research institutions and the library associations' etc. in the whole World. The study clearly explains that in the month of May and June 2020 were the peak hour for webinars 131 (28.47 %), July 2020, 52 (11.30 %) and September 2020, 46 (10.00 %).

Table 2: Distribution of Web Conferencing Platforms Used in LIS Related Webinars:

Sl. No.	Web conferencing platforms	Number of webinars contribution	Percentage (%)	Rank
1	YouTube	195	39.79 %	1
2	Zoom	85	17.34 %	2
3	Cisco Webex	76	15.51 %	3
4	Google Meet	66	13.46 %	4
5	GoTo Webinar	33	6.73 %	5
6	GoTo Meeting	11	2.24 %	6
7	Microsoft Teams	09	1.83 %	7
8	Facebook Live	08	1.63 %	8
9	BlueJeans	03	0.61 %	9
10	Blizz	01	0.20 %	10
11	Own Website	01	0.20 %	11
12	Google Classroom	01	0.20 %	12
13	Swecha	01	0.20 %	13

[Multiple options allowed]

Table 2 depicts the web conferencing platforms used in Library and Information Science (LIS) related webinars. Total 460 webinars organized during this period of April 2020 to June 2021. Ranking of the used web conferencing platforms were done based on the total number of webinars contribution. It is observed that there are thirteen types of web conferencing platforms were used. The study clearly explains the most usable web conferencing platforms were YouTube 195 (39.79 %), followed by Zoom 85 (17.34 %) and Cisco Webex 76 (15.51 %).

Table 3: Distribution of Types of Organizers for Webinars:

Sl. No.	Type of organizers	Total number of webinars attended	Percentage (%)	Rank
1	College library	192	35.48 %	1

2	Others	131	24.21 %	2
3	Library association	114	21.07 %	3
4	University library	97	17.92 %	4
5	Research institution	5	0.92 %	5
6	School library	2	0.36 %	6

[Multiple options allowed]

Table 3 shows the distribution of types of organizers for webinars during the period of April 2020 to June 2021. Ranking of the webinars organizers were done based on total number of webinars attended. The study explains most of the webinars organizers college library 192 (35.48 %), other institutions 131 (24.21 %) and library association 114 (21.07 %) in the whole World.

Table 4: Distribution of Webinars Based on the Respective Region:

> **National Webinars:**

Sl. No.	Name of the states	Total number of webinars	Percentage (%)	Rank
1	West Bengal	164	37.27 %	1
2	Karnataka	45	10.22 %	2
3	New Delhi	40	9.09 %	3
4	Maharashtra	38	8.63 %	4
5	Tamilnadu	28	6.36 %	5
6	Madhyapradesh	18	4.09%	6
7	Gujarat	18	4.09 %	7
8	Harayana	16	3.63 %	8
9	Uttarpradesh	13	2.95%	9
10	Odisha	10	2.27 %	10
11	Telangana	9	2.04 %	11
12	Kerala	7	1.59 %	12
13	Punjab	6	1.36 %	13
14	Rajasthan	5	1.13 %	14
15	Andhrapradesh	5	1.13 %	15
16	Mizoram	4	0.90 %	16
17	Assam	4	0.90 %	17
18	Tripura	3	0.68 %	18
19	Bihar	2	0.45 %	19
20	Chhattisgarh	2	0.45 %	20
21	Jammu & Kashmir	1	0.22 %	21
22	Nepal	1	0.22 %	22
23	Uttarakhand	1	0.22 %	23
Total		**440**		

> **International Webinars:**

Sl. No.	Name of the country	Total number of webinars	Percentage (%)	Rank
1	USA	9	45.00 %	1
2	United Kingdom	4	20.00 %	2

3	Bangladesh	2	10.00 %	3
4	France	1	5.00 %	4
5	Netherlands	1	5.00 %	5
6	Sri Lanka	1	5.00 %	6
7	Africa	1	5.00 %	7
8	Philippines	1	5.00%	8
Total		**20**		

Table 4 delimitates the distribution of webinars based on the respective region by national and international webinars during this period of April 2020 to June 2021. Ranking of the national and international webinars were done based on total number of webinars. This table clearly explains that in national webinar, webinar organizers of West Bengal emerged at top 164 (37.27 %), second place Karnataka 45 (10.22 %) and third place New Delhi 40 (9.09 %). In regard of ranking in international webinar, this table delimitates that being the country, webinar organizers of USA emerged at top most position 9 (45.00 %), second position United Kingdom 4 (20.00 %) and third position Bangladesh 2 (10.00 %). From the above table, 23 states were organized 440 national webinars, while 8 foreign countries were organized 20 international webinars.

Table 5: Distribution of Webinars Based on Time Duration:

Sl. No.	Time duration of the webinars	Total number of webinars	Percentage (%)
1	30 Minutes - 1 Hour	280	60.86 %
2	1 Hour - 2 Hours	137	29.78 %
3	2 Hours – 3 Hours	27	5.86 %
4	3 Hours - More	16	3.47 %
Total		**460**	

Table 5 emphasizes the distribution of webinars based on time duration. This table discloses that out of 460 webinars, duration of 280 (60.86 %) webinars were 30 minutes to 1 hour where duration of 137 (29.78 %) webinars were1 hour to 2 hours, duration of 27 (5.86 %) webinars were 2 hours to 3 hours and duration of 16 (3.47 %) webinars were 3 hours to more.

Table 6: Distribution of Webinars Based on Time Schedule:

Sl. No.	Time schedule	Total number of webinars attended	Percentage (%)
1	Morning (5:00 am – 12:00 pm)	190	41.30 %
2	Afternoon (12:00 pm – 5:00 pm)	226	49.13 %
3	Evening (5:00 pm – 9:00 pm)	44	9.56 %
4	Night (9:00 pm – 4:00 am)	00	00
Total		**460**	

Table 6 shows the distribution of webinars based on time schedule. This table illustrates that out of 460 webinars, 190 (41.30 %) webinars were broadcasted in morning session, 226

(49.13 %) webinars were broadcasted in afternoon session and 44 (9.56 %) webinars were broadcasted in evening session during this period of April 2020 to June 2021.

9. Findings:
The key findings from the present study are listed below:
i. Total 460 webinars were conducted during the COVID-19 period from April 2020 to June 2021.
ii. The study visibly explains that month of May and June 2020 was top time of webinars 131 (28.47 %).
iii. It is experimental that here thirteen types of webinar platforms were used and covered in this present study. This study shows most usable web conferencing platforms were YouTube 195 (39.79 %).
iv. This current study exposes that the majority of the webinars were organized by college library 192 (35.48 %), followed by other institutions 131 (24.21 %) and library association 114 (21.07 %) of national and international countrywide.
v. This present study explains that in national webinars, webinars organizers of West Bengal emerged at top 164 (37.27 %), second place Karnataka 45 (10.22 %) and third place New Delhi 40 (9.09 %). In regard of ranking in international webinars, webinars organizers of USA emerged at top most position 09 (45.00 %), second position United Kingdom 4 (20.00 %) and third position Bangladesh 2 (10.00 %). From the result, 23 states were organized 440 national webinars, while 8 foreign countries were organized 20 international webinars.
vi. This present study discloses that out of 460 webinars, duration of 280 (60.86 %) webinars were 30 minutes to 1 hour where duration of 137 (29.78 %) webinars were 1 hour to 2 hours, duration of 27 (5.86 %) webinars were 2 hours to 3 hours and duration of 16 (3.47 %) webinars were 3 hours to more. Thus, it gives a clear view that time duration of most of the webinars were short because for along period of time any participant doesn't want to see and sit in front of the computer as well as laptop, mobile or tablet. Eyesight and mental stability are most important health issues for any participant as well host and also invited speakers. On the other hand, time duration of some webinars was neither too long nor too short.
vii. Out of 460 webinars, 190 (41.30 %) webinars were broadcasted in morning session, 226 (49.13 %) webinars were broadcasted in afternoon session and 44 (9.56 %) webinars were broadcasted in evening session during this period of April 2020 to June 2021. The result indicates that maximum webinars were broadcasted in afternoon session then morning session and not a single webinar was broadcasted in night session.

10. Conclusion:
This Corona time has taught us how to do 'work from home' study, professional and research work online. It also teaches that with faith and hard work crisis situations can be fight. This is we have seen as a result. The main focus of this lesson is to current technological development and Informetrics of webinars through video conferencing platforms for teaching and learning by different LIS professional during COVID-19 period. So, it is seen that total

460 webinars were conducted during the COVID-19 period from April 2020 to June 2021. All webinars were free access. It is also seen thirteen types of webinar platform are used in the current study. The study noticeably most usable web conferencing platforms are YouTube, Zoom and Cisco Webex. Besides, the highest numbers of webinar organizers are college libraries nationally or internationally and the top national level webinar organizers are West Bengal in India and the USA internationally. As a result, 23 states hosted 440 national webinars, and 20 international webinars in 8 foreign countries.

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