

Citation: Anwar, H. M. N., & Basit, A. (2023). Online Teaching, University Teachers and the COVID-19 Pandemic: Exploration of Technology Acceptance Model (TAM). *Global Educational Studies Review*, VIII(I), 61-74 [https://doi.org/10.31703/gesr.2023\(VIII-I\).07](https://doi.org/10.31703/gesr.2023(VIII-I).07)



Online Teaching, University Teachers and the COVID-19 Pandemic: Exploration of Technology Acceptance Model (TAM)

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Abstract: The aim of the study was to explore the effectiveness of the online mode of teaching during the COVID-19 pandemic. For this research a qualitative method was applied and the instrument used to collect data was semi-structured interviews from university teachers. The research conducted under the umbrella of Technology acceptance model. How the teachers from public and private sector universities adopted technology during the COVID-19 and how they engage their students to manage this lockdown period without delay of any class. The findings of the study revealed that teachers of public sector universities faced challenges in the adoption of technology to conduct classes online but the private sector universities through proper management and resources have managed this tech-based learning during lockdown. When it comes to the public sector universities, the teachers were not facilitated by their institutions to manage this online teaching mode.

Key Words: COVID-19 Pandemic, Online Teaching, Universities, Teachers, Semi-structured, Adoption of Technology, Technology Acceptance Model

Introduction

The COVID-19, also known as coronavirus disease 2019, is an infectious disease caused by the SARS-CoV-2 virus. It was first identified in December 2019 in Wuhan, China and has since become a global pandemic (Gao & Zhang, 2020). COVID-19 primarily spreads through respiratory droplets and close contact with infected individuals, and can cause a wide range of symptoms from mild to severe, including fever, cough, and difficulty breathing. The pandemic has had significant impacts on public health, the economy, and daily life around the world. Governments and public health organizations have implemented a variety of measures to try to slow the spread

of the virus, including social distancing, mask mandates, and vaccination campaigns (Zhang et al., 2020). The development and distribution of effective vaccines has been a major focus of the pandemic response, with multiple vaccines now available and being administered globally. While progress has been made in controlling the spread of COVID-19, the pandemic continues to pose significant challenges and risks.

COVID-19 has had a significant impact on Pakistan. Pakistan had reported over 1.2 million confirmed cases of COVID-19 and more than 26,000 deaths. The pandemic has put a strain on Pakistan's healthcare system, which was already facing challenges such as shortages

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of medical supplies and staff. The government has taken measures to increase the capacity of hospitals and testing centers, but there are still concerns about the ability of the healthcare system to handle a large outbreak (Malik et al., 2020; Ali et al., 2021; Peters et al., 2020). The country's GDP contracted by 0.5% in the fiscal year 2019-2020 due to the pandemic, and unemployment rates have risen. Many businesses have been forced to shut down or reduce their operations, and there are concerns about the long-term impact on the economy.

The pandemic has also affected Pakistan's education system, with schools and universities being closed for extended periods of time. The government has tried to provide remote learning opportunities, but there are concerns about the quality and equity of access to online education (Kumar, 2020). This sudden shift was a challenge for many university teachers who had to quickly learn how to deliver their courses online, often with limited resources and training. While some teachers have adapted well to online teaching, others have struggled with the new format and the lack of in-person interaction with students conflicts (Swartz, 2018).

With the shift to online learning, many university teachers have found themselves with an increased workload. They may need to spend more time creating online course materials, recording lectures, and engaging with students through online platforms. Additionally, teachers may need to spend more time addressing student concerns and questions via email or virtual office hours. This shift to online learning has highlighted inequities in access to technology and resources (Sharma, 2020; Martin et al, 2019). Not all students have access to reliable internet or a suitable study environment, which can impact their ability to learn. Similarly, not all teachers may have the necessary technology or resources to deliver online classes effectively, which can impact the quality of education.

However, education is one of those phenomena that cannot be ignored for long, so online-learning has become the most popular way to obtain education. In foreign countries

this phenomenon was already in use prior to the COVID-19 at various levels, but it was not on such a large scale in Pakistan. Teachers on such a large scale wasn't associated with the online-teaching before the COVID-19 as they're now therefore the focus and the purpose of the study is to seek out the efficacy of modern teaching techniques in online teaching and the challenges that teachers are facing while teaching in online-classes.

Research Objective

- To explore effectiveness of modern teaching techniques of teachers in online teaching during the COVID-19 Pandemic.
- To explore the challenges faced by the teachers in adapting online teaching during the COVID-19 pandemic.
- Research Questions
- Are the modern teaching techniques helping the teachers in teaching online during the COVID-19?
- What kind of challenges are being faced by the teachers in adapting to online teaching during the COVID-19?

Literature Review

This pandemic actually led to forcible closure of life activities and resulted into massive crisis ranging from social distancing among citizens to avoid spread of the pandemic and provision of medicines, food items and other fundamental rights were compromised (Adedoyin & Soykan, 2020). Digital transformation had become necessity for the academic institutions involving multiple related stakeholders to have sharing their concerns about this novel phenomenon and they were forced to develop ICT based solutions to ensure smooth academic activities. The findings of the study carried out by Cefai and Cavioni (2013) revealed that this digital transformation pushed the academic institutions worldwide to develop an integrated mechanism for sustainable academic flow by facilitating the teachers and academic staff by providing them necessary training and hands-

on practice and bring necessary modifications in traditional method of teaching with the inclusion of modern technology.

According to a study carried out by Jin, Lin, Zhao, Yu, and Su (2021), the teachers were forced by the pandemic to replace traditional method to online method of instruction, evaluation and grading for the students. Besides other problems faced by the teachers, one leading factor was a challenging approach towards their adoption and adopting by the students especially when everything and every sector ranging from disturbance in routine normal life to economic downfall. Teaching faculty especially of the universities suffered serious setbacks in adopting new ways and methods of teaching to ensure learning process smoothly across the world.

Despite hectic efforts by the scholar, there was not a single evidence in support of putting teachers, students, faculty, staff and administrations of the schools, colleges, and universities in an emergency situation asking them to adopt a remote (online) teaching and learning method (Karata & Tuncer, 2020). However, according to UNESCO, total 61 countries immediately closed down its academic centers to curtail the spread of COVID-19 Pandemic with worst effect on the academic culture in those countries (Zhu & Liu, 2020; Onyema et al., 2020). Another study carried out by Ali and Dmour (2021), in the United Kingdom, most of the teaching staff voted in favor of adopting online education system, adding the tough circumstances occurred owing to the COVID-19 proved the effectiveness and efficiency of the online academic system (Pather et al., 2020; Zhu & Liu, 2020). They further commented to enhance more online blended teaching method in the days to come even after the pandemic situation was over. However, they also believed that online education system was not effective for the students of medical and engineering sector in particular because the both fields required hands-on practice on specific methods which are always labs oriented (Gao & Zhang, 2020).

Pakistan hosts 177 higher education institutions including 58 percent sharing public sector and 42 percent higher education institutions were owned by the private people (Agarwal, 2008). All these higher education institutions are bound by the law to follow the law, instructions/ directions and guidelines devised by the HEC. Keeping in view of the ongoing pandemic situation, the HEC issued a circular to all the higher education institutions to adopt virtual mode for imparting teaching and virtually hosts all the academic activities including organization of national and international conferences, webinars and seminars (Haider & Ali, 2020). In Pakistan, online education system had highly been interlinked with the virtual teaching processes adopted by the open universities including Allama Iqbal Open University (AIOU) and Virtual University (VU) (Iqbal & Ahmad, 2010). Therefore, these universities had developed their online teaching processes. In wake of ongoing COVID-19 outbreak, the Federal as well as Provincial Governments of Pakistan, Public and Private Sector Universities contacted the open universities to seek their assistance and guidance in developing their ways of online teaching (Haider & Ali, 2020; Mumtaz, Saqulain, & Mumtaz, 2021).

However, according to a study carried out by Afshan, Shahid, and Tunio (2021), the Government of Pakistan and subsequent Provincial Governments were badly failed in developing such mechanism to implement and ensure online education in Pakistan during COVID-19. Furthermore, according to a study by Kumar (2020), the online education system generally in developing countries and Pakistan in particular was unable to receive the desired outcomes owing to multiple problems. The major problem surfaced in online academic system in Pakistan was lack of availability and due to poor internet connectivity, a huge majority of the students was unable to connect with the online education system due to technical faults and monetary problems for the students. Therefore, we do not witness any announcement made by the government functionaries or directions to the universities of Pakistan to providing them or asking them to

ensure any [available, existing or new] mechanism to seek positive learning outcomes from the online education system. According to a study carried out by [Malik et al. \(2020\)](#), the Government in Pakistan was more interested in introducing new forms of lockdowns, announcing complete or partial lockdowns and taking credits of implementing lockdowns for 'public safety'.

Exploration of Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) is a theoretical framework that explains how people adopt and use new technologies. The model was developed by Fred Davis in 1989 and has since been widely used in the fields of information systems and technology management. According to the TAM, an individual's decision to adopt a new technology is primarily determined by two factors: perceived usefulness and perceived ease of use. Perceived usefulness refers to the extent to which an individual believes that the technology will be beneficial in achieving their goals or improving their performance. Perceived ease of use refers to the extent to which an individual believes that the technology is easy to use and learn ([Perumal, 2020](#); [Chan, 2013](#); [Kemp, 2019](#)).

The TAM proposes that these two factors influence the individual's attitude toward using the technology, which in turn affects their intention to use it. The model also suggests that external factors, such as social influence and organizational support, can also affect an individual's attitude and intention to use a new technology ([Nickerson et al., 2009](#)). The TAM has been used to explain the adoption and use of a wide range of technologies, including information systems, mobile apps, and e-commerce websites. It has also been extended and modified to include additional factors that may influence technology adoption, such as perceived enjoyment and trust. Overall, the TAM provides a useful framework for understanding and predicting how individuals will adopt and use new technologies.

Andrew Kemp, Edward Palmer and Peter Strelan in 2019 formed a taxonomy of factors affecting attitudes towards educational technologies for use with technology acceptance model in stages by using different type of sources. The taxonomy included seven primary categories: i) attitude, affect, and motivation; ii) social factors; iii) usefulness and visibility; iv) Instructional attributes v) perceived behavioral control, vi) Cognitive engagement, and vii) system attributes ([Kemp et al., 2019](#); [Huang et al., 2020](#); [Kemp, 2019](#)). The abrupt transition to online learning did not allow educators and professionals to plan a properly designed online instruction that eases the transition and social distancing during the COVID-19 created a new social reality.

In this study it will explore that what is the perceived behavior of teacher in adopting to the technology the sudden transition didn't let them get aware of the technology so it will be interesting to find out their perceived behavior on the ease and their abilities of using technology. The degree to which users maintain exclusive, focused attention on their activity is known as the cognitive engagement ([Zhu et al., 2020](#); [Hodges et al., 2020](#)). In this study through instructional attributes of the teachers it will be explored that whether the students are providing the desired results which teachers are aiming for and are the students paying attention to the instructor in online teaching. The researcher adopted the Technology Acceptance Model for the study in hand due to multiple factors; discussed above. Moreover, the perceived behavioral control discussed in this technological model refers to the individuals capability and effort and facilitating conditions that affects the ability [of teacher] to use educational technologies. This model provided directional approach to the scholar for which it was adopted for the study in hand. The study explored this model in Pakistani perspective.

Methodology

For this study the researcher found that exploratory research design is the most appropriate approach to know the university

teachers opinions on online teaching during the COVID-19 Pandemic. For this study researcher used a qualitative approach for data collection the strategy to collect data was through the semi-structured interviews of university teachers in Lahore. Interviews helps the researcher to hear out the real-live experiences of the respondents which enriches the data required for the study (Chen & He, 2013). For the data analysis and interpretation, the thematic analysis guidelines (Creswell, 2009) are used that helps to explore different kinds of interpretations (Jha, 2020).

For this study NVivo 12 plus software has also been used and results are extracted. It provides Word Cloud, Word Trees, Auto-Coding and Tree-Map of most frequent and dominant terms in the data set. Subsequently, all such investigated terms have been well interpreted and discussed with the help of the Technology Acceptance Model (Lee, 2003). In this study the sample size were 16 teachers from four different universities of Lahore two were public universities and two were private universities from each university.

Analysis and Discussion

Major Themes

After collecting the detailed qualitative data, holding discussion with all 16 faculty members being respondents of this study from different public sector as well as private sector universities of the Punjab-Pakistan and opinions of the expert of online teaching and in accordance with the objectives of the study, the scholar developed the following themes: -

- i. Modern Ways of Teaching
- ii. Medium for Online Teaching
- iii. Technological Facilitation for Online Teaching
- iv. Challenges for Teachers for Online Teaching

Sub-Themes

Keeping in view the main themes, after evaluating the qualitative data, the researcher developed the following sub-themes to interpret and discuss the main themes.

i. Modern Ways of Teaching

- a) Emerging Teaching Methods
- b) Modern Teaching Trends
- c) Online Teaching

ii. Technological Facilitation for Online Teaching

- a) Technological Advancement
- b) Technology Oriented Teaching
- c) Technological Learning

iii. Challenges for Teachers for Online Teaching

- a) Teaching Challenges
- b) Learning Challenges
- c) Online Challenges

Interpretation of Themes

Theme-1: Modern Ways of Teaching

- a. Emerging Teaching Methods
- b. Modern Teaching Trends
- c. Online Teaching

This theme was designed after analysis of the collected data. Basically, this theme described the modern teaching methods being adopted by the teachers to teaching, guiding and educating the students during online classes. Three sub-themes were emerged during the analysis of the data, including a) emerging teaching methods, b) modern teaching trends, and c) online teaching. The most appropriate responses as given in following fashion.

Key Responses

Responding to a research item, a respondent stated as:

"At the start when we started to teach online, I had the know-how of technology and modern ways of teaching but how to conduct classes and meetings online I wasn't aware of that. Now with the help of different applications we can impart our knowledge in a good way like on Zoom and TEAMS software suppose I have to show you a video or a tutorial so by using these apps I can share the screen with the students and then they

all can see it easily that is not easy in traditional learning. Technology is helping very much in this modern era we can explore different tools and mediums to teach students”.

The research scholar also found another appropriate response where a respondent shared the opinion as,

“I belong to an Era when every everything is so digitalized and I have done my postdoc from America that there are so many, many, many software's that we have been exposed to. But to be very honest, who in Pakistan, we are not used to go into this software so, you know, keenly, maybe we don't have interest, maybe we don't need them”.

Interpretation of the Theme

Keeping in view the all 16 responses about the research item, it was unearthed that teachers have adopted new style of teaching which is modern in nature and unique as well. According to data, in very start teachers were reluctant to adopt new ways of teaching but ‘Zoom ‘TEAMS and ‘Google Meet and other alike software assisted them a lot for adopting modern means of teachings. Responding to the main theme, in wake of prevailing situation of COVID-19, the data revealed teachers in universities have also been changed, in fact, their method of teaching has been changed altogether. Now, modern means have replaced the traditional ways of methods. According to the data, almost all the respondents were using Zoom, TEAMS and Google Meet, which have developed new emerging teaching trends for online teaching. So, it can be argued that the first theme received saturated response that during ongoing prevailing situation of Corona, like other practices of life, the traditional mode of teaching has also been replaced by modern approaches of teaching and learning. So, from the data collected in response of the first main theme, ‘Emerging Trends and the ‘New Methods were found as lynching themes.

Theme-2: Technological Facilitation for Online Teaching

a. Technological Advancement

b. Technology Oriented Teaching

c. Technological Learning

This theme is interlinking and associating theme with the other main themes. In fact, the reason behind developing this theme was to assess the technological facilitation from the university to its teachers for online teaching. This theme discusses the wholesome mechanism of technology, modern means of learning and technological teaching. So, three sub-themes were emerged during the discussion, which included as a) technological advancement, b) technology-oriented teaching, and c) technological learning. In literal sense, the respondents shared that these three sub-themes were the main concepts used during online teaching. The discussion was made in following manner about the main and sub-themes.

Key Responses

The most appropriate response by one of the respondents was recorded as:

“Yes, absolutely at the start of the COVID-19 the university was totally closed and to keep up with the technology and connectivity on individual basis is a tough ask financially it is not easy for everyone but after sometime here at UMT a LAB was created for us where all the technological facilities were available with the COVID-19 SOPS and that LAB also known as an Online Lecture Room. I can say that UMT is 1000% facilitating us in technological aspects in teaching online and hardly face any problem because of that”.

However, one from the respondents from the public-sector university also shared his otherwise experience. According to him, his institution was not providing technical assistance and other sort of cooperation in hosting online classes. According to him,

“And as far as my institution is concerned, honestly, speaking, I'm not talking about the university and the whole, but the Institute did not provide much of the facility first, because we were taking classes in easily from the home. So, we have to have a good connection at homes. Secondly, we were not given any official online, teaching software or any app”.

While sharing an experience working in a highly prestigious public sector university a respondent his experience that her institution didnt provide or arranged any kind of a training session so that we can learn some skills to teach online. According to her,

“If I talk about my institution, we didnt get any kind of technological assistance or any kind of training session and this has bothered me a lot. If I compare with the private sector universities, they got much better facilities to conduct classes online”.

Interpretation of the Theme

According to the analysis of the responses pertaining to the theme, the most appropriate responses revolve around the concept of extending technological assistances by the administration of the university especially the IT Department. The data reveals that the university provided technical assistance to the teachers in hosting online classes on Zoom, Google Meet and other software. Interestingly, the data collected from the private universities revealed that the administration as well as IT Departments of the private sector universities was providing them training about hosting online classes, operating LMS, providing online assignments and marking. However, the data collected from the public sector universities revealed that the administration of the institute of the communication studies was ‘non-cooperative in assisting the teachers for online classes or online assessment of the students. According to the data, the head of the department, administration and staff was non-cooperative in providing training to faculty for organizing online classes. So, the administrations of the private sector universities were providing 24/7 assistance to their faculty members whereas the faculty of the private sector universities had to arrange online sessions on their own from their homes by using their personal internet connections. So, it can be argued that the responses were variant in nature pertaining to technological facilitation for online classes. However, the sub-themes including technological advancement, technology-oriented teaching,

and technological learning were existent because online classes required such facilitation to the faculty for hosting proper classes to take positive outcomes.

Theme-3: Challenges for Teachers for Online Teaching

- a. Teaching Challenges
- b. Learning Challenges
- c. Online Challenges

There are challenges in each field of life. However, the teaching is a profession which demands congenial, supportive, facilitated and learning environment to impart knowledge. Therefore, teaching is effective when there are minimal challenges for the teachers in imparting knowledge and students in gaining knowledge. So, the rationale behind this main theme was to examine different challenges being confronted by all the related stakeholders including teachers, students and administration of the academic institutions during online teaching. In discussion, three sub-themes including a) teaching challenges, b) learning challenges and c) online challenges emerged as the key concepts need to be discussed in the theme. So, the key responses by different respondents are given in following fashion.

Key Responses

A respondent revealed a story of the students. according to him, no student was sincere with the teacher or honest with his/ her studies thats the main challenge. According to the respondent,

“I think to engage students in class is the biggest challenge when they are not attentive in class and have their intensions to just time pass and not to focus in a class so thats the main challenge according that I faced”.

A respondent working in this profession for the last several years stated a candid opinion about problems being faced by the students during online teaching. According to the respondent, *“Usually, students face Internet connectivity issues in submission of their online task sometimes load shedding issues are being*

Interpretation of the Theme

on back foot because every teacher was demanding reasonable internet connectivity and students were also right in their demand as they were paying their full fees even sitting at homes. According to the data, teachers demand from the administration(s) of the universities to provide them official internet packages because in low salary packages they were unable to use their own internet package. So, it can be argued that yes there are certain challenges during online teaching which were summarized into the sub-themes including teaching challenges, learning challenges and online challenges. In fact, all the challenges fall under the ambit of the online challenge sector and to engage students in a class is very much difficult because you cannot keep your eyes on the students. The lynching of this theme discusses the difficulties and problems being faced by the teachers in universities during online teaching.

Figure 1:
Word Cloud of Most Frequently Used Terms in the Transcribed Data

Figure 1

Figure-1 shows the frequently used terms in the transcribed data of interviews while talking about online teaching. It is to be expected that

Through the figure it can be analyzed that the teachers have mentioned some of the challenges in online teaching & to engage students in online teaching was one of the biggest challenges in online teaching during the COVID-19. Furthermore, the figure-1 also reveals that the understanding of modern ways

of teaching helped a lot to some of the teachers in terms of the particular conditions. This cloud also shows that, the majority of the respondents were focusing to discuss about classes, lockdown, technology, online system, teaching methods and so on.

Figure 2

Coding of Frequently Used Words

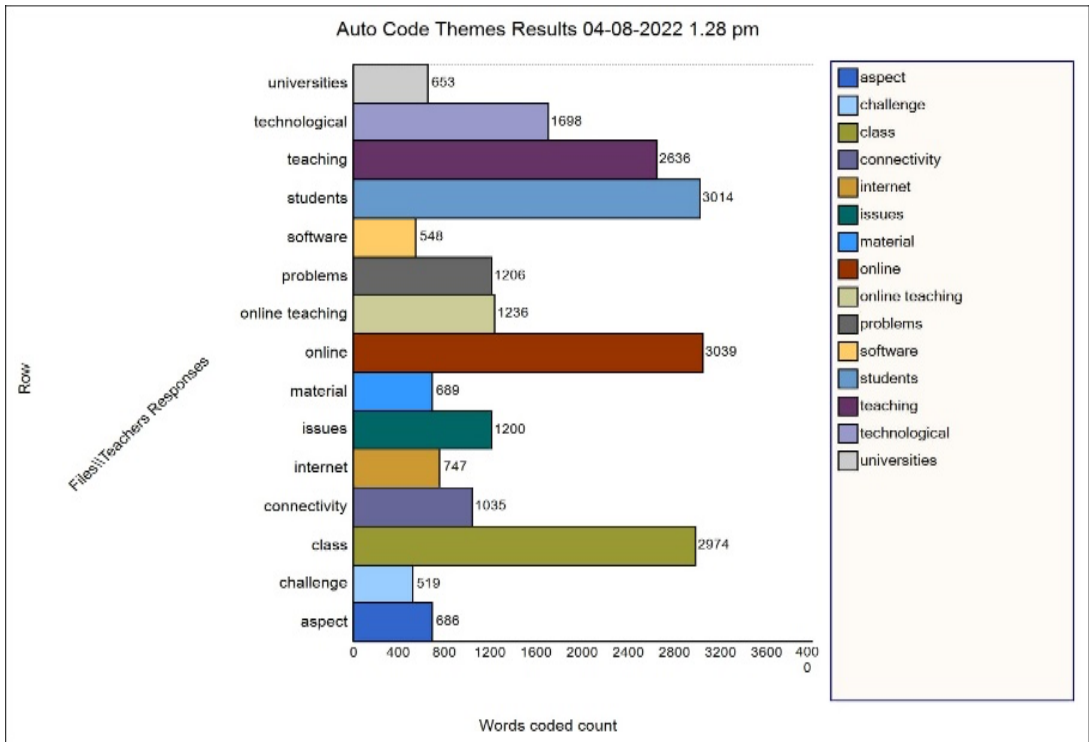


Figure 2

Give an account of the main themes of the transcribed data of interviews while talking about online teaching during the COVID-19 discourse. There can be traced a clear link between words Teachers, technological, students, online teaching, class and problems. These keywords reflect the main point of views of teachers on online teaching during the COVID-19 and how the teachers have used the discourse to form a link between the online teaching, Technology and the challenges faced by the teachers in order to teach online during

the COVID-19. The teachers have expressed their views by drawing the linkage that those who have got the technological assistance or trainings to teach online have got the better results in regards to ease and flexibility whereas those institutes who didnt provided any technological assistance to their faculty they have faced the challenges. COVID-19 is itself a very tough phase for all the people and to teach during that period requires assistance that ensures the feasibility in the process of teaching online. Through the figure it can be seen and analyzed that the most used from the

teachers are students, online, class, teaching and technology and technology all these words are interlinked teachers are dependent upon the technology to teach their students online all while doing it so they have faced some

challenges as well and through the figure it can be analyzed that the connectivity and technological assistance was the two main concerns in online teaching.

Figure 3:

Frequently Used Terms Tree Map in the Transcribed Data of Interviews

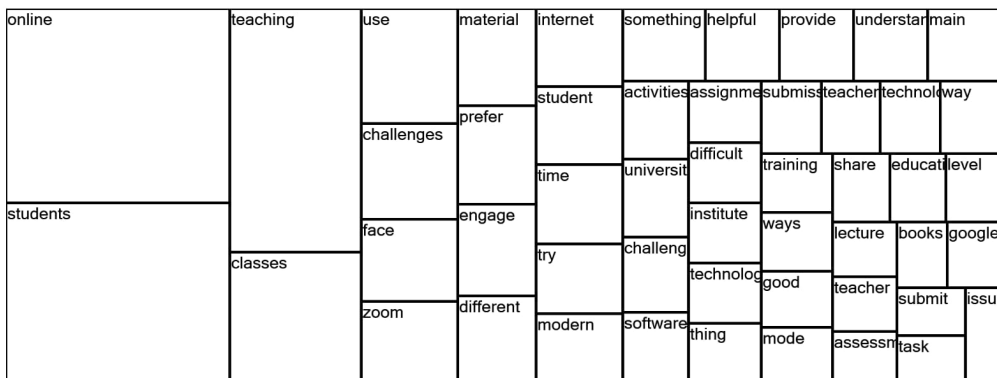


Figure 3

Figure-3 is the tree-map of frequently used words in the transcribed interview data of teachers. It shows the flow of words that are being used for instance, Online, Students, Teaching, engagement and modern teaching techniques. Through the Online teaching to engage students has said to be a very tough task for the teachers and the teachers have tried to

link the less student engagement in online classes to a challenge that has caused a lot of loss during the online teaching. On the other hand, from the tree map it can be analyzed that teachers had to adopt different modern ways of teaching in order to conduct classes online and to get maximum output from the students during the COVID-19.

Figure 4:

Word Tree of Frequently Used Terms in the Transcribed Data of Interviews

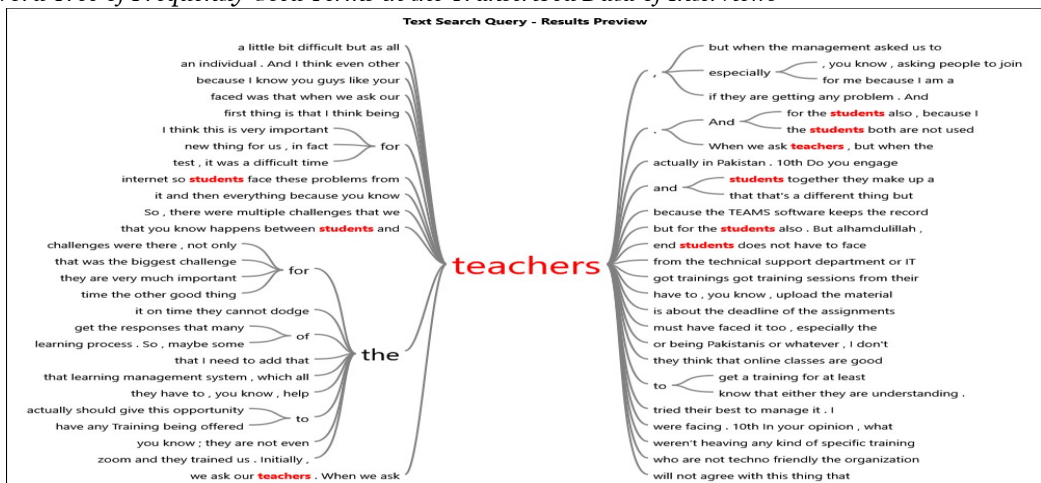


Figure 4

From the word tree map it can be analyzed that in Pakistan it was tough ask to teach online during the COVID-19 due to various reasons from internet to technological illiteracy everything was under the radar as a challenge but both the public and the private universities handled it differently it has been observed that who has developed a strategy to conduct the classes online has got better output. Technological guidance and trainings played a vital role in online teaching. The private universities teachers are more openly expressing their views that they have got the assistance that were required to teach online whereas the public sector universities on the other hand didnt provide any proper assistance to teach online.

Discussion of the Findings

Semi-Structured interview method was selected to conduct the research and researcher has conducted 16 interviews from the teachers of both public and private sectors universities so that conclusions can be drawn. Public Sector University includes Punjab University and University of education and private sector universities includes University of central Punjab, University of management and technology. From each university four teachers were selected for the interview. Some teachers were PHD and some were lecturers who have experience of more than four years in teaching.

Everyone agrees with the statements/questions that modern techniques and software including Zoom, Google Meet, Skype, OLARK and all other modern techniques were helpful for teachers and students for online teaching and learning on a contrary note most of the respondents said at the start they were hesitant as they were not aware of the modern teaching methods it took time to understand and conduct classes. There are technical issues in imparting necessary trainings to staff and faculty members to ensure effective teaching and some issues on the part of the administration in facilitation to the faculty.

However, overall, all the respondents were satisfied with the modern teaching techniques which were quite helpful for the students. Different teachers have adopted already set standards for modern teachings, but some of them also invented their own methods for imparting online teaching and educating to their students. Therefore, the students were also happy with already set standards and some adopted new styles of modern teaching.

Most of the respondents from private sector universities shared that their universities have adequate modern facilities, IT experts, and modern gadgets for hosting online classes and other relevant tasks for the students. However, the respondents from public sector universities revealed neither the university (universities) were inclined to provide them adequate facilities for online classes nor the administration of those institutions or staff was trained on modern lines to further impart training to the faculty members and that thing has affected the online teaching big time if there are proper facilities and training sessions that how to conduct online classes than it would be different kind experience to teach online.

According to the responses of different respondents working with different public and private sectors universities in (Lahore, Punjab) internet connectivity, training on modern gadgets, online software, hands-on-training with the modern tools and methods of online teaching were the main challenges for the teachers and students. The students were first time exposed to the modern technology for online teaching with positive purpose, so, it was a big challenge for them to arrange internet at their homes during COVID-19. The teachers were also pushed by the administration of the universities to arrange personal internet data packages to ensure successful online classes. Likewise, the teachers required necessary training on modern lines for efficient online teaching, assignment tasks i.e., assignments, group discussions and virtual presentation. The teachers confronted yet another challenge of making class active as

most of the students were found mentally absent and the teachers had to make them active through different methods. For instance, the teachers used to awake their students by asking questions about the lecture/ topic being delivered during the class.

Conclusion

According to all the data conducted from teachers from both public and private sector universities it is concluded that to make online system effective than it needs improvement it requires a proper plan to tackle and facilitate the system so that it gets easier to impart knowledge through an online mode of education. There are so many reasons behind this because Pakistan is developing country and people do not have much facilities like electricity issues through which students could not take their classes on time, Internet speed issue that causes hurdles in delivering lectures. Students are more non serious because teachers do not have control. To make online system effective the involvement and

monitoring of students are main elements. According to an article in order to get the best results from online mode of learning than it should be totally or approximately overall centered around the students when the online mode is centered around the students then the results that are being required or thought are get able when students are learning and exploring then the system automatically flourishes. (Rapanta, Botturi, Goodyear, Guàrdia & Koole, 2020). Teachers of Public Sector Universities are not techno friendly and were not given trainings which can trained them in conducting online classes effectively. While Private sector universities are satisfied by the trainings given by their institutions but still, according to them there needs an improvement in the management of student attitude towards the online mode of learning. So, our government and education policy makers should take initiatives in order to make online system effective so that students can learn effectively and teachers should be facilitated with all facilities that is required in online teaching.

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