A STUDY ON PROBLEMS FACED BY USERS OF ZOOM APPLICATION IN BANGALORE

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Abstract—*E-learning is mostly used in the present scenario to gain more knowledge other than direct lecturing, seminars, training etc. Zoom app is a e-learning technique which is used for learning through video conferencing, recording, audio, screen sharing like images, graphs, and charts etc to get knowledge. The zoom application has some security and the privacy issues so that the users are facing some problems regarding the zoom application in Bangalore. The biggest problem in zoom meeting are Zoom bombing, Sketchy Installers, Dubious encryption, Questionable Routing and the common problems that the users face are the audio and video problems, screen sharing, echoes during a call, receiving email messages from zoom, network connection etc. In the zoom research study both primary as well as the secondary data are been taken and the primary data is taken through questionnaires from 100 respondents and secondary data are been taken using websites, newspapers, magazines etc. The area for zoom research is taken within the Bangalore city itself using tables and charts with percentage. The findings and suggestions of the research is to improve the overall quality of the zoom application with new updating. The zoom user's satisfaction and their requirements have to be taken in consideration for the safety and security of the users.*

Keywords—*E-Learning, Privacy, Quality Services, Security, Zoom Application.*

INTRODUCTION

Zoom app is a e-learning technique which is used for learning through video conferencing, recording, audio, screen sharing like images, graphs, and charts etc to get knowledge. Zoom is a web-based device which can be used through the mobile device or the desktop for the purpose of online meeting for the users of zoom application.

The zoom application has some security and the privacy issues so that the users are facing some problems regarding the zoom application in Bangalore. Some of the common problems that the users face are the audio and video problems, screen sharing, echoes during a call, receiving email messages from zoom etc. The network is another issue for the connecting of zoom meeting. When there is low network connection the video and audio quality appear blurry and pixelated in the zoom meeting which affects the user in the getting the information from the zoom meeting.

The biggest problem in zoom meeting are:

➢ Zoom bombing- Zoom bombing is a cyberattack in which the hackers enter the meeting without the host allow to attend the meeting. The hackers enter the chat rooms to drop hated images and use unwanted languages in the meeting which creates distractions among others who participates in the meeting.

➢ Sketchy Installers- The installers use a technique of getting the data from the user's personal password without the knowledge of the user. The user will not be able to find that they have lost their personal data and information from their system.

➢ Dubious encryption- The dubious encryption is regarding the chat messages. The users can send the messages, pictures, screenshots, emojis and the files when the zoom has enabled encrypted chat. Through the encryption keys the hackers collect the data of the user.

➢ Questionable Routing- The questions are been asked that where the personal data of the users are going from zoom app. The user's personal data are been collected and it is been send to the social medias such as the Facebook, WhatsApp etc.

➢ These are the biggest problem that the users are facing in the zoom app meetings. Sharing the meeting link directly on social media will allow a stranger to join the meeting and the stranger can cause disorder in the meeting session using unwanted images and saying unexpected things in the meeting.

IMPORTANCE OF THE STUDY

The importance of the study is to know the proper reason why the users are facing these security and privacy issues in the meeting. The study is very much important to know the various problems among the zoom users because after getting the complete data and the information about the problems faced by the users, the company can try to solve the complete problems of the zoom users. Through this research we can identify the past and current issues happening in the zoom app from the Bangalore users. And, can provide the required and important information about the safety of the zoom users in Bangalore.

STATEMENT OF THE PROBLEM

The statement of the problem can be requiring correct passwords by the users for most zoom meetings in order to be safe from security issues and be safe from hacking of our personnel data and information by others. The meeting link should not be shared in the social media directly because sharing meeting link directly on the social media will allow the stranger to enter the meeting and the stranger can cause any distractions in the meeting putting some vulgar images and create useless talks in the meeting. When all the corrective measures are been followed while conducting a zoom meeting, the zoom users can protect their data and be secure in conducting the meeting effectively without any distractions by the strangers. So, all the Bangalore zoom users should be aware of the various privacy and security problems that happens in the online meeting sessions.

NEED FOR THE STUDY

The study presents the analysis of the problems faced by the people who are using this zoom application in Bangalore city. The study is needed to know the various problems, the security issues, that are been faced by the zoom application users. And to know how the installers can get the personnel data from the users without the knowledge of the users. The need of the study is to know the sufferance of the users regarding the expected and the unexpected problems and to know how these problems occur in the zoom meetings. The users suffer main problems like zoom bombing, sketchy installers, dubious encryption and questionable routing and the common problems like video, audio, screen sharing, low network connection, unexpected messages from an unidentified person etc.

OBJECTIVES OF THE STUDY

➢ To identify the various problems faced by the zoom application users in Bangalore.

➢ To identify potential risk, security, and personal data theft issues.

➢ To understand how to use the zoom application system with safety and effectively.

SCOPE OF THE STUDY

The scope of this study is applicable everywhere in all businesses and institutions. The scope of this study involves e-learning for students, industries, large, medium, and small businesses, company employees, IT sectors, universities, institutions in Bangalore etc. This study is to make aware of these various problems to all the zoom users. The value of the study is important for the safety and security issues of the Bangalore zoom users.

LIMITATIONS OF THE STUDY

➢ It has lack of security and privacy issues regarding the personal data of the users.

➢ It decreases the number of users using the zoom app.

➢ It decreases the quality of customer service.

REVIEW OF LITERATURE AND GAPS

A literature is a survey taken from various scholarly articles regarding any topic. In the articles of zoom app, the current problems and the effect of users are been reported on day by day. A literature review shows the overall rating or reviews

of zoom users on how much the users are comfortable in using the zoom app. A literature review is helpful in doing any research paper because as per the related articles the review presents the current information and the research can be done effectively.

➤ Naveen Menezes, Bangalore Mirror Bureau (May 19, 2020) The video conferencing zoom app is stopped in one of the reputed schools in Bangalore (Kengeri) because when a female lecturer was taking class for pre- university students, during an online class suddenly a vulgar video has been appeared in the screen. So, the online class has to be stopped suddenly due to this zoom bombing by both the lecturer and the students. So, after this zoom bombing incident the different app called Cisco WebEx has to be used by the faculty to take classes for the students. It was also said that it was not sure this zoom bombing may be done by the students.

➤ Bhvishya Patel for Mail online (May 17, 2020) The users of zoom start reporting about the video issues daily around 9 am. There were around 3043 people reported problems as per Down Detector. The American company, the headquarters is in San Jose, California, had faced some issues that their members were not able to login ang join in the meetings. In a day around more than 3,000 people were experiencing problem and they were reporting about their service problems as per the Down Detector and real time problem. As per the reported issues around 77 percent said that they were facing issues regarding the video conferencing and many people faced the problems on login that is about 21 percent people.

➤ Charlie Osborne (April 22, 2020) it was founded that zoom is not a good platform for the business and learning enterprise because zoom is not good for virtual conference. Zoom is used for meetings for businessmen, lessons for students and discussions for professionals. Zoom has created security problems and has unexpected growth to the company. It is said that the iPhone user's personal data is send to the Facebook even though the user does not have a Facebook account. It also says that the end to end encryption had some of the problems with relate to chat boxes. Later, it is said that they secure from the zoom hijacking and in the address bar the ID number will not be shown.

➤ Vijaita Singh Yuthika Bharagava (April 17th, 2020) The Ministry of Home Affairs has announced that the video conference on zoom is not safe. The cyber coordination centre had taken some set of measures for the users to be safe. The MHA had noticed that the offices and officials of government use was not there.

➤ The CERT-IN of March 30 note said that the zoom has popularity in its videoconferencing, but it has insecurity in zoom which results in cybercrime to access the personal details of the user. The CERT-IN of April 2 said that in video conferencing many vulnerabilities were reported so this could make the attacker to get data and information. So, the Ministry has said users to make powerful password and not to share any ID or password links directly on social media.

➤ Boris Johnson (March 31, 2020) The zoom bombing happens when hackers the enters zoom and post porn videos. So, he says that the password is not safe for zoom meetings due to its settings. And, do not allow any participants to share the screen during the meetings. So, the zoom app has made changes in its settings for e-learning to reduce privacy and security issues. And said that data is also leaked due to zoom contacts. To stop sending data to Facebook, zoom app has recommended to update its iOS system.

RESEARCH METHODOLOGY

This is a descriptive study. The data is taken through both primary and secondary data. The sampling technique used is convenience sampling and the instrument used for primary data collection is observation and questionnaires with total number of samples taken as 100. The secondary data taken are from articles, journal, and newspapers. And the statistical tools that are used are MS Excel, MS Word, Google Forms etc. for the Tables, charts, and graphs with MS Excel. This research design is to describe the current situation of the zoom users facing in Bangalore.

DATA ANALYSIS

DATA ANALYSIS AND INTERPRETATION

The data is been collected from various sources to get the clear and exact picture of the zoom problems of the users. The data is collected and formed as per the objective of the problems of the zoom users in Bangalore city. The zoom problems have been known and made questionnaires as per the collected information and took response from the zoom users about the problems faced by the zoom users in Bangalore.

As per the respondent's response the data analysis and interpretation of various questions are been shown clearly in the tables. The below tables are the various feedback that the users are suffering through the zoom app.

TABLE 1: GENDER OF THE RESPONDENTS

SL No.	Particulars	No. of Respondents	Percentage
1	Male	60	60%
2	Female	40	40%
	Total	100	100%

Source: Primary Data

The above table show 60% of them are male and 40% of them are female respondents. Majority of the respondents are male answered for the questionnaires.

TABLE 2: AGE OF THE RESPONDENTS

SL No.	Particulars	No. of Respondents	Percentage
1	15-20	10	10%
2	20-30	67	67%
3	30-45	13	13%
4	45 and above	10	10%
	Total	100	100%

Source: Primary Data

The above table shows, 10% belongs to age group from 15-20, 67% from age of 20-30, 13% from age of 30-40 and remaining 20% are 45 years above people.

TABLE 3: EDUCATIONAL LEVEL OF THE RESPONDENTS

SL No.	Particulars	No. of Respondents	Percentage
1	Secondary level	11	11%
2	Undergraduate	45	45%
3	Postgraduate	41	41%
4	PhD	3	3%
	Total	100	100%

Source: Primary Data

The above table shows the educational level. secondary level respondents are 11%, undergraduates are 45%, postgraduate are 41% and remaining 3% respondents are PhD.

TABLE 4: AWARE OF ZOOM APP

SL No.	Particulars	No. of Respondents	Percentage
1	Yes	92	92%
2	No	8	8%
	Total	100	100%

Source: Primary Data

Here the number of users aware of zoom app are 92% and the users not aware of zoom app are only 8%.

TABLE 5: USING ZOOM APP REGULARLY

SL No.	Particulars	No. of Respondents	Percentage
1	Yes	46	46%
2	No	29	29%
3	Maybe	25	25%
	Total	100	100%

Source: Primary Data

The table has shown the regular users and non-regular users of zoom application. The regular users are 46%, the non - regular users are 295 and the remaining 25% shows that they may or may not be a regular user of zoom app.

TABLE 6: FACING FOLLOWING PROBLEMS OF ZOOM APP

SL No.	Particulars	No. of Respondents	Percentage
1	Audio and Video problems	48	48%
2	More participants	14	14%
3	Time limit	27	27%
4	Chat box	11	11%
	Total	100	100%

Source: Primary Data

In the above table 48% of the respondents say that the audio and video problems they are facing, 14% say more participants is the problem, 27% say time limit is the problem and 11% say chat box is the problem which they are facing in zoom app.

TABLE 7: PROBLEMS FROM UNIDENTIFIED PERSONS

SL No.	Particulars	No. of Respondents	Percentage
1	Yes	67	67%
2	No	33	33%
	Total	100	100%

Source: Primary Data

The table is determined that the number of people who faced problems from an unidentified person are 67% and not faced problems are 33% of people.

TABLE 8: TIME CONSTRAINTS FROM ZOOM APP

SL No.	Particulars	No. of Respondents	Percentage
1	Yes	60	60%
2	No	40	40%
	Total	100	100%

Source: Primary Data

The above table is determined that some people face problem in the limited time that is 60% of them face problem and 40% of them do not face any problem in the time.

TABLE 9: ZOOM APP HELPFUL IN E-LEARNING

SL No.	Particulars	No. of Respondents	Percentage
1	Dissatisfied	36	36%
2	Satisfied	64	64%
	Total	100	100%

Source: Primary Data

The above table shows that how helpful is zoom app with reference to e-learning. In the table it shows the level of dissatisfaction and satisfaction, the rating of dissatisfaction level is 36% and satisfaction level is 64%.

TABLE 10: ZOOM EFFECTIVE IN E-LEARNING

SL No.	Particulars	No. of Respondents	Percentage
1	Yes	64	64%
2	No	36	36%
	Total	100	100%

Source: Primary Data

The above table is showing that the number of people say that zoom is effective in e- learning and not effective in e-learning. 64% of them say it is effective and 36% of them says it is not effective.

TABLE 11: QUALITY ON SCREEN SHARING EFFECTIVE

SL No.	Particulars	No. of Respondents	Percentage
1	Yes	64	64%
2	No	36	36%
	Total	100	100%

Source: Primary Data

The total number of people who says quality of screen sharing is effective are 64% and people who say not effective are 36% of respondents. Hence some people are not willing the quality on screen sharing is effective in e-learning.

TABLE 12: CHAT BOX USEFUL IN E-LEARNING

SL No.	Particulars	No. of Respondents	Percentage
1	Yes	62	62%
2	No	38	38%
	Total	100	100%

Source: Primary Data

The table shows the 62% of people say that chat box is useful in e-learning and 38% of people say that chat box is not useful in e-learning.

TABLE 13: PROBLEMS FACING WITH ZOOM APP

SL No.	Particulars	No. of Respondents	Percentage
1	Security issues	24	24%
2	Video conferencing	4	4%
3	Audio problems	12	12%

4	Quality	9	9%
5	All the above	29	29%
6	Nil	19	19%
7	Others	3	3%
	Total	100	100%

Source: Primary Data

The above table shows 24% face security problems, 4% face video conferencing, 12% face audio problems, 9% face quality problem, 29% of the respondents face all the above problems, 19% say no problems they have and 3% has other problems with zoom app.

TABLE 14: MAIN PROBLEMS IN ZOOM APP

SL No.	Particulars	No. of Respondents	Percentage
1	Zoom bombing	13	13%
2	Sketchy installers	11	11%
3	Dubious encryption	15	15%
4	Questionable routing	17	17%
5	All the above	44	44%
	Total	100	100%

Source: Primary Data

In the table it is shown that what are the main problems the users feel in zoom app. So, 13% of the users feel that Zoom bombing, 11% of them feel that sketch installers, 15% of them feel dubious encryption, 17% of them says questionable routing and 44% of them says all the above is the main zoom problems.

TABLE 15: AUDIO AND VIDEO CLEAR WITH REFERENCE TO E-LEARNING

SL No.	Particulars	No. of Respondents	Percentage
1	Yes	46	46%
2	No	54	54%
	Total	100	100%

Source: Primary Data

In the table it is shown that 46% of the users say yes and 54% of the users say no audio and video quality is not clear with reference to e-learning.

TABLE 16: ZOOM CAUSE MORE PROBLEMS IN WHICH OF THE FOLLOWING

SL No.	Particulars	No. of Respondents	Percentage
1	Mobile apps	47	47%
2	Desktop applications	13	13%
3	Both	24	24%
4	None	16	16%
	Total	100	100%

Source: Primary Data

This is the table showing that users feel mobile apps are 47% of problems for zoom app, desktop applications are 13%, 24% of users say both and 16% of users say none of the app.

TABLE 17: SATISFIED USING ZOOM APP IN iOS OR ANDROID

SL No.	Particulars	No. of Respondents	Percentage
1	Highly satisfied	4	4%
2	Satisfied	60	60%
3	Dissatisfied	27	27%
4	Highly dissatisfied	9	9%
	Total	100	100%

Source: Primary Data

In the above table it shows the satisfaction level of the user using in iOS or android. Highly satisfied level is 4%, satisfaction level is 60%, dissatisfaction level is 27% and highly dissatisfaction level is 9%.

TABLE 18: PROBLEM IN VIDEO CONFERENCING

SL No.	Particulars	No. of Respondents	Percentage
1	Yes	49	49%
2	No	51	51%
	Total	100	100%

Source: Primary Data

The table showing the total number of users say the problems with video conferencing. 49% of yes and 51% of no by the zoom users in Bangalore.

TABLE 19: SHOWING SCALES FROM STRONGLY AGREE TO STRONGLY DISAGREE

SL No.	Statements	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Percentage
1	Privacy and security are main problems	29	42	19	6	4	100%
2	Installers get users personal data without users' knowledge	20	43	29	5	3	100%
3	Sharing meeting link directly on social media will allow strangers to join meeting	31	37	25	3	4	100%
4	If hackers enter to your system, it makes hackers to access other parts of your computer	23	40	27	6	4	100%
5	Allowing the meeting hosts to track attendees creates privacy issues	21	36	28	10	5	100%

Source: Primary Data

The table shows the percentage on how much the respondents strongly agree, agree, be neutral, disagree and strongly disagree in the security and privacy related issues and how hackers attack personal data and spread the data of the user to others.

TABLE 20: ZOOM BOMBING IN ZOOM APP

SL No.	Particulars	No. of Respondents	Percentage
1	Strongly agree	11	11%
2	Agree	58	58%
3	Disagree	28	28%
4	Strongly disagree	3	3%
	Total	100	100%

Source: Primary Data

The above table shows zoom bombing is main problem they are facing. 11% strongly agree, 58% agree, 28% disagree 3% strongly disagree.

TABLE 21: LOGIN PROBLEMS WITH ZOOM APP

SL No.	Particulars	No. of Respondents	Percentage
1	Often	21	21%
2	Rarely	60	60%
3	Never	19	19%
	Total	100	100%

Source: Primary Data

The above table shows 21% face login problems often, 60% face rarely and 19% never faced login problems.

TABLE 22: VIDEO AND AUDIO QUALITY WITH LOW NETWORK CONNECTION

SL No.	Particulars	No. of Respondents	Percentage
1	Strongly agree	18	18%
2	Agree	46	46%
3	Neutral	30	30%
4	Disagree	4	4%
5	Strongly disagree	2	2%
	Total	100	100%

Source: Primary Data

The table is showing about the audio and video quality problems with low network connection. The respondents say more as agree, neutral, strongly agree, disagree, and strongly disagree in the network connection problem.

TABLE 23: VULGAR MESSAGES OR VIDEOS DISPLAYED IN ZOOM MEETING

SL No.	Particulars	No. of Respondents	Percentage
1	Yes	26	26%
2	No	74	74%
	Total	100	100%

Source: Primary Data

The table shows the respondents response on the whether they have faced vulgar messages or the videos during the zoom app. Only some people have faced the problem on vulgar messages and most of the respondents say no they did not face this problem.

TABLE 24: SCHEDULING MEETING

SL No.	Particulars	No. of Respondents	Percentage
1	Often	26	26%
2	Rarely	56	56%
3	Never	18	18%
	Total	100	100%

Source: Primary Data

The scheduling meeting problem is shown in the table that is 26% people face often, 56% face rarely and 18% do not face scheduling problem in the zoom app.

TABLE 25: SATISFIED IN USING ZOOM APPLICATION

SL No.	Particulars	No. of Respondents	Percentage
1	Highly satisfied	7	7%
2	Satisfied	61	61%
3	Dissatisfied	23	23%
4	Highly dissatisfied	9	9%
	Total	100	100%

Source: Primary Data

This table is showing the analysis of 7% highly satisfied, 61% of satisfied, 23% of dissatisfied and 9% of highly dissatisfied by zoom users in zoom applications. This shows the overall satisfaction of zoom users in using the zoom app.

FINDINGS OF THE STUDY

➢ In the above study most of the people are aware of about the zoom app and they use the app regularly by both male and female.

➢ Most of the users say that they have faced many problems from the zoom app like the security and privacy issues, video and audio quality, time constraints, a greater number of people etc.

➢ In the study more than 1/2th of the people say zoom app is good in e-learning with good video and audio, screen sharing and chat box. And the remaining percentage of people say that e-learning not effective in the zoom app.

➢ In the study most of the respondents say that 47% of the users are suffering problems in using mobile apps, 13% users say desktop is having problem, 24% of users say both the mobile apps and the desktop is having problems and remaining 16% users say that they do not face any problem in both the mobile apps or desktop apps.

➢ Most of the users are satisfied in using zoom app in their iOS or android because it is easy for the user to carry wherever they want and use whenever their need.

➢ The respondents say that they face login problems in the zoom app while joining the meeting and after joining the meeting they faced vulgar images and videos from an unidentified person.

➢ In the study over all 61% of the respondents say they are satisfied using the zoom app 23% are dissatisfied, 9% are highly dissatisfied and only remaining 7% users are highly satisfied using this zoom app.

5.1 SUGGESTIONS / RECOMMENDATIONS OF THE STUDY

➢ The problems of zoom app have to be taken in consideration by the zoom company for the safety and security of the users.

➢ The overall quality of the zoom application has to be improved for the better conducting of meetings through zoom app.

➢ Building of more protection to the privacy and security issues can make the zoom application to run smoothly without any distractions in online sessions.

CONCLUSIONS

From my research study I can conclude that the problems faced by the users of zoom application in Bangalore is due to the privacy and the security issues. Through zoom app meeting the user can conduct the meeting using audio, video, recording, chat box, sharing various images etc. The study says that the zoom users were facing many problems like the audio and video problems, echoes during any call, screen sharing etc. The biggest problem of zoom app is zoom bombing, questionable routing, dubious encryption, and sketchy installers. These problems are very dangerous to the zoom users while the zoom meeting that is been conducted. So, the users should be very safe while the online session. Due to corona virus lockdown many people are doing their job from their home itself and the students are studying through online. When there is increase in the zoom users the hackers enter and stole the personal data of the users without their knowledge and create many privacy related issues with the zoom users. Therefore, the problems faced by the zoom users in Bangalore has to be strictly considered for the privacy and security of the zoom users. And, has to take some corrective measures regarding the problems that the users are regularly facing from the hackers. So, this can make the zoom app effective and bring successful growth in the business.

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