Traditional Learning Vs E-learning

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Abstract: The aim of this research paper is to compare and contrast the methods of traditional learning in classroom and E-Learning. The topic of this research paper appeared while considering the constant growing trend of technology and as a consequence of the current trends, the need for change to the methods of learning and teaching appears. Due to the outbreak of COVID-19, the educational system across the world has massively been affected; it forced the shutdown of all educational institutes, which hugely affected teaching learning professions across the globe. Due to its infectious nature, COVID-19 demanded containment and imposed isolation that tremendously affected personal interaction of teachers and students. In the absence of traditional classroom teaching and one-to-one interaction, computer-based learning (E-learning) has come out as the closest substitute for traditional learning. This paper analyzes the advantages and disadvantages of these learning methods. Traditional learning includes a physical place, a classroom, students and teachers interaction and E-Learning means e-space with a server and a web browsing interface, based on communication networks. A survey is conducted on the basis of methods of learning collected data and is analyzed using data visualization technique.

Keywords – **Traditional learning, E-learning, importance of traditional & E-learning, comparison of traditional & E-learning, similarity of traditional & E-learning**

I. INTRODUCTION:

Learning is the active process of obtaining knowledge or abilities through studies, experience or being educated [1]. In the case of traditional learning, students can gain interactivity, motivation, accessibility, organizing and so on. Interactivity leads to direct communication between teacher and students from that learning. As a result, students can grow their group work activity and direct clearing doubts of a particular subject in a timely manner, which features something apart from e-learning. In a traditional classroom, students can straightforwardly share their perspectives and clear up their own doubts with the respective teacher, in this way getting their doubts addressed immediately.

The education system has been advancing with the era and the technological advancements. The significant variation of technological advancements and improved e-learning from the traditional learning system makes students gradually turn their interests away from the traditional learning to e-learning. With the expansion in innovation, e-learning has been coupled with course modules due to its vital support to the students at any time. E-learning has become more popular with the increasing number of smart devices apart from desktops and laptops along with the rise of internet providers.

The COVID-19 has resulted in educational institutes shut all across the world. Globally, over 1.2 billion children are out of the classroom [2]. As a result, education has changed dramatically, with the distinctive rise of e-learning, whereby teaching is undertaken remotely and on digital platforms. With this sudden shift away from the classroom in many parts of the globe, some are wondering whether the adoption of e-learning will continue to persist post-pandemic, and how such a shift would impact the worldwide education sector. Due to the COVID-19 situation, e-learning is at higher priority hence online platforms like google meet, zoom meet, Microsoft teams, WhiteHat Jr etc. offers free access to their services.

One of the conclusions being drawn from this study is to combine traditional and e-learning to develop a blended learning concept which is very useful to students.

II. LITERATURE REVIEW:

Traditional education is also called conventional education. The main motive of traditional education is to pass on ethics, manners skills, and social practice to the students which is necessary for their survival. Moreover, learning language, acquiring the values and behavior of the people. Before the formulation of reading and writing, people lived in a surrounding in which they spread to survive against natural forces, animals, and other humans.[3]

In traditional education, the student learns about the customs and traditions of the society in which he or she lives. This type of education is mostly given to the students by means of oral narration. There is very little written work or practical work. The students merely sit down together and listen to the teacher or other students who narrate the lesson. The type of education does not include written tests but some oral tests are taken which are not very formal. The traditional education system basically included the knowledge about customs, traditions, and religions. That is why it is called traditional education.

Online environment has focused on digital content however it lacks emphasis on the importance of the learning aspect; whereas the traditional environment focuses on content and providing knowledge in real time. E-learning can be tedious for most of the students as they tend to postpone due to lack of self-discipline and teachers also face the challenge of engaging students. Traditional classrooms encourage closer relationships between students with their teachers. One of the main factors that will encourage

traditional classroom learning will be the shared learning experience among students. This aspect cannot be replaced by any online teaching method, students learn better in an environment where they can socialize and learn from fellow students. Traditional learning starts from the idea of total control of the teacher over students in the way a curricular content is taught (Novak, 2003: 128; Lulat, 2005: 179). In other words, the teacher conceives their students as "empty holes" in knowledge and only through their teachings the "holes" can be "filled". Recognized experts such as Dewey (1938: 114) and Robert (2009: 38) emphasize the passive role of the students in which a rigid explanation of phenomena given by the teacher is imposed. Besides, the repetition, memorization of concepts and written tests focused only on theory as instruments of evaluation of a course (Novak, 2003: 125). The traditional teaching, the students' interests are not taken into account and information is transmitted in the same way to everybody (Prudence, 2008: 304; Zeichner, 2002: 60).Furthermore, authors such as Marcelo (2013: 27) and Prudence (2008: 303) consider that in the traditional methodology, the student-teacher relationship is limited to the purpose of teaching and the syllabus of a course, which closes the possibility of hearing the students' voices[4].

The traditional education which was provided in schools was not meant for all the students. There was a lot of discrimination between them. It was examined that education was meant for only high society people. The children who belonged to the lower society/ division families were not allowed to enter the schools. Traditional education was not meant for everyone. Obviously this stereotypical thinking has evolved with time and education has become a fundamental right.

E-Learning is an approach to instruction and learning that utilizes Information and communication technologies to communicate and collaborate in an educational environment. This includes technological expertise that supplements traditional classroom training with web-based components and learning environments where the educational process is experienced online. e-learning was considered useful only for distance learning programs. But no one can deny the fact that e-learning is the most innovative application of the Internet and it has done wonders globally and currently is achieving education in the classroom as well.

The e-learning, though reached India late of course, is being fast accepted in a big way. India perhaps has watched the success of the west in adopting e-learning and is trying hard to implement it. Over the past few years, the Ministry of Human Resource Development has been trying to achieve the target of making education accessible to every corner of the country. Still there are many parts of the country, which are in darkness about e-learning (MALIK, 2009). Due to the growing Indian economy, India has a chance to become the heart of e-learning programs. There are many e-learning classes which are coming to India to build and develop e-learning infrastructure. The e-learning does not seem to replace the conventional classrooms with black boards but it seems to coexist with the already existing system. This system rather promises to reach too far off rural areas in India where education is still unclear. This objective can be achieved by providing PCs at low cost with broadband connection. The chances of e-learning to build up the educational system in India are very high. Furthermore the Government has also come forward undertaking the programs of upgrading the technical quality of the fresh graduates encouraging them to go into research and teaching professions. e-learning is fast growing and seems to take control of the world because of its educational advantages.

The definition of e-learning has evolved over the past few decades and continues to change. Although the origin of the term is uncertain, it is believed that its first use was in 1999 when a computer and software company in Atlanta offered and labelled their online courses coupled with live instruction as e-learning (Friesen, 2015). This definition suggested that e-learning was restricted to only virtual learning without face-to-face involvement, a constraint that has become less true with the later development of e-learning. It is important to be aware of the purpose of e-learning. Apart from improving students' performance and cost effectiveness, e-learning also aims to be highly personalized for each student. This has been suggested by Thorne (2003) when he described e-learning as the process of trial of customizing learning and development to the necessities of students. In order to meet the objectives of e-learning, social interaction in a traditional classroom is equally as important as the utilization of an individualized online system. In 2006, the technical engineering team in computer management and systems in the University of Girona found that the use of e-learning platforms not only increased the students' motivations in studies but also improved their academic results (Soler et al., 2006). The most relevant achievement in this study was a tool that autocorrects the exercises related to the subject. This tool allowed teaching staff to realize and acknowledge the learning level and possible deficiencies of the students. Some developments included a Computer-Based Assessment (CBA) e-learning platform distinguished by the automation of every teaching/learning feature of the student (Soler, 2010). With the CBA, it was found that an interaction existed between the students all along the evaluation process. In this process, the delivery of the course exercises, its correction and the feedback generated is performed by the system automatically. Rodríguez et al. (2013) proposed that the Artificial Intelligence techniques were integrated into the e-learning platform of the engineering laboratory practices (System and Automation Engineering Laboratories) to form a teacher-cognitive system combination. E-learning can be used together with the traditional face-to-face learning as well. This mode of learning would then be known as blended learning. Many studies concur that blended learning is a hybrid mode of learning which harnesses both face-to-face learning and online learning (Bersin, 2004; Boyle et al., 2003; Garrison and Vaughan, 2008; Lim and Morris, 2009; Mortera-Gutierrez, 2006). For example, Graham (2006) in the first handbook of blended learning defined blended learning as the combination of two historically separate models of teaching and learning, namely the traditional face-to-face learning systems and distributed learning systems. It is worth noting that the term distributed learning systems is an umbrella term for any technology-led learning. E-learning can go hand-in-hand with traditional learning since it combines the Internet and digital media with conventional classroom structures which necessitates the physical co-presence of the learners and educator (Friesen, 2015)[5].

However when it comes face-to-face in the traditional learning and online learning system they both have some similarities and differences [6].

Similarities:

- Both online learning and traditional learning have an excessive basis of work.
- Giving and receiving reaction is essential in both atmospheres.
- Projects are a massive portion of the learning experience.
- The tests and prizes are similar in each situation.
- Both need students to cope with their time cleverly. While some studies demonstrate that online students to some extent leave behind their traditional learning fellows, due to the fact that there is slight dissimilarity in general performance among the two schemes.

Advantage and disadvantage [6]

Traditional Learning	E-learning
Advantages: ➢ Immediate feedback ➢ Being familiar with both instructor and students ➢ cultivation of social community ➢ Motivating Students	**Advantages:** ➢ Learner centred and self paced ➢ Time and location flexibility ➢ Cost effective for learner ➢ potentially available to global learner ➢ Unlimited access to knowledge ➢ Archival capability for knowledge reuse and sharing
Disadvantage ➢ Time and location constraints ➢ More expensive to deliver ➢ Instructor centered.	**Disadvantage** ➢ Lack of immediate feedback in asynchronous digital learning. ➢ potentially more frustration, anxiety and confusion ➢ Not comfortable for some people

III.   RESEARCH METHODOLOGY:

For this study, 147 responses were received through the survey and the collected data is analyzed using data visualization tool Microsoft Excel. Out of 147 responses, 103 (69.9%) were of students and 44 (30.1%) were of teachers. As compared to teachers, the number of responses of students is more. Students with different age groups participated and the maximum number of participants is from the age group of 22-25yrs.
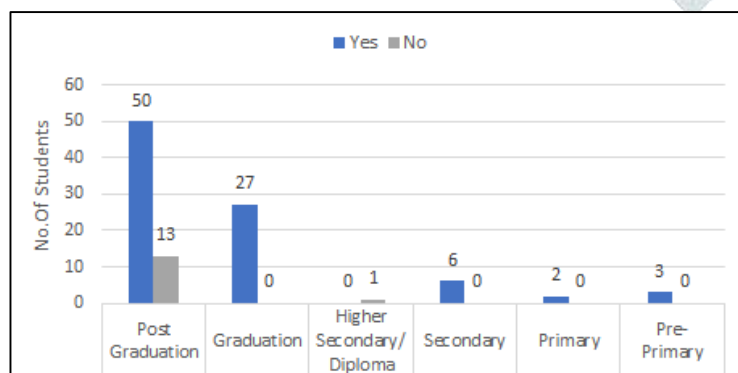
1. Do you miss your School/College?

Figure 1: Education level wise classes missed, data distribution.

Figure 1. Depicts the classes missed by different students at various levels of education. It signifies classes missed percentage is more for the Post Graduation students as compared to other education level students.

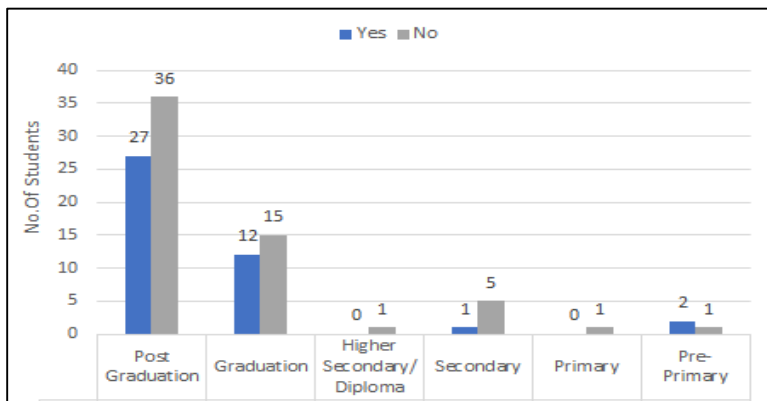2. Did you enjoy the transition from traditional to online learning in pandemic?

Figure 2: Education level wise online classes preferences.

Figure 2. Depicts the analysis of different education levels and the online classes liked by them during COVID-19 pandemic. It's been observed that school going students prefer and enjoy classroom based learning more as compared to online learning. Whereas, as per the data collected, the maximum number of students from post-graduation enjoying online learning.

3. Which learning method increase your interest in subjects?

Figure 3: Education level and learning interest

Figure 3. Describes the education level wise learning interest of learners. The overall data analysis suggests, the maximum number of students from post-graduation thinks traditional learning as well as E-learning method increases their interest in the subject whereas very few students learning in s school education think traditional learning as well as E-learning method increase their interest in the subject.
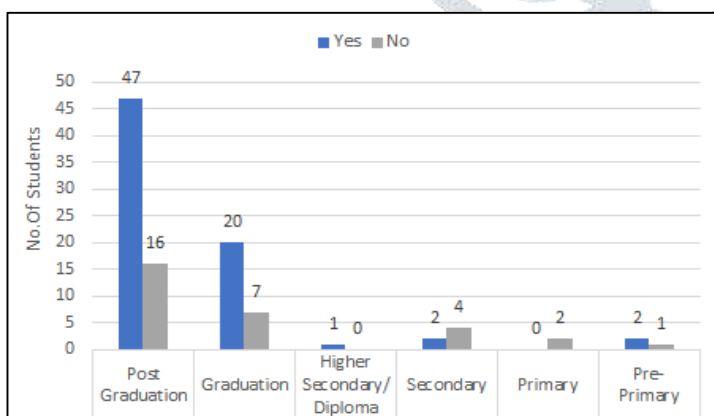
4. Are you technically prepared for e-learning?

Figure 4: Education level wise technically competency

Figure 4. Describes the education level wise technically competency depiction of students. The overall data analysis suggests, the maximum number of students from post-graduation were technically prepared as well as not prepared for e-learning. So the overall data conclude that the average number of the students from all educational levels were prepared for e-learning.
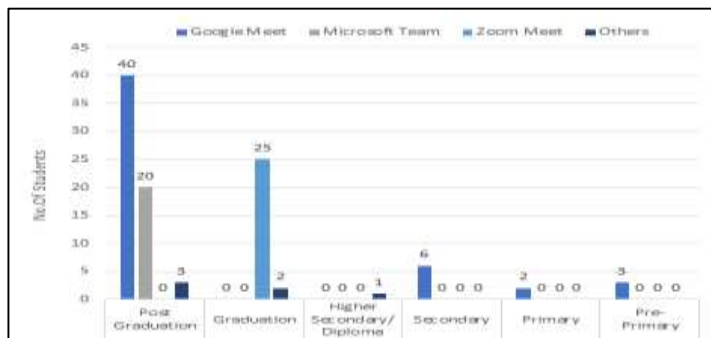
5. Which technology do you used for e-learning?

Figure 5: Education level wise technology used

Figure 5 states that the analysis of different technologies used by students from different educational levels. It's been observed that most of the students from higher level education were using technology for learning before COVID-19. Whereas per the data collected, different technologies (Google meet, zoom meet, Microsoft teams) used by students from all educational levels .It shows that Google meet is more preferred technology.

6. What is your most preferred method for clearing doubts?

Figure 6: Education level and doubts clearing preferences.

Figure.6 Describes the education level and doubts clearing preferences are described in the graph. As per the survey conducted, the students ask doubts in offline/classroom sessions more than online. During the session, the number of questions asked are less than after the session on an online platform. Highest number of college going students prefer clearing doubts during the classroom session and on online platforms after the session.

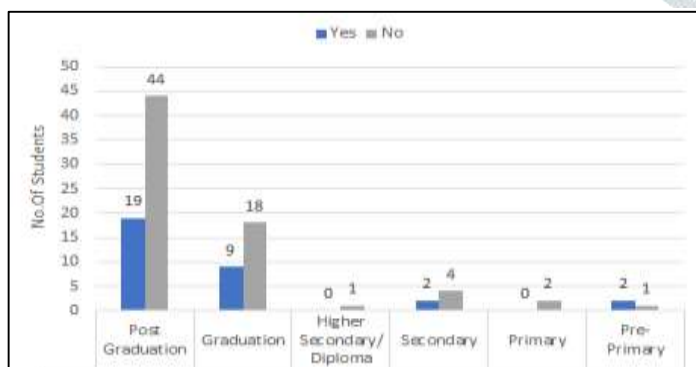7. Is e-learning more effective than traditional learning?

Figure 7: Educational level and effective methods.

Figure 7. Depicts the analysis of different education levels and the effective methods of learning liked by students during COVID-19 pandemic. It's been observed that classroom based learning was more effective as compared to online learning according to school going students. Whereas, as per the data collected, the maximum number of students from higher education says traditional and e- learning both are effective.

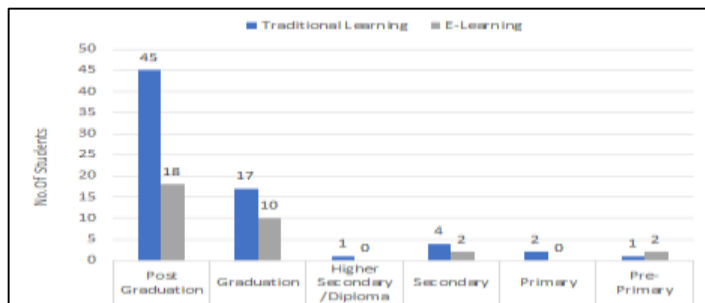8. Which method of learning would you prefer after Covid-19?

Figure 8: Education level wise learning method preference

Figure.8 depicts the analysis of different education levels and preferred learning method. It's observed that traditional learning is more preferred than e-learning before COVID-19 for students from all educational levels. Maximum number of students from higher education prefer traditional learning after COVID-19.

9. Did you enjoy the transition from traditional to online teaching in pandemic?

Figure 9: Experience wise online classes preference

Figure 9. Depicts the analysis of different years of experience of teachers and the online classes liked by them during COVID-19 pandemic. It's been noticed that most of the experienced teachers prefer and enjoy classroom based learning more as compared to online learning. Whereas, as per the data collected, the maximum number of teachers who are more experienced from enjoying traditional as well as e-learning.

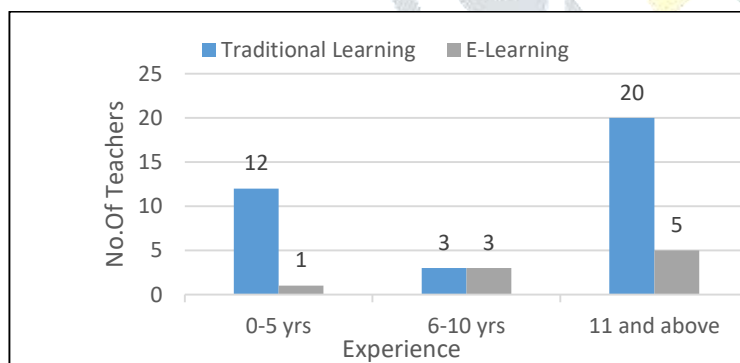10. In which environment you are comfortable for teaching?

Figure 10 : Experience wise comfortable teaching method.

Figure.10 states that the analysis of different years of experience of teachers and comfortable teaching methods are preferred by them. It's been observed that most of the teachers are more comfortable in classroom based learning as compared to online learning. Whereas, as per the data collected, traditional based learning is more comfortable than e-learning irrespective of the experience of teachers.

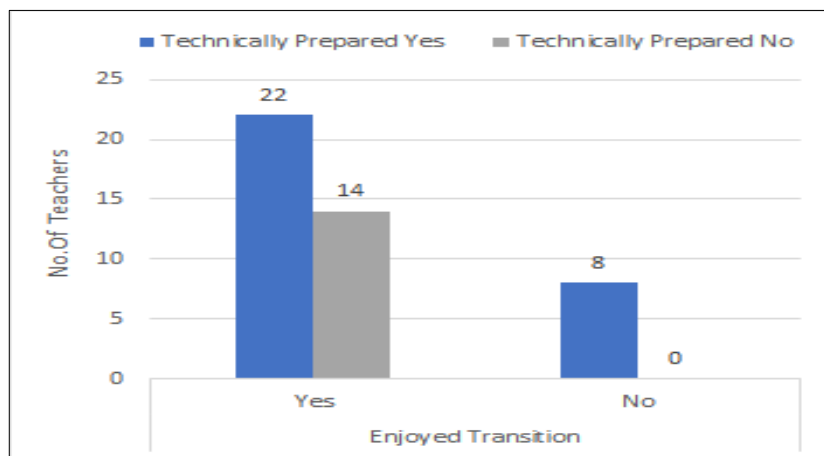11. Are you technically prepared for online teaching?

Figure 11: Enjoyed changes in teaching method and technically prepared.

Figure 11 states that the analysis of different transitions and number of teachers who are technically prepared or not. It's observed that teachers are technically prepared because they enjoyed the transition .Whereas per the data collected, the maximum number of teachers were technically prepared as well as not prepared, even though they enjoyed the transition.
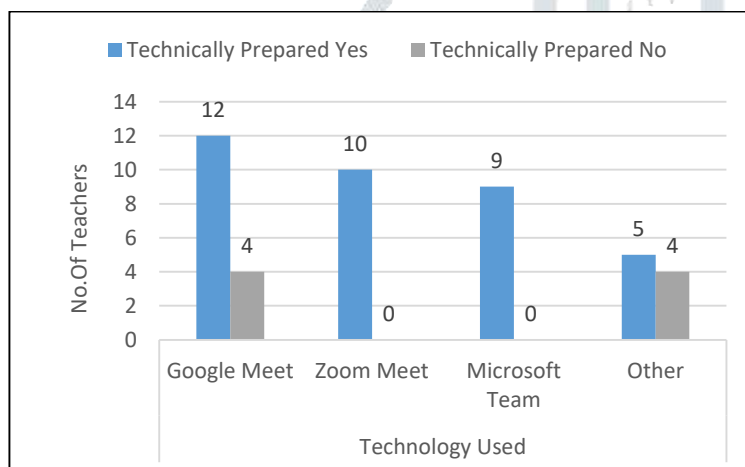
12.Which Technology do you used for online teaching?

Figure 12: Technically prepared teachers and technology used.

Figure 12 states that the analysis of different technologies used by teachers who are technically prepared. It's been observed that most of the teachers were not using technology for teaching before COVID-19.Whereas per the data collected, different technologies(Google meet, zoom meet, Microsoft teams) used by teachers whether they are technically prepared or not. Where google meet is preferred by technically prepared teachers and those who are not technically prepared prefer either zoom meet or other technologies (YouTube, WhatsApp call, Video Call).

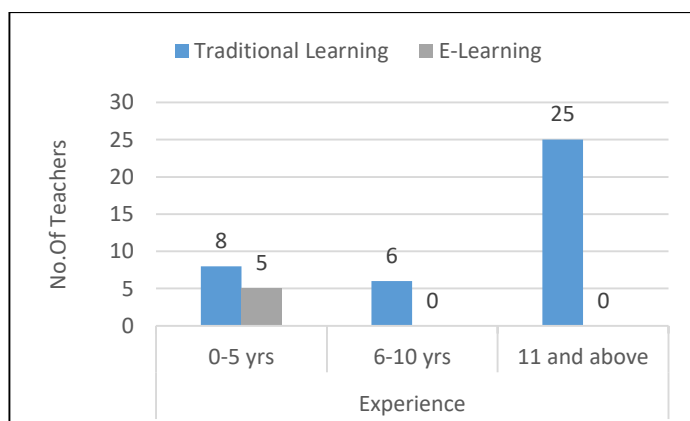13. In which learning do you think students are more involved?

Figure 13: Teachers experienced wise involvement of students.

Figure 13 depicts the analysis of different years of experience of teachers and involvement of students in different learning methods. The involvement of students in traditional learning is the same as e-learning. Whereas, as per the data collected, most

experienced teachers think involvement of students in traditional learning is more than e-learning. The opinion differences are identified about e-learning and traditional learning.

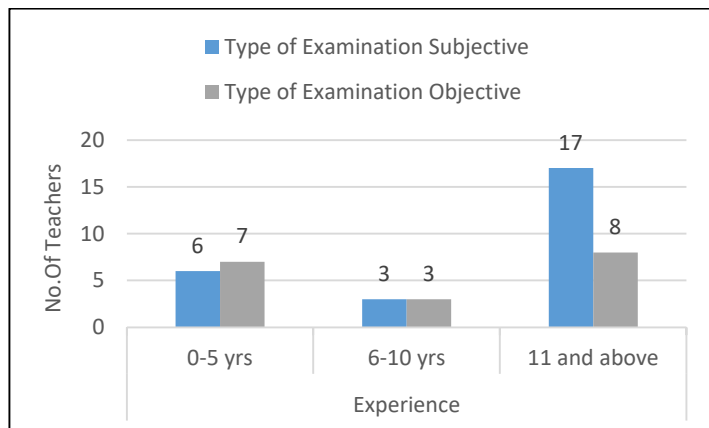14. According to you which type of examination is better for students?

Figure14: Teachers experience wise types of examinations.

Figure 14 depicts the analysis of different years of experience of teachers and types of examination. It's observed teachers were prefer that subjective examination is better for students than objective. Whereas, as per the data collected, most experienced teachers think subjective as well as objective examination is better for students.

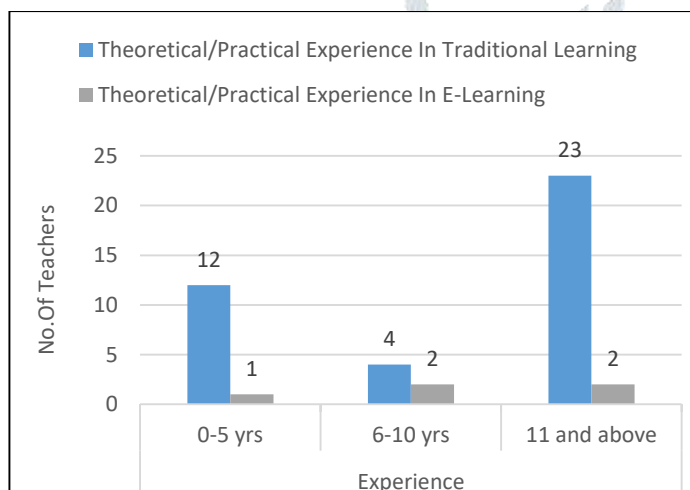15. In which learning method do you think the right amount of theoretical/practical experience provide?

Figure 15: Teachers experience wise theoretical/practical experience.

Figure. 15 states that the analysis of different years of experience of teachers and theoretical/practical experience provided by different learning methods. It's observed that the right amount of theoretical/practical experience provided by traditional learning is better than e-learning. Where as per the data collected, very few teachers from all experience of group thinks e-learning provides better theoretical/practical experience.

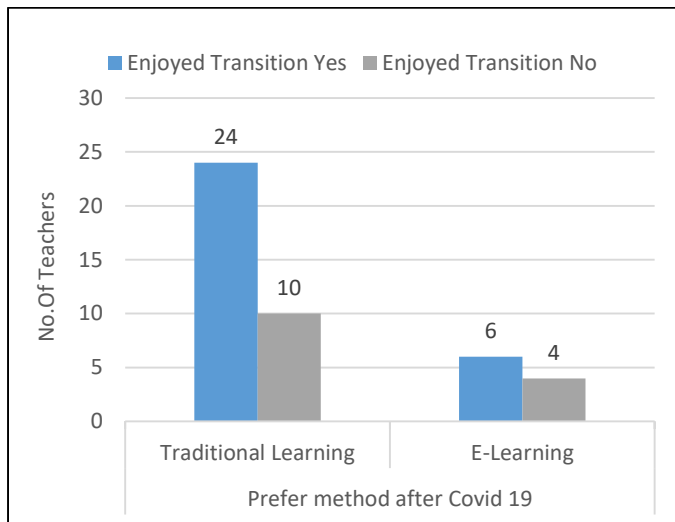16. Which method of teaching would you prefer after Covid-19?

Figure 16: Transition wise prefer teaching method after COVID-19.

Figure 16 depicts the analysis of different preferred learning methods and transition of learning methods. It's observed that traditional learning is more preferred than e-learning before COVID-19. Whereas per the data collected, the maximum number of teachers prefer traditional learning after COVID-19 whether they enjoy the transition from traditional to e-learning or not as compared to e-learning.

IV.　CONCLUSION:

According to a survey conducted, it shows that most of the students and teachers preference is for traditional learning because of better interaction between students and teachers, comfortable environment, useful and accurate study materials. But some percentage of people's preference is for e-learning because of the flexibility, scalability, accessessibility.

Both types of learning have their own advantages. During the pandemic traditional learning was not suitable which would result in sudden growth in online learning. Traditional education and e-learning, both have equal importance.

Education sector is changing as per the need of time and learners requirements. Nowadays traditional education is not considered enough to meet the growing demands. Traditional education is mostly rote learning, students are evaluated on the basis of marks but now industry demands for skills. To adapt with these changes, instead of adopting any one technique, a blended learning will definitely be a suitable solution.

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