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## LIVE STREAM CLASSROOMS DURING PANDEMIC 2020: COMPARATIVE STUDY OF THE PERCEPTION OF TEACHERS AND STUDENTS

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Kainat<sup>1</sup>, Dr. Sohaib Sultan<sup>2</sup>, Dr. Shazia Naureen<sup>3</sup>  
191588@students.au.edu.pk, [sohaib.sultan@mail.au.edu.pk](mailto:sohaib.sultan@mail.au.edu.pk),  
[drshazia.naureen@iiui.edu.pk](mailto:drshazia.naureen@iiui.edu.pk)

<sup>1</sup> MPhil Scholar, Department of Humanities Education & Psychology, Faculty of Social Sciences, Air University, Islamabad, Pakistan

<sup>2</sup> Assistant Professor, Department of Humanities Education & Psychology, Faculty of Social Sciences, Air University, Islamabad, Pakistan

<sup>3</sup>Incharge of Department of Education, Faculty of Social Sciences, International Islamic University Islamabad, Pakistan

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### Abstract

Due to the pandemic situation of the COVID-19 the live stream had being adopted for online learning in higher education system of Pakistan. The bidirectional communication in live stream is synchronized connection via Internet, such as video-audio conferencing though the software of the Microsoft team, zoom, google meet and Skype had utilized for learning. The purpose of the research were to compare the perception of teachers and students regarding the live stream classrooms during outbreak covid-19. The study were significant to teachers, students, new researchers and policy makers. The study were descriptive survey method. The research were quantitative and questionnaire were utilized by researcher to collect the respondent's responses. Whereas descriptive and inferential statistics were used to analyzed the data. The results of the study were depicted that mostly respondents were not satisfied though online live stream classrooms, there is no difference between the perception of the teachers and students regarding the live stream classrooms during outbreak covid-19. Students were not self-motivated and to maintain discipline in live sessions is very difficult for teachers as well. Technical issues had made class boring, cause the cognitive exertion and become time consuming. The subjects like science mathematics and engineering cannot taught properly. Learners can engage through video conferencing and interactive discussion. Moreover research recommended that teachers should trained for these techniques, advance applications should provide by Government for online learning, interactive discussion is the best way to engage learners in live stream. Discussion method may be used and video conferencing may be preferred.

**Key words:** *Teachers and Students Perception, Live Stream Classrooms, Situation of COVID-19, Higher Level.*

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## 1. INTRODUCTION

The world has effected by coronavirus, also known as covid-19. The disease was a pandemic that spread from China to the world (Zahra, Helmanto, & Maryani, 2020). This zoonosis disease, have negative consequences in Italy and Iran after China. Today, it attacked the majority of the world's population. Whereas world has failed to control the faster predation of this dangerous disease (Zhang, Wang, Yang, & Wang, 2020). The best way to fight the disease is to "stay home, be safe," and maintain distance and social isolation (Islam, Kim, & Kwon, 2020). Maintaining social segregation in educational institutions is extremely difficult, that is why several countries have chosen to address e-learning in this global context (Ferri, Grifoni, & Guzzo, 2020). Pakistan is a developing country and is trying to control the circumstances by saving time, education were shifted to online system. The Pakistani Government responded immediately to the pandemic of Covid-19, including the closure of schools, colleges and universities for the duration of a pandemic.

Synchronized learning is a kind of learning that happens over time (Setyorini, 2020). This means that learners and instructors connect to a specific virtual location, through specific online support, at a specific time (De Brouwer, Raimondi, & Moreau, 2020; Yunus, Umiera & Hashim, 2019). Coordinated e-learning techniques include video conferencing and remote coordination. , live chat and live instructions (Reed, 2003; Sahu, 2020).

Online education has never been a top priority. The ability to learn online is better adapted to educators as substitutes. Although parasites are not the ultimate causes of the educational crisis, there has been a recent need for classrooms and online training as the coronavirus is ubiquitous (Szpunar, Moulton & Schacter, 2013). Distance learning from a computer can also be useful in blizzards, typhoons, and other normal emergencies. Online stream and the internet have played a key role in the availability of online education (Carnell, 2007; Sahu, 2020).

Online learning videos, live download instructions, online courses, and other educational materials are amazing (Setyorini, 2020). In fact, even without an emergency, distance learning changes the lives of some people. In fact, it is heading towards the goal of the formation(Zahra et al., 2020). We need to find the measures and tools needed to enable live telecommunications training (Zhang et al., 2020).

Technology has taken place in the classroom over the past five or ten years. Out-dated projectors and large televisions have been replaced by intuitive pages (Journell & Dressman, 2011). Even in a typical school environment, school work involves the use of online tools. Many schools expect children to have an iPad or tablet other than elementary school (Setyorini, 2020). The spread of the Covid-19 coronavirus started closing schools by the mid of March 2020, educators had to design the semi-computerized and fully online method very quickly. In fact, even weeks after, teachers are still struggling to put it all together in all assessments (Sahu, 2020; De Brouwer et al., 2020). Many turn to Zoom, Microsoft team skype and google classrooms, a video tour move that was not designed to train many young people, teenagers at the same time. The best answer for schools and universities is to

implement live educational steps on their site, using expert video animation steps, with live stream. This allows them to broadcast live lessons and practical exercises that students can access on request (Chou & Liu, 2005; Setyorini, 2020).

The current study is about the teachers and students perception regarding the live stream classes at higher education level in Pakistan during covid-19 pandemic. The current scenario force researchers to study teachers and students perception regarding the current online live stream learning classroom environment.

### **1.1 Objectives of study**

The objective of study were to:

- 1 Analysis of the students and teacher's perception regarding online learning and live session discipline issues in virtual classrooms.
- 2 Find out the perception of students and teachers towards the student's engagement through online live stream classroom.
- 3 Comparative analysis of teachers and students regarding the learning satisfaction through live stream classroom.
- 4 Examine the students and teachers perception regarding the effectiveness of learning through live stream classroom.

### **4.1 Research questions**

The research question of the study were

1. What is the perception of students and teachers towards the effectiveness of online live stream classroom?
2. What is the perception of students and teachers towards the student's engagement through online live stream classroom?
3. What is the perception of students and teachers regarding online learning through live session, discipline issues in virtual classrooms and classroom environment?
4. What is the perception of students and teachers learning satisfaction through online live stream classrooms?

### **1.3 Hypothesis of study**

The hypothesis of the study were

$H_0^1$ : There is no significance difference between teachers and students perception regarding online live stream classrooms.

## **2. RELATED LITERATURE REVIEW**

Whether instructors mimic classroom weather calculations, broadcast high school sports live, or make morning statements, the goal of setting up quality live broadcasts can open up the news. forms of intelligent education. Getting started without any kind of preparation can be overwhelming. So the instructors have put together this digital book to understand their understanding of how it works internally and make suggestions to help students organize a successful and profitable live broadcast for them.

## 2.1 Live Stream Classroom

Live stream is a method of associating with individuals around the globe utilizing web and innovation (Sahu, 2020). Clarified live stream permits broadcasting of an occasion in the real time, it is going on the web in addition to the crowd can watch it without the issue to download the substance first into the PC (Chou & Liu, 2005; Islam et al.,2020). Live Stream as a procedure which utilizes the web to send or stream live video and sound film on the web; it tends to be observed live or later through past communicates (Dunn, 2000; Ferri et al., 2020).

Live stream requires a decoration who is communicating progressively to watchers who can give remarks on a visit channel. The live stream stage was initially begun when YouTube investigated the universe of live video and back at the time it was just accessible to prominent makers (Yan, 2016).

Be that as it may, things began to change when web based life affect the utilization of live stream among their clients. For models, Periscope for Twitter, Facebook Live for Facebook clients and Instagram Live for Instagram. (Carnell, 2007; Zahra et al., 2020).

## 2.2 Stream Media

Live stream , however it is still in its early stages is as yet the child sibling of communication videos (Islam et al.,2020). The size of the cloud and reach of the Internet have permitted various crowds to all the more effectively arrive at their specialty content and takes into account advertisers to all the more precisely put applicable substance before intenders. Live stream mobs, be that as it may, are foiled by communicating learners (Hartsell & Yen, 2006). Live stream isn't yet a genuine cash creator, and it needs to ascend to the degree of communication in steady quality and accessibility (Islam et al.,2020). Additionally, the flightiness of Internet designs and the idea of Internet conveyance is totally different than controlling conveyance of substance to the home by link (Zahra et al., 2020).

Stream media innovation permits constant or on request conveyance of sight and sound (Zhang et al., 2020). Utilizing Internet based advances, what happens is that media information are transmitted to the client while the media is being seen. Video, voice, text or information are provided in a nonstop or practically constant stream (Yunus et al., 2019). Applications start showing these media when enough information has been moved from the stream server to the getting stations support (Dunn, 2000). Stream media is about access, and less about quality: pictures might be somewhat foggy and the sound once in a while poor, however when a client taps on a streaming connection and avails media on-request, any place, the person in question might be, the outcome can be extremely incredible (Setyorini, 2020).

Most definitions allude to the Internet as the empowering system, however in our models and contextual analyses, there are a few applications that are called stream yet that don't really utilize the Internet as the transmission arrange by any means (Chou & Liu, 2005). Whereas regular is the utilization of IP-based innovations: every single stream server and customers rely upon IP(Internet protocol) as the convention of decision to set up the streams for serving and approaching to learning (Hartsell & Yen, 2006).

## 2.2 Stream in Educational system

By the previous 50 years, there has been a move in watcher's conduct. Spectators have moved away from being uninvolved viewers engrossing the pictures and substance showed on the screen (Wang, 2003; Sahu, 2020) and have become dynamic spectators applying singular encounters and comprehension to their review (Szpunar et al., 2013).

Beginning during the 1980s a few new types of video went along: Laserdiscs and the VHS tape were well known techniques for advancing the study hall with content, whatever the topic. Also, satellite conveyance which had just been available became a progressively regular strategy for transmission guidance in separations instruction systems (Yunus et al., 2019; De Brouwer et al., 2020). Camcorders caused it workable for instructors and understudies to start their own simple substance, despite the fact that the methods for extensively conveying that substance didn't yet exist (Ferri et al., 2020). In the principal decade of the 21st century, study halls got associated with the Internet adequately that computerized substance could all the more effectively be dispersed all around (Chou & Liu, 2005).

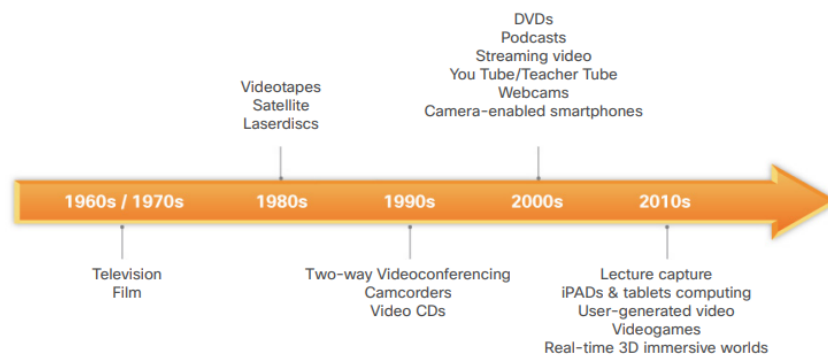


Figure2.1: *Integration of Technology in Education*

Inside a couple of brief years, YouTube came to command the idea of how to carry video into the study hall for improvement and how to enable students to make their own substance (Zahra et al., 2020). Gadgets like webcams and cell phones additionally grew up around a similar time. Web recordings have carried the capacity to make discrete sound documents that could be conveyed for instructive purposes and upgraded web recordings added video to the condition (Zhang et al., 2020; Setyorini, 2020). DVDs carried the capacity to endless supply of VHS assets, empowering more noteworthy profundity of material in view of the capacity to include content carefully (Safar & Alkhezzi, 2016).

In stream learning, schools and advanced education foundations have a past filled with utilizing instructive/instructional recordings in the study hall as a device to advance instructing and learning (Sahu, 2020; De Brouwer et al., 2020). An expanding number of instructors and employees communicate addresses by carefully recording and transferring them for understudies (Reed, 2003). Stream video innovation has been utilized as "advantageous materials to exhibit the perfect act of techniques; devices for self-appraisal and reflection on one own training; and assets to assist understudy with getting ready for assessments" (Yan, 2016).

Stream media, for example, video and sound can assist students with understanding complex ideas and methodology that are hard to clarify with just content and designs (Journell & Dressman, 2011). This capacity is significant for separations learning guidance in that most online courses despite everything use fundamentally text-based materials to convey guidance, and sight and sound can add intuitiveness to these self-content based materials (Garrison, 2001).

Most online courses today need inventiveness as well as intuitiveness with regards to conveying instructional materials. Cognitivists accept that the expansion of sight and sound can help improve and enlarge the learning procedure of understudies as they see the idea in real life (Szpunar et al., 2013).

Different investigations, in any case, have discovered that few components have hampered the utilization of stream video innovation in instruction, for example, delays in physical or online access (e.g., insufficient transmission capacity), prohibitive approaches, restricted video choice, shortage of projection gadgets (Chou & Liu, 2005) and a propensity for entire class as opposed to singular use) (Ferri et al., 2020). In addition, methodological concerns, including "inadequate portrayal of stream recordings, little example size, and the non-attendance of announcing unwavering quality and legitimacy assessments of the information assortment apparatuses (Yan, 2016) have been accounted in numerous investigations of stream media (Islam et al.,2020).

By using visual and auditory messages, students can process the information quicker, which in turn, helps foster their learning acquisition of the material (Zahra et al., 2020; Zhang et al., 2020). The old saying that "a picture is worth a thousand words" holds true in this case in that moving images add authenticity and reality to the learning context (Dunn, 2000). Video's face-to-face context engages the students, and can effectively capture cultural context to enhance the learning experience (Anderson, 2008). In addition, a moving image can help students to visualize a process or see how something works. Video can take tacit information or knowledge that may be too difficult to describe in text into an articulate, vivid description through the use of images. Furthermore, videos have visual appeal that can evoke emotional reactions from students that would help in increasing motivation (Joint Information Systems Committee) (Agarwal et al., 2012).

With these benefits in mind, stream video is a new opportunity for educators to bring online courses alive (Yan, 2016). The quickly expanding nearness of rapid broadband Internet availability in training, the boundless access to data and correspondence innovation (ICT) devices and administrations, and the current development of unreservedly accessible Web-based advanced video content suppliers have quickened the utilization of instructional recordings in learning (Wang, 2003). Besides, the development of front line cell phones and other top notch gadgets with high goals, enormous screen size, and other presentation highlights has improved the nature of stream recordings, contingent upon the Internet specialist organization's capacity to maintain a strategic distance from disappointments and postponements (Dunn, 2000; Setyorini, 2020).

### **2.3 Utilization of Live Stream Classes**

Utilization of the online guidance for instructive objects is far reaching and quickly developing. Different educational institution such as college and universities, courses have been produced for conveyance totally by means of the web (Carnell, 2007). This methodology quickens more schools and colleges, encourage personnel to make online adaptations of their courses (Garrison, 2001; Sahu, 2020). Online course learning is one of the most unique and improving types of separation discovering that exist today. Online learning is a subcategory of separation training, which has been characterized as the proper conveyance of guidance wherein time and geographic area separate understudies and teachers (Agarwal, Bain, & Chamberlain, 2012).

A live stream classrooms (virtual classroom) is a web based learning condition (Wang, 2003). Qualities of online courses are a kind of separation instruction. The conveyance design passes by various names: e-learning, Internet learning, disseminated learning, arranged learning, tele-learning, and virtual learning, or online teaching (web-learning) (Reed, 2003). Synchronized learning is, from numerous point of view, like a physical homeroom. For instance, both physical and virtual study classrooms consider prompt input, collaborations with educator and peers, and guided activities to spur and increment understudy teaching (Agarwal et al., 2012; De Brouwer et al., 2020).

The online virtual live stream classrooms has another bit of leeway as cooperation's which are student content, student educator, and student in the online condition (Safar & Alkhezzi, 2016). Synchronized advancements can increase the value of educating and learning models, either as an enhancement or swap for eye to eye or offbeat learning (Garrison, 2001). The understudies communicated all the more often through the span of the semester (Rossouw, 2018), as they turned out to be progressively happy with utilizing innovation and all the more effectively (Dunn, 2000; Ferri et al., 2020; Islam et al.,2020).

### **2.4 Engaging in Stream learning**

The basic element/components were found to expand one's commitment with a live stream. Streamer (educationist/teachers). Personality and Skills Many constructive qualities of streamers more than once developed in our information, including inviting, great tempered, amiable, legit, bona fide, kind, compassionate, quiet, thankful, fair-minded, persevering and constructive (Anderson, 2008; Islam et al.,2020). Viewers (learners) likewise loved great voice, humor, narrating aptitudes, between close to home abilities, aptitudes to deal with ungainliness, and aptitudes to manage trolls shrewdly (Ferri et al., 2020). The few elements of live stream need in live stream classroom are as follow:

#### **2.4.1 Environment of classroom**

The perfectly captivating streams have a decent environment that may originate from including validity of content and usage of effective color scheme of good taste, tasteful foundation improvements, (Rossouw, 2018) light of the setting, and the amiable practices and well-disposed remarks of different viewers. A good connectivity assist watchers with staying observing longer and be progressively occupied with the stream (Wang, 2003; Dunn, 2000; De Brouwer et al., 2020).

#### 2.4.2 Novelty (learners engagement)

Learners additionally appear to be increasingly occupied with things they have not experienced, places they have not been to, information they don't approach previously, and unforeseen outcomes. Consequently, they like to watch streams about voyaging or open air exercises, or streams with misrepresented practices (Safar & Alkhezzi, 2016; Zahra et al., 2020).

#### 2.4.3 Student motivation

When students are given the opportunity to make computer hardware for use in the classroom, empowerment, ownership, and control are much greater (Setyorini, 2020). This, in turn, enhances students' inspiration for a particular topic and increases the development of additional skills such as development, ingenuity, initiative, social collaboration, and counseling (Journell & Dressman, 2011; Zhang et al., 2020).

The literature reviewed indicated that advanced live broadcasting is a key part of the stages in which observer activities influence the content of a broadcast (live stream). Live stream (audio-video conferencing) is an excellent online learning tool as it allows two-way communication and teacher-student interaction in a virtual classroom (Anderson, 2008; Sahu, 2020).

### 3. RESEARCH METHODOLOGY

#### 3.1. Research design

The researchers had used quantitative research methods. Whereas descriptive Survey research method were utilized for the current study. The research were descriptive in nature because researcher had studied the perception of the teachers and students regarding the online live stream classrooms at higher level during pandemic 2020.

#### 3.2. Population

The research population was students and teachers practicing live stream learning during pandemic situation at higher education level. The research were delimited to the way cant and three institution were the population of the study, Wah Medical College, Wah University and Wah Engineering College in Pakistan.

#### 3.3 Sampling technique and Sample

The random snowball sampling technique were utilized by researchers because of current pandemic situation created by the Covid-19. The drawn sample size were 364. There were no definite amount were decided for each group or department. Therefore it was snowball because it were transferred respondent to respondent whereas it was random at the same time under the defined population.

Table 3.3  
*Institutions Participation as Sample*

<i>Sr.no</i>	<i>Institutions</i>	<i>Sample size</i>
1	Wah University, Pakistan	189
2	Wah Medical College, Pakistan	126
3	Wah Engineering College, Pakistan	49

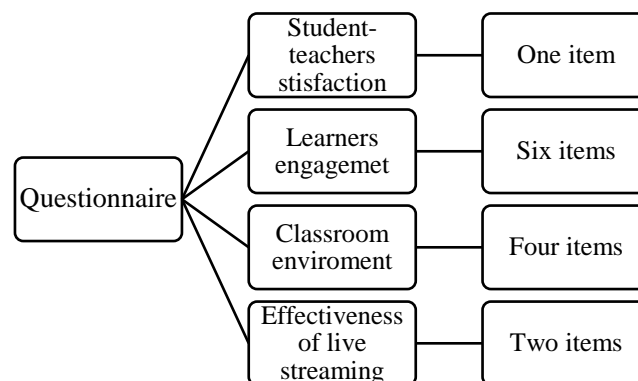


Total sample size	364(154 teachers and 210 students)
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Above table shows the no of participants from each institution.

### 3.4 Instrumentation

Research tool were self-design according to the research objectives of current study. The researcher had designed a questionnaire for both teachers and students with four basic factors of the classrooms. Each factor had a set of items that based on the objectives of the research. There were 13 items in a questionnaire. The all items were based on Likert scale as Strongly Disagree = “1”, Disagree = “2”, Neutral = “3”, Agree = “4” and Strongly Agree = “5”.



The validity of the instrument were taken by the experts of the field of Education and Higher education from the Allama Iqbal Open University Islamabad, Pakistan and Air University Islamabad, Pakistan. The reliability of the research tool were checked by the research through the Cronbach alpha.

Table 3.1  
*Reliability of the Scale*

Sr.No	Scale	No. of Items	Cronbach Alpha
1	Perceptions of teachers regarding the online live stream classes	13	.753

Cronbach alpha value (.753) shows that all the items are reliable and retain for final administration.

### 3.5 Data collection analysis

Data collection is the process of collecting the response from the respondents as due to pandemic google forms were utilized by researchers and researcher had collected data online medium. Though because of lack of interest of teachers and students, the data were collected in two months. Researcher had kept responses open till 2 months and five days. When respondents stopped responding researchers wait till one week but no improvement in the number of respondents force researchers to stop data collection.

### 3.6 Data Analysis

The researchers had analyzed the data. For analyses the data quantitative analysis were utilized by the researchers. Whereas descriptive such as frequency, percentage and mean score were used by the researchers for the item analysis and presentation of the respondents. Moreover independent t test were used from the family of inferential statistics

because researchers were comparing the perception of teachers and students. Teachers and students perception were independent variables.

#### 4. DATA ANALYSIS AND INTERPRETATION

Analysis of the questionnaire were as follow:

##### A. Descriptive Statistics

##### 4.1 Group Wise Representation of the Respondents

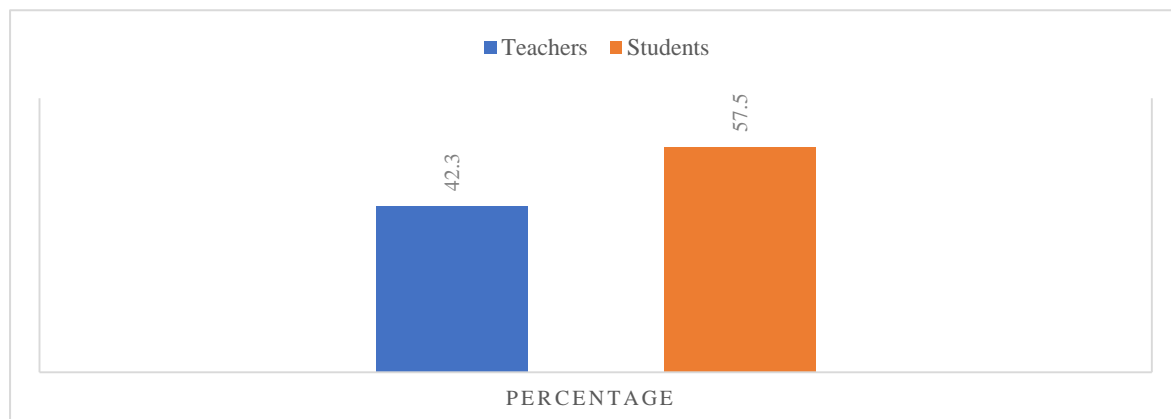
Table 4.1

Group Wise Frequency of Respondents

<i>Group wise frequency of respondents</i>	
Groups	Frequency
Teachers	154
Students	210
Total	364

Above table shows the frequency of respondents from each group as there were teachers(F=154) and Student(F=210).

Graph 4.1: Percentage of the respondents from groups



Above graph shows the percentage of the respondents from groups teachers (P=42.3%) and Students(P=57.5%).

##### 4.2 Department Wise Representation of Respondents

Table 4.2.1

Department Wise Frequency of Teachers Respondents

<i>Department wise frequency of Teachers Respondents</i>	
Departments	Frequency
Arts/ Social Sciences	42
Medical	105
Engineering	14
Applied Science	49
Total	210

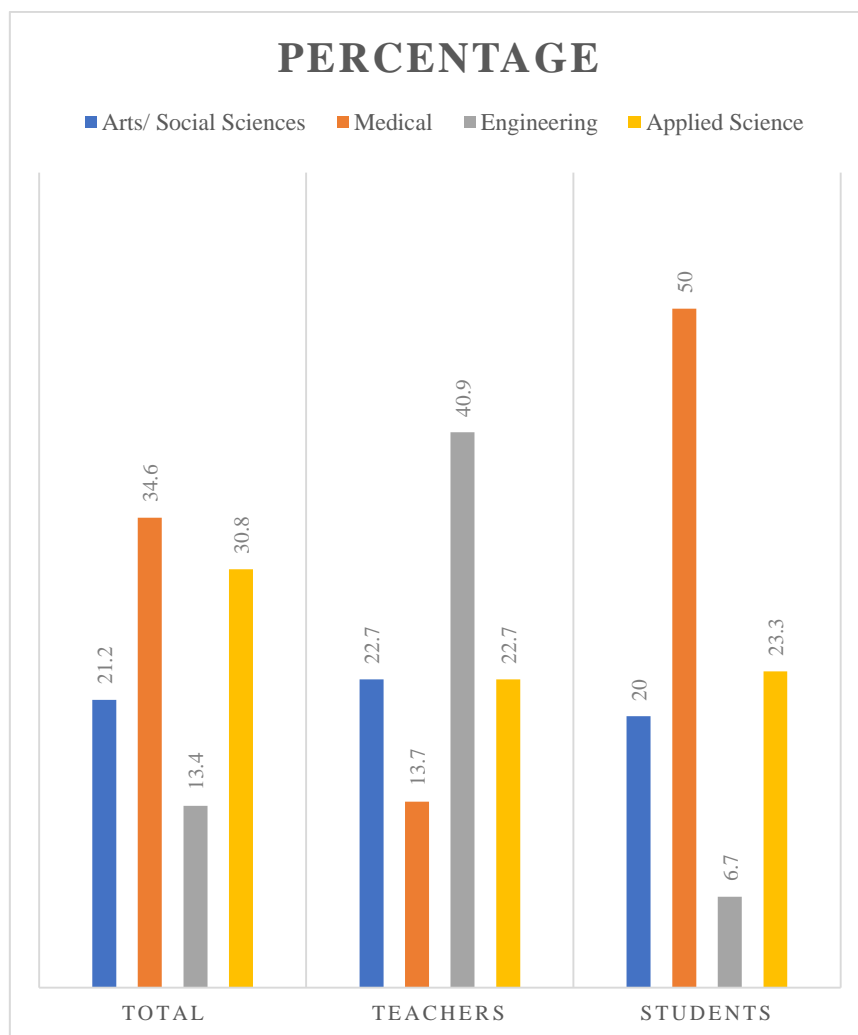
Above table shows the frequency of respondents from each department, Teachers Art/ Social Sciences(F=42), Medical(F=105), Engineering(F=14) and Applied Science(F=49).

Table 4.2.2

*Department Wise Frequency of Students Respondents*

<i>Department wise frequency of Students Respondents</i>	
Departments	Frequency
Arts/ Social Sciences	35
Medical	21
Engineering	35
Applied Science	63
Total	154

Above table shows the frequency of respondents from each department, students Art/ Social Sciences(F=35), Medical(F=21), Engineering(F=35) and Applied Science(F=63).



*Graph 4.2: Percentage of the respondents from each department*

The graph 4.2 shows the percentage of teacher Art/ Social Sciences(P=22.7%), Medical(P=13.7%), Engineering(P=40.9%) and Applied Science(P=22.7%). The graph 4.2 presents the percentage of students Art/ Social Sciences(P=20%), Medical(P=50%), Engineering(P=6.7%) and Applied Science(P=23.3%).

### 4.3 Item wise mean score

Table 4.3  
 Item Wise Mean Score

<i>Sr no</i>	<i>Items</i>	<i>Students</i>	<i>Teachers</i>	<i>Total</i>
1	Satisfied with online live stream classrooms	2.36	2.63	2.46
2	Video conferencing keep learners active	3.26	2.59	3.40
3	Audio conferencing cannot keep learners active as video	3.36	3.59	3.59
4	Interactive discussion is best way to engage learners	4.10	3.90	4.09
5	Live sessions keep learners engage with classroom	2.96	3.36	3.13
6	Technical difficulties results as cognitive exertion and lack of interest in learning	4.56	3.86	4.26
7	No evidence of physical engagement in audio conferencing	3.93	3.86	3.90
8	Difficult to maintain discipline	3.76	3.68	3.73
9	Technical issues make classroom environment noisy	4.28	3.63	3.96
10	Intrapersonal Learner avoid to participate	3.56	3.63	3.59
11	Due to connectivity issues it become time consuming	3.60	3.81	3.69
12	Learners feel relax and motivated	2.36	2.81	2.57
13	Learners cannot learn practical subjects like mathematics, science, physics, chemistry and engineering.	3.965	3.409	3.72

Table 4.1 shows the mean value of each items regarding perception of teachers and students towards the online live stream classes. Respondents disagreed that they were satisfied with online live stream classrooms with mean score total(M=2.46), teachers(M=2.63), students (M=2.36). Respondents neutral that video conferencing keep learners active with mean score total(M=3.40), students (M=3.26), whereas teachers(M=2.59) where neutral to some extent. Respondents agreed that audio conferencing cannot keep learners active as video with mean score total (M=3.59), teachers(M=3.59) and students (M=3.36). Respondents agreed that interactive discussion were the best way to engage learners with mean score total(M=4.09), teachers(M=3.90) and students (M=4.10).

Moreover table shows that respondents that live sessions keep learners engaged with classroom with mean score total (M=3.13), teachers(M=3.36)and students (M=2.96). Respondents were agreed that technical difficulties results as cognitive exertion and lack of interest in learning with mean score total (M=4.26), teachers(M=3.86) and students (M=4.56). Respondents agreed that there were no evidence of physical engagement in audio conferencing with mean score total (M=3.90), teachers (M=3.86) and students (M=3.93).

Respondents also agreed to the statement that it was difficult to maintain discipline with mean score total(M=3.73), teachers(M=3.68), students (M=3.73).

The table shows that respondents agreed that technical issues made classroom environment noisy with mean score total (M=3.96), teachers (M=3.63) and students (M=4.28). Respondents again agreed to the statement that intrapersonal learner avoid to participate with mean score total (M=3.59), teachers (M=3.63) and students (M=3.56). Respondents agreed that due to connectivity issues it become time consuming with mean score total(M=3.69), teachers(M=3.81) and students (M=3.60). Respondents agreed that learners feel relax and motivated with mean score total(M=2.57), teachers(M=2.81) and students (M=2.36). Respondents also agreed to the statement that learners cannot learn practical subjects like mathematics, science, physics, chemistry and engineering with mean score total(M=3.72), teachers(M=3.40), and students (M=3.96).

#### 4.4 Sub Factor Analysis

Table 4.4

<i>Sr.#</i>	<i>Sub Factors</i>	<i>Students N= 210</i>	<i>Teacher N=154</i>	<i>Total N=364</i>
1	Satisfaction	2.36	2.5	2.46
2	Learner's engagement	22.2	22.68	22.43
3	Classroom environment	15.1	14.77	14.98
4	Effectiveness of live stream learning	6.2	6.22	6.21

Table 4.4 shows that mean scores of students satisfaction (M=2.36), teachers satisfaction (M=2.5) and overall satisfaction (M=2.46). The mean score shows that there is no difference between teachers and students perception. Low mean score presents that teachers and students both were not satisfied online live stream classroom at higher level during pandemic 2020.

Learner's engagement according to students (M=22.2), teachers (M=22.68) and overall (M=22.43) showed that live stream classrooms engaging learners at higher level during pandemic 2020. Whereas students (M=15.1), teachers (M=14.77) and total (M=14.98) at classroom environment, shows that the class environment were appropriate to some extent. Effectiveness of live stream learning students (M=6.2), teachers (M=6.22) and total (6.21) showed that the live stream classroom was found not effective too much, although but it was better than nothing. It means live stream learning is effective only to engage learners through interactive discussion whereas it is difficult to maintain classroom environment smooth and learners self-motivated.

#### B. Inferential Statistics

#### 4.5 Comparative analysis of the perception of teacher and students

Table 4.5

<i>Group Statistics</i>				
<i>Respondents</i>	<i>N</i>	<i>Mean</i>	<i>Std. Deviation</i>	<i>Std. Error Mean</i>

Perception regarding	Teacher	154	46.2727	5.16179	.41595
Live stream	Student	210	45.9000	4.34895	.30011

Above tables shows that Teacher’s and student’s perception recorded through their response collected through questionnaire as there is only one point difference in the mean score (<sup>t</sup> M=46.27, <sup>s</sup> M=45.90) and standard deviation(<sup>t</sup> SD=5.16179, <sup>s</sup> SD=4.3489) of both teachers and students perception.

“There is no significant difference between in the perception of teachers and student regarding the online live stream classrooms at higher level”

*Table 4.6*  
*Independent t test analysis*

Perception regarding Live stream	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2- taile d)	Mean Differen ce	Std. Error Differen ce	95% Confidence Interval of the Difference Low Uppe er r	
Equal variances assumed	9.172	.003	.746	362	.456	.37273	.49965	-.609	1.355
Equal variances not assumed			.727	295.19	.468	.37273	.51291	-.636	1.382

Researchers had conducted an independent t-test to compare teachers and students perceptions there was no significant difference in the perception of teachers between teachers (M=46.27, SD=5.16179) and students (M=45.90, SD=4.3489) respondents perception;  $t(362) = .003, p=.456$ . As significance value were 0.05 at the confidence Level 95%. The  $p=0.456 > \alpha=0.05$  showed there is evidence to support the null hypothesis that there is no significant difference between in the perception of teachers and student regarding the online live stream classrooms at higher level.

## 7. DISCUSSION

In today’s digital age, the traditional approach to learning, which focuses on the teacher or the textbook as a center of knowledge, is not relevant. The rapid development of a living mediating society among very young people can indeed be a step for students around the world to use it in their learning process (Hartsell & Yen, 2006; Setyorini, 2020).

Live-broadcast classrooms allowed some students to join their class. Because they exceptionally know what is needed and how to perform live stream in online life, it may be helpful to use live stream procedures in their deliberations (Zhang et al., 2020; Journell &

Dressman, 2011). Whereas the current study shows that video conferencing is more effective than audio and that interactive conversation is the best teaching technique in living classrooms.

The strong presence of live broadcasts in many areas of life, such as data sharing, demonstration of real understanding, promotion of brands and companies, shows that it is also possible to use live broadcasts to train students from all over the world. The evolution of innovation, tools, and web speed are some of the variables that can help us better understand live stream (Sahu, 2020; Rossouw, 2018). The current study results shows that by positive use of live broadcasting teachers engaged learners in learning to some extent which was better than nothing.

The positive use of technology has influenced the development of educational technology in education and has enhanced students' collaborative learning (Zahra et al., 2020; Wang, 2003). Current study showed that students used a new way of learning through technology because they used technology in a positive way.

## 6. CONCLUSIONS

The study concluded that teachers and students perceived live classrooms in the same way during the 2020 pandemic. While video conferencing is better than audio because the teacher can get a complete picture of students' body language. Although most teachers and students are dissatisfied with live online learning. Technical problems are very common and confusing in the classroom. This is difficult for practical learning subjects such as engineering physics, mathematics, and so on.

## 7. RECOMMENDATIONS

Recommendations of the current research are:

1. The free application and internet services may be provided by the Government as that connectivity issues can be resolve to some extent.
2. Teachers should trained for these advance applications and theses applications should design by Government.
3. Interactive discussion is the best way to engage learners in live stream so discussion method should use and video conferencing should be preferred.

## References

- Anderson, T., (2008). Is Videoconferencing the Killer App for K-12 Distance Education?, *Journal of Distance Education*, 22:2, 109-124,.
- Agarwal, P. K., Bain, P. M., & Chamberlain, R. W. (2012). The value of applied research: Retrieval practice improves classroom learning and recommendations from a teacher, a principal, and a scientist. *Educational Psychology Review*, 24, 437-448.
- Chou, S., & Liu, C. (2005). Learning Effectiveness in a Web-based Virtual Learning Environment: a Learner Control Perspective, *Journal of Computer Assisted Learning*, 21(1), 65-76.

- Carnell, E. (2007). Conceptions of effective teaching in higher education: Extending the boundaries. *Teaching in Higher Education*, 12(1), 25–40. doi:10.1080/13562510601102081
- Dunn, S. (2000). The virtualizing of education. *The Futurist*. 34(2): 34-38
- De Brouwer, E., Raimondi, D., & Moreau, Y. (2020). Modeling the COVID-19 outbreaks and the effectiveness of the containment measures adopted across countries. *Med Rxiv*, 1–8
- Ferri, F., Grifoni, P., & Guzzo, T., (2020). Online Learning and Emergency Remote Teaching: Opportunities and Challenges in Emergency Situations. *Societies*, 10(86), 1-18
- Garrison, W. (2001). Video streaming into the mainstream. *Journal of Audiovisual Media in Medicine*, 24(4), 174-178.
- Hartsell, T., & Yen, C. (2006). Video Streaming in Online Learning, *AACE Journal*, 14(1).31-43.
- Islam, M., Kim, D.A., & Kwon, M., (2020). A Comparison of Two Forms of Instruction: Pre-Recorded Video Lectures vs. Live ZOOM Lectures for Education in the Business Management Field. *Sustainability*, 12, 1-11
- Journell, W. & Dressman, M., (2011). Using Videoconferences to Diversity Classrooms Electronically, *The Clearing House*, 84: 109-113
- Setyorini, I. (2020). Pandemi COVID-19 dan Online Learning: Apakah Berpengaruh Terhadap Proses Pembelajaran Pada Kurikulum 13?. *Journal of Industrial Engineering & Management Research*, 1(1), 95-102.
- Sahu, P. (2020). Closure of universities due to coronavirus disease 2019 (COVID-19): Impact on education and mental health of students and academic staff. *Cureus*, 12 (4), 1–6.
- Szpunar, K. K., Moulton, S. T., & Schacter, D. L. (2013). Mind wandering and education: From the classroom to online learning. *Frontiers in Psychology*, 4(495).
- Safar, A., & Alkhezzi, F. (2016). Students' perspectives of the impact of online streaming media on teaching and learning at the college of education at Kuwait University, *Eurasia Journal of Mathematics, Science & Technology Education*, 12(12), 2975-2989 doi: 10.12973/eurasia.2016.02317a
- Reed, R. (2003). Streaming technology improves student achievement. *T.H.E. Journal*, 30(7), 14-20.
- Rossouw, M. (2018). The Perceptions Of Students And Lecturers On The Live Streaming Of Lectures As An Alternative To Attending Class, *South African Journal of Higher Education*, 5(23), 253–269
- Vanbuel, M., Bijmens, H., & Bijmens M. (2007). *Streaming Media in the Classroom - An overview of the current use of streaming technologies and the opportunities they afford in meeting educational needs particularly in Europe*. Anton Knierzinger/Caroline Weigner, Education Highway Innovation Center for School and New Technology



- Wang, Y. S. (2003). Assessment of learner satisfaction with asynchronous electronic learning systems, *Information & Management*, 41, 75–86, doi: 10.1016/S0378-7206(03)00028-4
- Yan, X. F. (2016). Exploring Online Live Streaming in Communication “Scene” *Perspective. Press Circles*, 15, 51-54.
- Yunus, M. M., Umiera, H., & Hashim, H. (2019). Massive Open Online Courses: En Route to Communication Skills Acquisition. *Arab World English Journal (AWEJ) Special Issue* , (5), 98-109. <https://doi.org/10.24093/awej/call5.8>
- Zahra, K.L., Helmanto, F., & Maryani, N., (2020). The Practice of Effective Classroom Management in COVID-19 Time. *International Journal of Advanced Science and Technology*, 29(7), 3263- 3271.
- Zhang, W., Wang, Y., Yang, L., & Wang, C. (2020). Suspending classes without stopping learning: China’s education emergency management policy in the COVID-19 outbreak. *Journal of Risk and Financial Management*, 13 (55), 2–6