A STUDY ON THE PREFERENCES OF ONLINE LIVE SESSIONS AND RECORDED SESSIONS AMONGST HIGHER EDUCATION INSTITUTES AT MUMBAI CONCERNING STUDENT'S ACADEMIC PERFORMANCE AND SUBJECT STREAMS

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ABSTRACT
Students have no option rather continue with this online mode of education in this post-pandemic era as a precautionary measure. Universities and schools have made the live lectures compulsory for students but many are giving an option to students whether to attend live sessions when a teacher is on board alike a classroom or to listen to recorded lecture individually as per their convenience.

In this paper, the researcher wants to find out the degree of the preference college students amongst both the option of learning through online mode i.e. Live lectures and Recorded lectures. Both the modes are having pros and cons hence the research desires to clarify this point with the student's point of view and the also factors affecting the preferences of degree students opting live lectures or recorded lectures. The researcher is also focusing that whether the subject stream, makes any difference in the choice or students' past academic performance influence their decision to opt for live sessions or recorded sessions

Keywords: Online, Recorded lectures, Live Lectures, Academic Grades, Subject Stream

1. INTRODUCTION :

The world has just come out of the era of lockdown due to a pandemic. The students have always had an option to learn through online modes before the lockdown period as compared to the physical mode of learning and understanding. It was promoted as a part of technology rather a compulsion. Faculties were using this video lecture system as a support system during their physical interaction with students in class but nobody would have expected that the students would have to compulsorily choose this online mode of learning during this period of isolation. In this research paper, the researcher wants to study the preferences of the student having the subject stream with their preferences of choosing online live lectures or online recorded lectures. On the other hand, the researcher also wants to see whether students had better academic performance are more inclined to any of the two modes of learning as compared to students having low academic grades.

It was also observed that when students were in the classroom, they were attending the live lectures and hence they have to be attentive with the maximum level of concentration. In the same approach was applied in case of online live lectures. But in the case of recorded lectures, there may be a chance at their attentive level or concentration level may fall if they continue the practice of preferring recorded lectures.

Statement of Problems and Need for Study:

In the existing two modes of online teaching i.e Live lectures and Recorded lectures were faculties of the students of higher educations are using to make their students understand. It was observed that some of the students are facing network issues or having a limited cell phone or computer to attends live sessions as their siblings may also have to attend at the same time on the other hand students have become lax and don't want to attend live sessions

and prefer the recorded sessions as per their convenience. Hence the researcher wants to figure out some of the best options from these two methods of teaching through online modes where students can get the best understanding. At any point in time, the online lectures cannot be considered the replacement of live sessions but the teaching fraternity can try the best option for students till this era of lockdown and pandemic is going on.

2. REVIEW OF LITERATURE.

Capsi and Gorsky (2005) found out the importance of technology and maintained that the students must rely on technology in the online learning context than in the regular classroom to obtain learning material. According to the study the choice of media can play an important role in the onlie learning environment, and may be influenced by a number of factors; social influence and technology skills being the significant factors. Furthermore, it was revealed that factors like gender, technological comfort, and the person with whom to communicate can also play a major role. In a similar kind of study **Zhao, *et al* (2009)** found out the faculty's preference of media are different than those of students in the context of online leaning. On one hand, both the faculty and students preferred online assessments and notes. On the other hand, a significant difference is found in the preference of online teaching formats. Use of online videos in the context of online education is becoming more popular and some faculties prefer to upload the recorded sessions in the websites. In this context a study conducted by **Sardik (2015)** concluded that students preferred screencasting recording and perceived it to be more useful than lecture capture recordings. In a study conducted by **Bos *et al* (2016)** the preference of students may vary when given the choice between recorded sessions and live sessions. Initially the live sessions are preferred over recorded sessions in the first assessments, and the recorded sessions are preferred as the students move on to the second assessment. However, **Lust *et al* (2011)** concluded that learning in the initial stages can benefit fron recorded sessions, and live sessions can be highly beneficial means for in-depth understanding in the later stages of learning.

As the online learning is becoming more popular and common, maintain the the quality and relevance of recorded sessions is something of great concern. According to a research paper by **Islam, Kim, & Kwon (2020)** there are many advantages and disadvantages associated with recorded sessions. The sessions provide the convenience to students and are easy to concentrate, plus it allows students to go through the recorded sessions as manytimes as they want, eventually enabling them to watch them reopeatedly. However, the major drawback can be seen when it comes to controlling and monitoring the quality of recorded sessions. A common observation in the online teaching setup is to show students youtube videos as part of learning but the relevance of the video content with the concepts taught is always questionable. Communication blockage and the lack of a two-way communication channel is another issue that comes with pre-recorded sessions as there is no way for students to get clarification of doubts. Least to say, the data collected in the research has some drawbacks; the size ofd the sample is small and the participants belonged to one university only. Another study conducted by **Bahnson & Olejnikova (2017)** pointed out at the ineffectiveness of retaining and reproducting study material due to supply and oversupply of materials. A lot of time and efforts go into developing materials for recorded sessions, the same level of dedication if put towards classroom teachings can not only help in the retension of material but also could be utilized for other learning essentials like brainstorming, peer learning, and discussions. According to **Brecht (2012),** besides the flexibility offered by the recorded sessions, a statistically significant part of the student body claimed the videos as a helpful guide. Recorded video lectures empower students to utilize the resource at their will without any external influence affecting them, which is also problematic at times. Beyond the empowering, the control for the entire recorded lecture with at the ease of their fingertips with replaying parts with unclear delivery

A research conducted by **Brockfeld et al. (2018)** looked into effectiveness of lectures by comparing video and live courses by allowing a certain percentage of students take video sessions and the remaining take live sessions for a set period of time. The research was furthered by allowing students to change their assigned lectures, so that all the students will end up taking the same live and video lectures. Of course students showed tendency towards the live sessions, however, the video lectures received better reviews than the live sessions in functional areas like learning atmosphere, concentration capacity and acoustic intelligibility. This is believed to be due to the fact the video sessions allowed students to repeat the sessions as much as possible leading to better understanding of the conecepts and hence the overall lecturer. Other contributing factors were the abibilty of students to adjust the speed of video sessions, and savings time to attend sessions. Furthermore, the research also compared the efficacy of course evaluations and found out that the efficacy of evaluations is almost the same in live lectures and video sessions. Simillar kind findings can be seen in the research by **Cardall et al (20008).** According to a study conducted by **Day & Foley (2006),** the students perform better in a cohort that relied on online lectures as

compared to live lectures. However, a study by **Martin el al (2012)** contracted and concluded that the teaching methods in video sessions are not exceptionally good as compared to live sessions, and hence the students prefer live sessions.

In their research **Zainuddin et al (2019)** tried to identify the impact of implementing a Learning Management System (LMS) to promote students self directed learning. Most of the students acknowledged the benefits of online LMS as an effective medium to share and acquire new information. Students could also monitor their learning activities and practices. On top of all, the students acknowledged that the onine learning has significantly enhanced their autonomous and self learning skills. The online material enables students to learn and understand the concepts at therir own pace, and also fecilitated peer to peer learning and discussions which helped the students to assess their performance against their peers. Simillar findings were concluded by **Brookfied (2009)** who pointed out that online learnings with the help of the instructor enables students to determine how and what they will learn, as well as evaluate their own learning. Moreover, **Lin & Hwang (2018)** explored the importance of flip-classroom, and reported that online learning supports students in becoming more responsible and autonomous. The study further concludes that this system of learning improves the attendance and participation from students.

While most of the studies conducted in the context of online learning points out the obvious benefits and drawbacks for students. A few studies have been conducted to see this from the perspective of lecturers or faculty. According to **Henseler (2014)** while video classes help students to learn by watching the videos at their own pace and convenience, it has equal benefits for lecturers by enabling them to be more effective by saving time from paper flipping and other routine work; the time saved can be utilized by lecturers in developing their own personal and technical skills. Similar findings were concluded by **Williams *et al* (2012)** that the recorded sessions can provide lecturers will an opportunity to improve their teaching skills.

Another critical issue that researchers have been trying to explore is to understanding the impact on the student performance. A study by **Shqaidef, *et al* (2020)** looked into three different learning media; live lectures, video recorded lectures, and audio recorded lectures, and compared the academic performance of dental students, and evaluated the attitude of students towards the three media. The study concluded all the three methods are equally effective when it comes to assessing basic knowledge and application of actual learning methods. However, in the case of assessing learners analytical thinking, video recorded sessions and live sessions were more effective. Majority of learners agreed that live sessions are more beneficial when it comes to interacting with lecturers and to understand difficult concepts. Moreover, the students rated the video sessions and live sessions equally in overall learning experience. According to **Ramlogan *et al* (2014)** the use of video recorded sessions alone has drawbacks. Inspite of increased use in video and audio recorded sessions, the impact on student learning is still pooly understood.

Purpose / Objectives:
To understand the student preference of the mode of lecture delivery within higher education based on their academic grades and subject stream.

Research Objectives:
To understand the relationship of student's academic performance and preference for online lecture sessions and recorded lecture sessions.

To understand the relationship between the student's subject stream and preference for online lecture sessions and recorded lecture sessions.

Hypothesis:
H01: There is no relationship between the student's academic performance and preference for online lecture sessions and recorded lecture sessions.

H02: There is no relationship between the student's subject stream and preference for online lecture sessions and recorded lecture sessions.

3. RESEARCH PROCESS:

3.1 Research Philosophy

The set of beliefs drawing the process of data collection, analysis, and use to further develop the awareness in a given field describes the research philosophy (Business Research Methodology, 2011). There are four general types of research proposals employed by researchers to guide their work and these include pragmatism,

positivism, realism, and interpretivism. They are briefly explained with the chosen philosophy for this research work further elaborated on.

3.2 Types of Research Philosophies

Positivism research philosophy dictates that independent observation of events leading to acquired knowledge is reliable and to be trusted. The philosophy follows structured, scientific methods in conducting independent research works that distance the researcher from findings thus inferring objectivity of the work. Positivism limits the role of the researcher to data collection and analysis, unlike interpretivism philosophy which makes the researcher a participant in the observation process. This research philosophy adopts a deductive approach which involves building hypotheses from studied theories (Dudovskiy, 2009; Dudovskiy, 2010).

Interpretivism research philosophy incorporates human responses into the study to derive meanings and insights. The philosophy attaches the interest of the researcher to the work and therefore entertains the relationship in the work which is known as subjectivist epistemology. The philosophy avoids generalizations due to its emphasis on the personal viewpoints of the human actors in the research work as the basis for further meanings (Dudovskiy, 2009).

3.3 Justification for Preferred Philosophy

Against the backdrop of the four research philosophies briefly explained above, this research work adopts a positivist research philosophy for the following reasons. The selected research approach delinks the researcher from respondents to ensure an objective outcome which requires the researcher to desist from any interaction with the respondents. This was achieved through a survey feedback medium that allowed access to participants' responses only after completion.

Secondly, the preferred research method is quantitative for a survey research strategy which is an identifying element of a positivist research philosophy. The various responses are scientifically analyzed through hypotheses that were tested in the process. Findings from the hypotheses testing helped provide explanations on the adoption, or otherwise, of the perception of student's preference in the selection of mode of lecture delivery.

3.4 Research Approach

Guided by the preferred research philosophy described above, this research work employs a deductive approach for its analysis. The deductive research approach refers to the development of hypotheses carved out from theories captured in the research work that is subjected to selected research analytical methods to test the hypotheses (Dudovskiy, 2010). The hypotheses test results indicate whether it should be confirmed or rejected depending on the outcome of the null and alternate hypotheses.

3.5 Sample Size

Through the questionnaire, a healthy sample size of 248 respondents participated who are current learners within the higher education (both postgraduate and undergraduate) in the city of Mumbai.

3.6 Research Methodology

This research data is analyzed using quantitative methods to provide necessary explanations related to the subject at hand with primary data gathered from respondents in the form of a survey. The survey method of data collection is used to gather data from respondents using Google forms through a link requesting all potential respondents to click and follow on-screen instructions containing the questionnaire items. The respective responses are consolidated for processing and analysis guided by the research philosophy and approach indicated above.

The population of survey respondents refers to all the students in the higher education of Mumbai ranging from UG to PG students. The sampling nature of this research mimics a non-probability convenience sampling technique where the Google forms questionnaire link is circulated to a broad professional group well represented by all the learners of the higher education in the city of Mumbai. This sampling technique is chosen due to the good representation it presents to the researcher as well as it being cost-effective considering the medium used. Judging the nascent nature of this research work which essentially is to explore the perception of Student's preference of mode of lecture delivery, applying the chosen sampling technique serves the research well even though a probability technique would be more objective.

4. DATA ANALYSIS :

4.1 Checking for Assumptions:

4.1.1 Normality test through Shapiro-Wilk's test

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
OnlinePref	.174	70	.000	.873	70	.000
	.175	165	.000	.895	165	.000

Using Shapiro-Wilk's test (for sample size below 2000 to confirm normality of the dependent variable (Online live session preference over recorded session) has shown the significance level below 0.05, concluding that the sample extracted deviates normality.

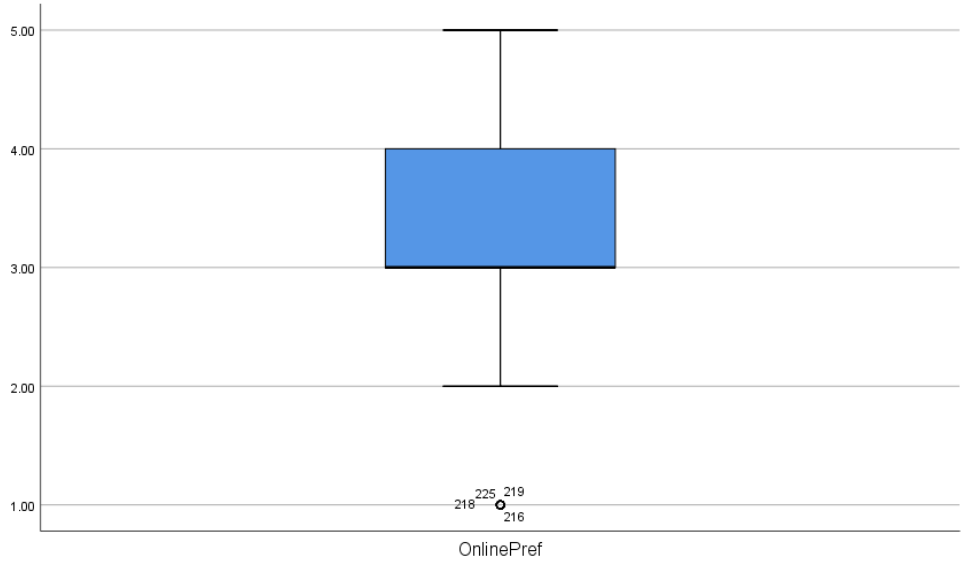
Descriptive Statistics of "Online Session Pref over Recorded session":

Descriptives

			Statistic	Std. Error
OnlinePref	Mean		3.3830	.08175
	95% Confidence Interval for Mean	Lower Bound	3.2219	
		Upper Bound	3.5440	
	5% Trimmed Mean		3.4255	
	Median		3.0000	
	Variance		1.571	
	Std. Deviation		1.25326	
	Minimum		1.00	
	Maximum		5.00	
	Range		4.00	
	Interquartile Range		1.00	
	Skewness		-.415	.159
	Kurtosis		-.686	.316

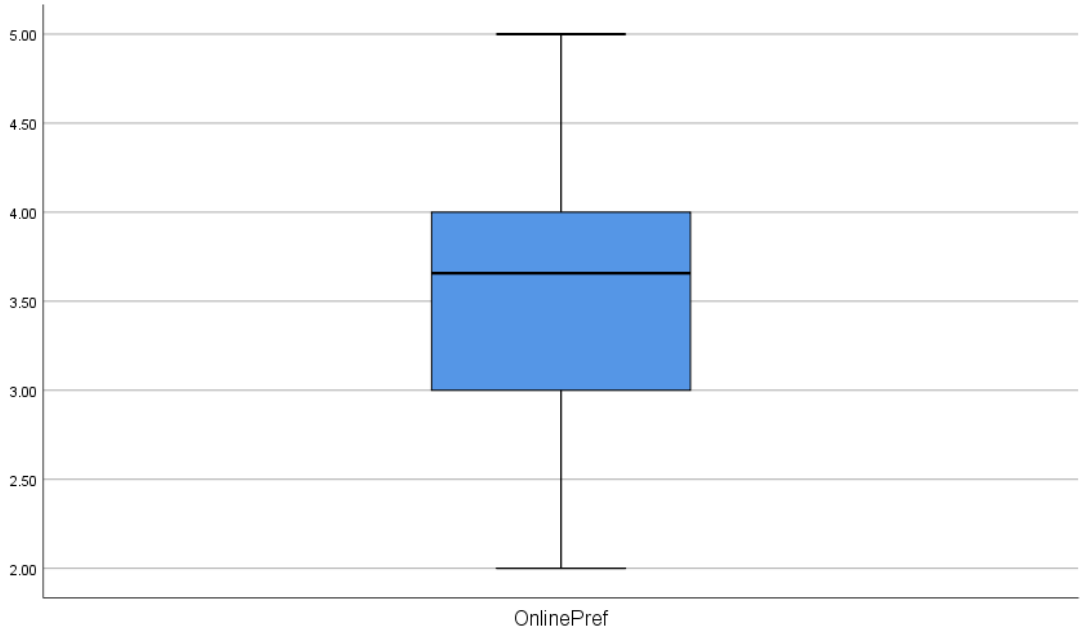
The descriptive statistics has a mean score of 3.38 i.e. higher than the neutral value and the standard deviation has been found out as 1.25- this value represents disparity in the measurements.

4.1.2 Check for Outliers:



From the above plot, it is evident that the data set at 216, 218, 219 & 225 are outliers. Investigating into each of them shows that the responses are the same for both the questions, hence replacing the values with the average i.e. 3.67 avoid data noise into the other question.

Below is a plot after removing the outliers:



After checking for the required assumptions, we move to the main test of understanding of preferences by applying Ordinal Logistic Regression.

4.2 Reasons for applying Ordinal Logistic Regression:

Multiple regression cannot be applied since both the dependant and independent variables are categorical and numerical in nature. Simple Logistic Regression cannot applied too as the dependant variable has more than two categories in it. By using SPSS 25 and applying the PLUM approach, we could identify the following results as given below.

Some benefits of using Ordinal Logistic Regression: It does not need the residuals to be normally distributed, independent and dependent variables does not require to have linear relationship and finally homoscedasticity is not required.

4.3 Test Applied- Ordinal Logistic Regression

Has dependent variable as ordinal with more than two categorical options.

Var2	Exp_B	Lower	Upper
[Passingrade=]	1		
[Passingrade=50-59%]	0.924	0.194	4.413
[Passingrade=60-60 %]	0.446	0.008	23.67
[Passingrade=60-69 %]	1.16	0.255	5.282
[Passingrade=70% & above]	1.481	0.325	6.746
[Passingrade=Below 49%]	0.246	0.001	2.67
[Behavior=]	1		
[Behavior=Extrovert]	0.435	0.189	1.002
[Behavior=Introvert]	1.225	0.698	2.151

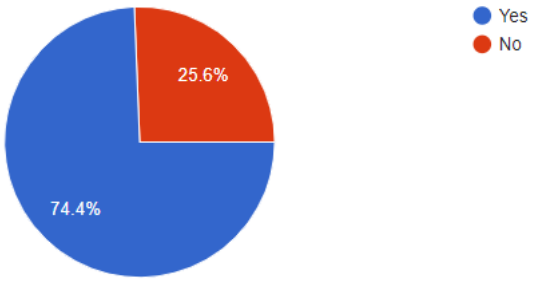
Interpretation of Results:

Checking the proportional odds measure, we interpret that the Passing grade (70% & above) prefers the online live mode 1.4 times when compared with the rest. This set of odd measures is the highest among all with the lower limit set at 0.325 and higher at 6.746 at 95% CI.

The proportional odd measure for the behavioral pattern is interpreted as Introverts preferring online mode 1.2 times more than the extroverts. There is a slightly significant difference in the behavioral pattern preference that is more oriented towards the introverts.

5. DISCUSSION:

74.4 % of the total respondents answered "Yes" to the question: "Does your concentration increases with online live lectures when compared with online recorded sessions. This output links concentration to the higher passing grade (70% & above) which is a critical element to higher grades. Higher concentration leads to a better understanding of the topics and ultimately leads to high scores.



6. CONCLUSION:

Through this study, the preference of student's learning mode within higher education was ascertained and the main aim of linking the learner's academic performance to their respective preference was achieved. It is evident that both the academic levels of 60-69% and 70% and above have shown a higher preference for online live sessions as compared to recorded sessions. However, the subject stream shows a slight difference in the preference of mode of lectures with engineering showcasing higher preference for online live sessions as compared to other streams i.e. Business and allied.

7. LIMITATIONS:

The study is carried out in the city of Mumbai only randomly considering students from degree college undergraduate and postgraduate students. The results may vary if we take all types of students i.e from high schools to all post-graduate. It will also show different results when students sample from the larger area is taken. There is a scope for further detailed study in this area of research by taking more variables and increase in the number of sample size.

Conflicts of Interest Statement: None of the two authors have a conflict of interest in this research

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