Study of the Role of ZOOM Platform in Collaborative Learning from the Perspective of the Kabul University Lecturers

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ABSTRACT

This paper examines the different qualities of the Zoom platform with a focus on its advantages and disadvantages in a collaborative learning style from Kabul University's lecturers' perspective. The study explored the role of both humans and technology in shaping the higher education system. The descriptive methodology is used to collect data through a questionnaire with sixteen questions. The statistical population is Kabul University, and the target population is the professors of Journalism, Computer Science, Psychology, Social Sciences and Agriculture faculties who were selected by cluster sampling method. The findings of this research indicate that the majority of the participants of this study believe that the use of Zoom can facilitate the process of collaborative learning and can increase the interaction between students and professors. Participants of this study considered sharing in discussions easily and cheaply as one of the noteworthy advantages of Zoom technology.

Keywords: Collaborative learning, higher education system, interaction, Zoom

Introduction

Every aspect of human life has been influenced by technology and communication. This phenomenon evolved quickly, creating a complex environment where human and non-human components interacted to support life. Despite the fact that technology has always been viewed as a tool, analysis of it uses a functional paradigm that emphasizes its instrumental aspect. Technology, in Lanzara's opinion, is more than just a tool; it also has a dubious side that has the ability to be both beneficial and detrimental. (Mader, 2015, pp. 109-116). A theoretical framework in social science called the actor-network theory (ANT) makes the argument that

inanimate items like technologies have agency and the capacity to change how people interact with one another. This perspective of view is more radical. When determining the source of an activity in ANT, there is no preference given to people, machines, or other forms of technology. (Mader, 2015, pp. 109-116).

ZOOM, as a participant, influenced online learning through a variety of capabilities (including screen sharing, virtual whiteboards, file sharing, transcription of recordings, and non-verbal feedbacks). The level of participation in class may change. Professors from Kabul University look at Zoom's features, benefits, and drawbacks in regard to online group learning in this post. We'll look into this interaction between people and technology to see how it affects schooling. (Roy, 2020) .

Literature Review

While studying Interactive Videoconferencing for collaborative learning at a distance in the school of 21st century stated that through the use of video communications, educational institutions can reach a wider audience of students, engage in cross-institutional research, and provide students with new learning opportunities (Anastasiades, 2010, pp. 321–339.) Whether it is referred to as distant learning or eLearning, using video communications boosts productivity, lowers training costs, makes subject matter experts accessible (regardless of location), and provides students with real-time, immediate access to classes and course materials. It is easier for students to retain the course material when practice exercises and feedback are combined with multimedia and instructional design. Educational institutions must employ video communications to engage with current and new students, give access to outside experts, work with other universities, and electronically interact with students, teachers, and staff in order to stay competitive and boost revenue.

Doggett, 2007 in their study about the videoconferencing classroom: What do students think? With that Collaborative learning has been shown to improve student motivation, engagement, and overall learning outcomes. When students work together in a virtual classroom, learning can be more dynamic and fascinating since each student has the opportunity to express their unique perspectives and thoughts. Teachers can gauge student involvement levels and adjust their teaching tactics as needed by supporting and monitoring student cooperation in real time via Zoom. Zoom makes it possible for virtual classrooms to be more interactive and collaborative, which increases student engagement. Collaboration in education through the use of Zoom and technology can completely change how students learn and develop in a virtual environment. (Doggett, 2007)

With the help of online learning, students may regain control over their schedule by being able to learn at any time and from any location. The concern that video conferencing-based instruction and learning isn't as successful as what is done in a regular classroom setting was examined by (Knipe, 2002).The results demonstrated that students at the distant site had access to less effective instruction and learning than those in a conventional classroom. In order to better understand how students feel about video conferencing in higher education, (Candarli, 2012) believed that study's participants were second- and third-year college students who spent roughly thirty minutes in a videoconference English lesson.

Students believed using videoconferencing in class was inappropriate, according to the study's findings. A study by (Wang, 2018) looked into a hybrid synchronous learning environment (BSLE). The majority of students attended in person, and the remaining few used

two-way videoconferencing (Zoom). The study's aim was to find out more about how students learned and how they felt about the blended synchronous learning strategy. 24 participants in the study enrolled in an elective course at a facility for teacher preparation. The study's findings suggest that students liked the convenience and flexibility of learning online through Zoom. The researchers did note that pupils didn't participate in Zoom very much. Sometimes, students would turn off their cameras and refuse to respond to questions.

According to a study by (Sayem, 2017) employing Zoom can help students learn fundamental engineering units more effectively. The quantity and kind of contributions to the Moodle Q&A Forum and the number of students participating in Zoom virtual tutorials were used to gauge student engagement with the course. The usage of Zoom virtual tutorials, according to the researchers, enhanced student satisfaction while reducing instructor effort by about 25%.

In a study published in 2019, (Archibald, 2019) investigated if Zoom might be used to gather qualitative data for health research. Online qualitative interviews with 16 female nurses were used to gather data. The interviews lasted between 50 and 92 minutes. When compared to FTF, phone, or other videoconferencing platforms, the researchers discovered that 69% of the participants preferred Zoom as an interviewing method. The following benefits of adopting Zoom for qualitative interviews were also mentioned by the participants: rapport, convenience, simplicity, and user-friendliness. The researchers discovered that Zoom might be a very suitable platform for gathering information from qualitative interviews. The relative simplicity of use, cost effectiveness, data management features, and security alternatives were cited as the causes.

The perceived benefits of using Zoom for dissertation chairs to train and mentor doctoral students were examined by (Maul, 2018). Participants in this study included dissertation chairs and PhD candidates from a university in the southwest of the United States. Researchers performed a poll to find out more about the demographics of the university's dissertation chairs and how frequently they use Zoom to connect with their doctorate students. Using a 19-item survey in the Likert style, data were collected. The poll was divided into five categories, including demographic data, monthly Zoom usage, Zoom use with doctoral students who served as dissertation chairs, and others. Additionally, four PhD candidates and four dissertation chairs were interviewed by the researchers. Zoom is valued by both instructors and students, according to research.

Agarwal, 2020 belived that FTF lessons were substituted by 40-minute Zoom lectures as a result of the COVID 19 epidemic. At the conclusion of the lecture series, 77 students wrote down their impressions. The majority of students (97%) said the sessions related to their clinical practice and learning needs and 99% said the sessions were appropriate for their level of learning. All of the participants agreed that adding Zoom lectures to the medical curriculum would be a good idea. (Agarwal, 2020)These findings led the researchers to the conclusion that postgraduate training in future classes should include online teaching.

Demuyakor (2020) examined the degree to which Ghanaian foreign students at Chinese higher education institutions were happy with their online learning experiences. The study's findings indicated that students supported the use of online learning resources (Demuyakor, 2020).

As a result of the COVID-19 epidemic, many colleges shifted from FTF classroom instruction to online instruction; others chose Zoom as their delivery platform.

Method

The descriptive methodology is used to gather data from a questionnaire containing 18 items. The statistical population of Kabul University consists of the teachers from the faculties of journalism, computer science, psychology, social sciences, and agriculture who were selected using the cluster sampling method. In order to collect accurate data, I chose the administrators and members of the e-learning committee of these five faculties as my sample group. There was a total of sixty participants, of which fifty were chosen using an online sampling approach with a 90% confidence level and a 5% error margin.

Research Questions

1. What are the advantages of using zoom in the process of online collaborative learning?
2. What are the disadvantages of Zoom in the process of online collaborative learning?

Results

Demography of respondents

Table 1.1: Gender of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	44	86.3	88.0	88.0
	Female	6	11.8	12.0	100.0
	Total	50	98.0	100.0	
Missing	System	1	2.0		
Total		51	100.0		

Table 1.1 shows that 88% of the respondents of this survey are males and 12% are females. So we can say that the majority of the respondents of this research are male.

Table 1.2: Educational level of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bachelor	4	7.8	8.0	8.0
	Master	38	74.5	76.0	84.0
	PHD	8	15.7	16.0	100.0
	Total	50	98.0	100.0	
Missing	System	1	2.0		
Total		51	100.0		

Table 1.2 shows that 8% of the respondents of this survey are bachelors.76% of survey participants are masters.16% of the participants of the survey are Ph.D. Therefore, we can say that the majority of the participants of this survey have a master's degree.

Advantages of Zoom in collaborative learning

Table 1.3: The use of zoom can make teaching easier

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	14	27.5	28.0	28.0
	Agree	28	54.9	56.0	84.0
	No comments	3	5.9	6.0	90.0
	Strongly disagree	4	7.8	8.0	98.0
	Disagree	1	2.0	2.0	100.0
	Total	50	98.0	100.0	
Missing	System	1	2.0		
Total		51	100.0		

Table 1.3 shows that 28% of the respondents of this survey strongly agree that the use of Zoom can facilitate the teaching process. 56% of the participants of this survey agree that using Zoom can make the teaching process easier. 6% of the participants of this survey do not have an opinion on this matter. 8% of the participants of this survey strongly disagree that the use of Zoom can make the teaching process easier. 2% of the participants of this survey disagree that the use of Zoom can make the teaching process easier.

Table 1.4: The use of ZOOM increased my interaction with my students.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	12	23.5	24.0	24.0
	Agree	25	49.0	50.0	74.0
	No comments	7	13.7	14.0	88.0
	Strongly disagree	6	11.8	12.0	100.0
	Total	50	98.0	100.0	
Missing	System	1	2.0		
Total		51	100.0		

Table 1.4 shows that 24% of the respondents of this survey strongly agree that the use of Zoom can increase the interaction between the professor and the student.50% of the participants of this survey agree that the use of Zoom can increase the interaction between the professor and the student.14% of the participants of this survey do not have an opinion on this matter.12% of the participants of this survey strongly disagree with the fact that the use of Zoom can increase the interaction between professors and students.

Table 1.5: The features of Zoom technology are easy to understand for learning

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	9	17.6	18.0	18.0
	Agree	30	58.8	60.0	78.0
	No comments	6	11.8	12.0	90.0
	Strongly disagree	4	7.8	8.0	98.0

		Frequency	Percent	Valid Percent	Cumulative Percent
	Disagree	1	2.0	2.0	100.0
	Total	50	98.0	100.0	
Missing	System	1	2.0		
Total		51	100.0		

Table 1.5 shows that 18% of the survey respondents strongly agree that the features of the Zoom app are easy to understand for learning.60% of the participants of this survey agree that the features of the Zoom program are easy to understand for learning.12% of the participants of this survey have no opinion on this matter.8% of the participants of this survey strongly disagree that the features of the Zoom program are easy to understand for learning.2% of the participants of this survey disagree that the features of the Zoom program are easy to understand for learning.

Table 1.6: Using Zoom technology, I can encourage my shy student more than face-to-face meetings in the classroom

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	8	15.7	16.0	16.0
	Agree	20	39.2	40.0	56.0
	No comments	12	23.5	24.0	80.0
	Strongly disagree	8	15.7	16.0	96.0
	Disagree	2	3.9	4.0	100.0
	Total	50	98.0	100.0	
Missing	System	1	2.0		
Total		51	100.0		

Table 1.6 shows that 16% of the respondents of this survey strongly agree that using the Zoom program they can encourage their shy students more than face-to-face meetings in the class.40% of the participants of this survey agree that by using the Zoom program, they can encourage their shy students more than face-to-face meetings in the class.24% of the participants of this survey do not have an opinion on this matter.16% of the participants of this survey strongly disagree with the fact that by using the Zoom program, they can encourage their shy students more than face-to-face meetings in the class.2% of the participants of this survey strongly disagree that by using the Zoom program, they can encourage their shy student more than face-to-face meetings in the classroom.

Table 1.7: I think using Zoom's various features can really ease the online learning process

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	13	25.5	26.0	26.0
	Agree	26	51.0	52.0	78.0
	No comments	9	17.6	18.0	96.0
	Strongly disagree	2	3.9	4.0	100.0
	Total	50	98.0	100.0	
Missing	System	1	2.0		
Total		51	100.0		

Table 1.7 shows that 26% of the survey respondents strongly agree that using various Zoom features can really make the online learning process easier. 52% of participants in this survey agree that using various Zoom features can really make the online learning process easier. 18% of the participants of this survey do not have an opinion on this matter. 4% of the participants of this survey strongly disagree that using various Zoom features can really make the online learning process easier.

Table 1.8: It is convenient and cheap for me to participate in discussions through Zoom.

		Frequency	Percent	Valid Percent	Cumulative Percent
	Strongly agree	9	17.6	18.0	18.0
	Agree	25	49.0	50.0	68.0
	No comments	4	7.8	8.0	76.0
Valid	Strongly disagree	8	15.7	16.0	92.0
	Disagree	4	7.8	8.0	100.0
	Total	50	98.0	100.0	
Missing	System	1	2.0		
Total		51	100.0		

Table 1.8 shows that 18% of respondents to this survey strongly agree that it is convenient and cheap for them to participate in discussions through Zoom. 50% of the participants of this survey agree that it is convenient and cheap for them to participate in discussions through Zoom. 8% of the participants of this survey do not have an opinion on this matter. 16% of the participants of this survey strongly disagree that it is convenient and cheap for them to participate in discussions through the Zoom program. 8% of the participants of this survey strongly disagree that it is convenient and cheap for them to participate in discussions through the Zoom program.

Table 1.9: Using Zoom, I can access additional information about the course and search the Internet even during the sessions.

		Frequency	Percent	Valid Percent	Cumulative Percent
	Strongly agree	9	17.6	18.0	18.0
	Agree	30	58.8	60.0	78.0
Valid	No comments	7	13.7	14.0	92.0
	Strongly disagree	4	7.8	8.0	100.0
	Total	50	98.0	100.0	
Missing	System	1	2.0		
Total		51	100.0		

Table 1.9 shows that 18% of respondents of this survey strongly agree that by using Zoom even during meetings they can access additional information about the course and search the Internet. 60% of the participants of this survey agree that by using Zoom, even during meetings, they can access additional information about the lesson and search the Internet. 14% of the

participants of this survey do not have an opinion on this matter. 8% of the participants of this survey strongly disagree that it is convenient and cheap for them to participate in discussions through the Zoom program.

1.10: Since Zoom has the ability to record sessions for later review, I can replay the recording and take notes to improve my teaching.

		Frequency	Percent	Valid Percent	Cumulative Percent
	Strongly agree	20	39.2	40.0	40.0
	Agree	25	49.0	50.0	90.0
Valid	No comments	4	7.8	8.0	98.0
	Strongly disagree	1	2.0	2.0	100.0
	Total	50	98.0	100.0	
Missing	System	1	2.0		
Total		51	100.0		

Table 1.10 shows that 40% of the survey respondents strongly agree that since Zoom has the ability to record sessions for later review, they can replay the recording and take notes for better teaching.remove50% of participants in this survey agree that since Zoom has the ability to record sessions for later review, they can replay the recording and take notes to improve teaching.8% of the participants of this survey do not have an opinion on this matter.2% of the participants of this survey strongly disagree that since Zoom has the ability to record sessions for later review, they can replay the recording and take notes to improve teaching.

Table 1.11: Using Zoom features, including non-verbal feedback and session feedback, helps the flow of teaching smoothly.

		Frequency	Percent	Valid Percent	Cumulative Percent
	Strongly agree	9	17.6	18.0	18.0
	Agree	24	47.1	48.0	66.0
Valid	No comments	12	23.5	24.0	90.0
	Strongly disagree	5	9.8	10.0	100.0
	Total	50	98.0	100.0	
Missing	System	1	2.0		
Total		51	100.0		

Table 1.11 shows that 18% of the respondents of this survey strongly agree that the use of Zoom features, including non-verbal feedback and reaction of the meeting, makes the teaching process smoother.48% of the participants of this survey agree that the use of Zoom features, including non-verbal feedback and reaction of the meeting, makes the teaching process smoother.24% of the participants of this survey do not have an opinion on this matter.10% of the participants of this survey strongly disagree with the fact that the use of Zoom features, including non-verbal feedback and reaction of the meeting, makes the teaching process smoother.

Table 1.11: Posting comments, chats and non-verbal feedback can help in the interactive learning process.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	8	15.7	16.0	16.0
	Agree	31	60.8	62.0	78.0
	No comments	8	15.7	16.0	94.0
	Strongly disagree	2	3.9	4.0	98.0
	Disagree	1	2.0	2.0	100.0
	Total	50	98.0	100.0	
Missing	System	1	2.0		
Total		51	100.0		

Table 1.11 shows that 16% of survey respondents strongly agree that posting comments, chats, and non-verbal feedback on Zoom can help in the collaborative learning process.62% of the participants of this survey agree that sending comments, chats and non-verbal feedback on Zoom can help in the collaborative learning process.16% of the participants of this survey do not have an opinion on this matter.4% of the participants of this survey strongly disagree that sending comments, chats and non-verbal feedback in Zoom can help in the collaborative learning process.2% of the participants of this survey disagree that sending comments, chats and non-verbal feedback on Zoom can help in the collaborative learning process.

Disadvantages of Zoom in collaborative learning

Table 1.12: Using Zoom in large classes can limit monitoring and control over students.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	7	13.7	14.0	14.0
	Agree	30	58.8	60.0	74.0
	No comments	8	15.7	16.0	90.0
	Strongly disagree	3	5.9	6.0	96.0
	Disagree	2	3.9	4.0	100.0
	Total	50	98.0	100.0	
Missing	System	1	2.0		
Total		51	100.0		

Table 1.12 shows that 14% of survey respondents strongly agree that the use of Zoom in large classes can limit monitoring and control over students.60% of the participants of this survey agree that the use of Zoom in large classes can limit the monitoring and control of students.16% of the participants of this survey do not have an opinion on this matter.6% of the participants of this survey completely disagree that the use of Zoom in large classes can limit the monitoring and control of students.4% of the participants of this survey disagree that the use of Zoom in large classes can limit the monitoring and control of students.

Table 1.13: Zoom is more teacher-centered than student-centered.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	12	23.5	24.0	24.0
	Agree	15	29.4	30.0	54.0
	No comments	11	21.6	22.0	76.0
	Strongly disagree	10	19.6	20.0	96.0
	Disagree	2	3.9	4.0	100.0
	Total	50	98.0	100.0	
Missing	System	1	2.0		
Total		51	100.0		

Table 1.13 shows that 24% of survey respondents strongly agree that Zoom is more teacher-centered than student-centered.30% of participants of this survey agree that Zoom is more teacher-centered than student-centered.22% of the participants of this survey do not have an opinion on this matter.20% of the participants of this survey strongly disagree that Zoom is more teacher-centered than student-centered.4% of the participants of this survey disagree that Zoom is more teacher-oriented than student-oriented.

Table 1.14: There is a lack of social interaction and difficulty in group activities on Zoom

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	15	29.4	30.0	30.0
	Agree	18	35.3	36.0	66.0
	No comments	11	21.6	22.0	88.0
	Strongly disagree	6	11.8	12.0	100.0
	Total	50	98.0	100.0	
Missing	System	1	2.0		
Total		51	100.0		

Table 1.14 shows that 30% of survey respondents strongly agree that there is a lack of social interaction and difficulty in group activities on Zoom.36% of participants of this survey agree that there is a lack of social interaction and difficulty in group activities on Zoom.22% of the participants of this survey do not have an opinion on this matter.12% of the participants of this survey completely disagree that Zoom is more teacher-oriented than student-oriented.

Table 1.15: Unstable internet connection during Zoom sessions can affect the flow of teaching.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	23	45.1	46.0	46.0
	Agree	24	47.1	48.0	94.0
	No comments	2	3.9	4.0	98.0
	Strongly disagree	1	2.0	2.0	100.0

		Frequency	Percent	Valid Percent	Cumulative Percent
	Total	50	98.0	100.0	
Missing	System	1	2.0		
Total		51	100.0		

Table 1.15 shows that 46% of survey respondents strongly agree that unstable internet connection during Zoom sessions can affect the flow of teaching.48% of participants of this survey agree that unstable internet connection during Zoom sessions can affect the flow of teaching.4% of the participants of this survey do not have an opinion on this matter.2% of the participants of this survey completely disagree that unstable internet connection during Zoom sessions can affect the flow of teaching.

Table 1.16: During class sessions, teachers may be distracted by other mobile or computer programs and lose their concentration.

		Frequency	Percent	Valid Percent	Cumulative Percent
	Strongly agree	7	13.7	14.0	14.0
	Agree	22	43.1	44.0	58.0
Valid	No comments	14	27.5	28.0	86.0
	Strongly disagree	7	13.7	14.0	100.0
	Total	50	98.0	100.0	
Missing	System	1	2.0		
Total		51	100.0		

Table 1.16 shows that 14% of survey respondents strongly agree that during class sessions, teachers may be distracted by other mobile or computer programs and lose their focus.44% of the participants of this survey agree that during class sessions, professors may be distracted by other mobile or computer programs and lose their concentration.28% of the participants of this survey do not have an opinion on this matter.14% of the participants of this survey are completely against that during class sessions, teachers may be distracted by other mobile or computer programs and lose their concentration.

Findings

The aforementioned statistics show that the majority of survey respondents concur that using Zoom helps simplify the teaching process. The majority of survey respondents concur that using Zoom boosted contact with their pupils and made instruction simple. The majority of respondents to this survey concur that adopting the Zoom program will enable them to more effectively encourage their timid students than face-to-face interactions in class. The majority of poll respondents concur that using various Zoom features can substantially help the online learning process. Participants in this survey agree that using Zoom for talks is practical and economical. They also concur that using Zoom during sessions enables them to browse the Internet and access more materials for the lesson. Zoom characteristics that improve teaching efficiency include non-verbal feedback and meeting reaction. Sessions can be recorded using Zoom and reviewed at a later time. Replaying the tape and making notes will help users learn more effectively. The majority of participants in the study agreed that employing Zoom in large classes can lessen student supervision and control.

Most respondents to the survey agreed that Zoom is more teacher- than student-centered. The overwhelming majority of respondents to the poll agree that Zoom lacks social connection and makes group activities difficult. This study found that a shaky Internet connection can hinder instruction during Zoom sessions. The use of other mobile or computer programs by professors during class periods can cause them to become confused and lose focus.

Conclusion

The findings of this research indicate that the majority of the participants of this study believe that the use of Zoom can facilitate the process of collaborative learning and can increase the interaction between students and professors. Participants of this study considered sharing in discussions easily and cheaply as one of the noteworthy advantages of Zoom technologyand at the same time they consider unstable Internet connection during Zoom sessions affecting the teaching flow and Using Zoom in large classes can limit monitoring and control over students as important disadvantages of Zoom.

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