Technology as an Elixir to the Future of Education: Impact on the Traditional Modes of Teaching

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ABSRACT

Purpose: *In the globally competitive 21st century, one has to be technically literate, able to use technology with much ease. Technology has revolutionized the field of education while automating manual tasks. With the implementation of computers, the task of the teachers is made easier not only in the process of imparting knowledge, but also in the grading and assessment process. As education is a process of social development, there is always a platform to bring about change through educational reforms like curriculum pedagogy, online or digital education, compulsory and high-quality education along with organizing learning programme for teachers that are considered essential and are prioritized with the support of the government. And without doubts its implementation leads to greater effectiveness and efficiency. Technology is an elixir that connects parents and guardians with educational institutions. In this process, innovative pedagogy is implemented with the redesigning of the classrooms. This paper aims to explore the discrepancies causing hurdles in the effective imparting of knowledge through online instruction. The implication of the research conducted focuses on identifying and labelling positive and negative factors, that is not a prominent part of the mainstream mechanism of education but have a draconian impact on it.*
Design/Methodology/Approach: *The researcher conducted a survey with a designed questionnaire seeking feedback from teachers about their online mode experience during the COVID 19 pandemic.*
Findings/Result: *Teachers lack the necessary training and tools to effectively deliver lectures. Social backgrounds, home environment, mental wellbeing, inaccessibility with regard to materials and methodologies also poses a problem.*
Originality/Value: *Based on the survey conducted it is argued that there is a need of a hand-holding mentor facilitating self-motivation in students. Students lack time management skills, ability to use their potentials, think on their own, develop personal and interpersonal skills to solve difficult, challenging problems and collude effectively.*
Paper Type: *It's empirical research.*
Keywords: Technology, Classroom, Pedagogy, Educational reforms, Online instruction

1. INTRODUCTION :

Since the time, Coronavirus or the Covid-19 pandemic has hit the globe, it has been a catalytic agent instigating speedy, expeditious change in every sphere of life. A time of crisis that has affected our personal lives, society, industry and the educational system worldwide leading to the closure of educational institutions. During this phase of crisis, an unexpected big change apart from the regular classroom environment and its impact on children, youth was of major concern. All across the globe the stakeholders wondered whether the online approach of the facilitator, that evolved under pandemic guidelines would be appropriate to carry on with! and how such a thing would crash or smack education worldwide. If one has to look into the effectiveness of online learning, we need to talk in terms of accessibility to the right technology. Research has proven that on the whole, students preserve 25-60%

additional matter or stuff when learning online in contrast to only 8-10% in a classroom. E-learning is less time consuming and it requires 40-60% minimum amount of time than in a traditional school room [1]. This is because of the possibility of students being able to grasp quicker online along with the advantage to learn unhurriedly, at their own speed and convenience; they could revert back, read through, study again, go over or facilitate through concepts, ideas, theories, or images as they decide on. New Orleans, a Southern University became one of the e-learning campuses when terrorizing tempest created chaos and ruined the smooth processes [2]. Despite this, the efficacy of online learning differs or fluctuates between peer groups. Children of the age group 5 to 12 require a structured environment because they tend to get distracted easily. Studies have proven that children highly, use their senses to grasp, to learn, making the learning experience laughter-filled and enjoyable [3].

Years ago, the government of Karnataka came up with the concept of 'Nali-Kali' - Joyful Learning and introduced it in 2009-2010 in all government Kannada medium schools at class I and II, which focused on activity-based interactive and cooperative sessions, at times with a competitive spirit [4]. It was a concept of learning through multiple sensory stimulation, play-way, peer guidance and self-evaluation. This system incorporated different phases of learning and the child had to go through all these phases of learning that included preparatory activities, competency preparatory activities, learning activities, practice activities, evaluation activities and the government of Karnataka was decent and large enough to provide children with nali-kali kits. It contained learning materials like cards, learning ladder, progress charts, climate charts, work books etc.,[5]. A praiseworthy concept. This nali-kali concept proves that learning through activities encourages children to have impertinent habitual curiosity and persistent quizzing, in other words it makes them inquisitive and independent. Unlike online teaching or learning it promotes the development of social skills, improves memory, keeps them engrossed. In a way there is active desire to learn or to know.

2. OBJECTIVES :

(1) To introduce readers to the main themes of this research and key ideas about the learning process and teacher assisted learning.
(2) To understand that children, to a great extent use their senses to grasp, making the learning experience exhilarated.
(3) To understand that activity-based, interactive and cooperative session, makes learning easier and enjoyable.
(4) To suggest that its strenuous to keep children below the age of ten engaged and interested online, as they have little attentiveness and the tendency to get distracted easily.
(5) To suggest educators to take initiatives to upskill teachers, with the features of technology.

3. METHODOLOGY :

The methodology used here is empirical. The researcher conducted a survey with a designed questionnaire seeking feedback from teachers about their online mode experience during Covid 19, their views of the strenuous time and the effectiveness of reaching out to the students through technology, that provided some insight on my subject of research. For the purpose of this survey, online education is practicably elucidated as a pattern or form used in learning, when students not necessarily be sitting in a school room. The term online learning, online tutoring, online education, online directive or requirement, online drilling is used conversely in this paper. The study was also done in the context of secondary data sources like reports, academic publications, scholarly articles and journals.

4. DIGITAL WORLD AND EDUCATIONAL SECTOR :

In the modern global learning process, a teacher is a 'facilitator of learning'. Because technology intends to provide unrestricted access to information and people can access it at any time they want to do so. As the area of education becomes more competitive, digitalization is now becoming an obligatory means of survivorship. And the educational field requires educators to modify, to alter and take up and to endorse digital technologies, methodologies, practices, processes, procedures and mindsets. The change in attitude could help education stakeholders to promote quality in its execution across the nation [6]. Due to the upsetting disturbance in the existential state of education process, caused by the catastrophe children are at risk. There is a possibility of exploitation in forms like early marriages, child labour, recruitment into armed forces etc. The tragedy of the situation can either be man made or natural

calamity [7]. A time out of the ordinary and its unpredictability is a stress test to the educational sectors too, apart from parental responsibility. It's crucial to act intelligently and rationally at a time when sentiments are at its peak and decision fatigue is genuine. So, its healthier to get engaged in teaching - learning activities despite the hard times.

5. TECHNOLOGY AND TEXT BOOKS :

The moment there was a shift from offline to online in the educational field in particular some of the arguments that came to the forefront of debate were accessibility, affordability, flexibility, learning pedagogy etc. Distance, farness, remoteness did not matter, as it was assisted or supported by technology. More than its adverse effects it was accepted as user friendly, favourable and beneficial. It was welcomed as a tool for innovativeness and elasticity [8], [9]. If we use a laptop or a tablet as a substitute for a textbook, technology isn't adding any value because only the medium of instruction has changed. The child can access the same information from the textbook without being exposed to the screen light. If a smart board in the classroom is used to show multimedia content that is not otherwise accessible to children, then it adds value. On the contrary, children should be motivated to read from textbooks instead of the same textual content being projected. A lot of responsibility sets upon educational institution to initiate responsibility to help students attain, achieve cognitive skills that involve conscious mental activities, to instigate change in the way of thinking, understanding, learning and remembering. Also, to render a helping hand to attain interpersonal and intrapersonal skills.

6. TRADITIONAL LEARNING V/S ONLINE LEARNING :

It's certain, the idea incontestable that the generic approach or the classroom experience through involvement and participation in different activities are inefficacious and can't be recreated or be explored through online learning. To a great extent, acquisition of social skills might remain a fantasy or vision. And this remains by and large true. This was stated in '*The Hindustan Times*' that it's impossible to restore humane living condition, the physical presence of a teacher in a class full of students, bustling with activity. However, given a platform, facilitators and students have not been left with any choice but to shift to the virtual learning platforms. This has however led to anxiety and stress among many students as their physical activity has gone down drastically [10]. One should not entirely pivot on the pros linked to the appropriateness of the online learning during the time of catastrophe but envisage the possibility to retain the standard of virtual platforms [11]. So, creating a healthy environment has become the need of the hour, in an online platform as teachers, parents and children are exposed to the screen more than before. It thus becomes important to look into the matter as to how learners are kept engaged and to check the learning effectiveness.

'*The Hindustan Times*' further makes a remark that online class doesn't just take place by chance. It is decisive and painstaking. It's tough to design a lesson that is functional and one that students can associate with and it requires accuracy and negligence cannot be shown in implementing it [10]. The above interview data by '*The 'Hindu Times*' is an insight to master mind the course outline or plan of study carefully, thoroughly and correctly. It's an ample and adequate proof to realize the issues of engaging learners through online mode as there is no escape or alternative.

It can be defended that the on-line mode has the potentiality and capacity to make the sessions reciprocal and connected through various applications like- **'**FoxFi, Audio boo, Evernote, Tether, Drop Box, Screen Share, White Board etc.,' [12]. Learners can be occupied, and the learning experience can be intensified and strengthened. Nonetheless there is agitation deep inside. The joy of collective learning is lost, apparatus or other equipment and materials may not be available in a home environment. And the major concern lies here, "How long can be the screen time for children?" or "How long children can remain online?'

7. COVID 19 AND EDUCATION SECTOR :

Education is a procedure that promotes learning. It is gaining knowledge, mastering skills, treasuring values, strengthening morals and to hold in high esteem beliefs and habits [13]. There was a period, there was a time, where education was the advantage of a few. Not many could afford it. The accurate normalization or regularization of learning came with the printing press era. 'An age of reformation that allowed ideas and news to be shared quickly and accurately in an accessible form for the masses.' [14]. This model by Gutenberg became an asset in the process of spreading information at a speed. In

the course of time, it created outstanding, splendid intellectuals and experts with the beginning of a new page in the education sector.

In time, this model, in association with the industrial era gave rise to an improved version of education, i.e., constructing buildings to accommodate students, splitting up students into batches by age and location, uninterruptedly scheduled testing and evaluation patterns, hence creating a platform of what we call the renewed version of educational system [15]. But Covid 19 played a havoc with the existing condition of education sector. As this catastrophe challenged the educators, the ongoing educational structure has to face a drastic alteration- a shakedown, a turnover and a complete shift. For the first time this virus barges in at the base level of the educational process. Online education is an alternative for students' learning that is considered purposeful to focus attention on thought process and reasoning.[16],[17] However**,** 'Online courses are commonly directed by the technology (Callaway, 2012; Cole, Shelley, & Swartz, 2014) and are outlined more for the favouring of online system and the technology' [18]. As technology gradually advances in extent, promoting and favouring progress towards innovative inventions, ideas and methods, there must be continuous updating of knowledge, to promote social interaction, to make the learning experience lasting.

8. ANALYSIS OF THE SURVEY, ONLINE AND TRADITIONAL MODE OF TEACHING :

To understand the impact of the COVID - 19 pandemic in the field of teaching, a survey was conducted with 42 teachers as participants. The parameters ranged from 1 to 5, wherein 1 denoted 'strongly agree' and 5 denoted 'strongly disagree.' These teachers render service in both the rural and urban sectors, with 45.2% belonging to the rural and 54.8% working in the urban set-up. 73.8% of the respondents primarily were teaching the undergraduate section, with 78.6% belonging to the Private Sector. The most common tool used for teaching was Google Meet, with 88.1% of the teachers having a preference for it due to its friendly user interface. 45.2% of the respondents strongly agreed that they had basic computer knowledge and skills required to conduct online classes, but 45.3% showcased a preference for training in conducting online classes and preparation of material for online classes.

Various theoretic research does suggest that online classes tend to be more flexible but 59.6% of respondents strongly disagree with that statement. The effectiveness of online classes/lectures on the lives of students considering various dimensions like attention span, connectivity, social setup, economic background are also grey areas that need to be considered. 78.6% of the respondents disagree with the statement that online classes are an effective way of delivering lectures.

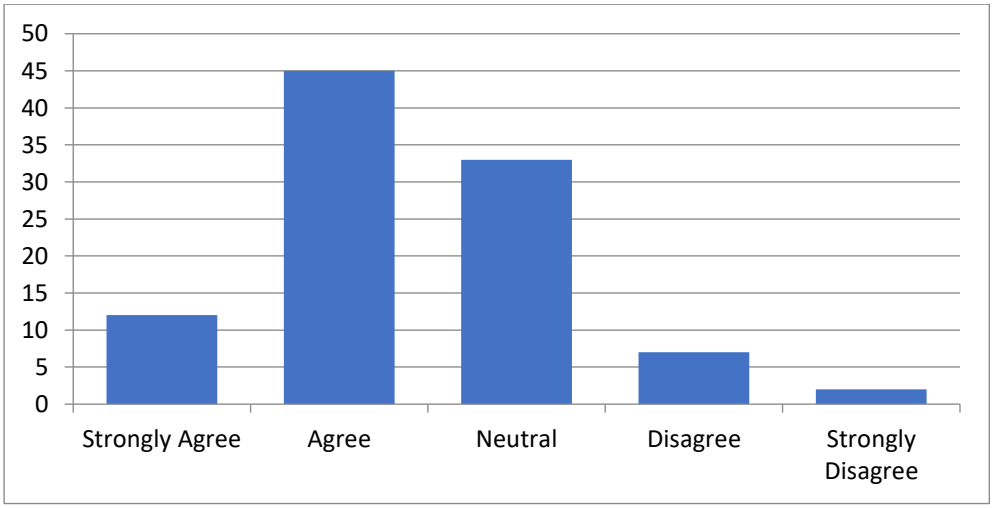

Fig. 1: Basic Computer Knowledge

Figure 1 shows that 45.2% of respondents have adequate computer knowledge and skills required for online lectures, whereas 2.4% of the respondents feel they need to equip the basic skill to be proficient in teaching performance. This Data draws a line that a good number of respondents have adapted to the changing times

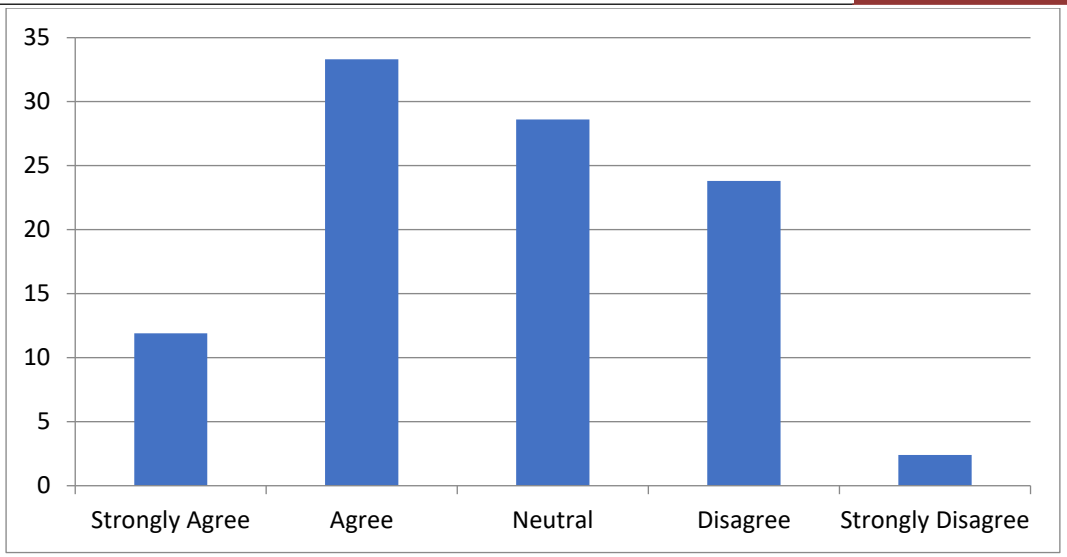

Fig. 2: Preference to be trained for Online Lectures

Figure 2 depicts the opinions of 33.3% respondents preferring to be trained to operate the World Wide Web, to use online tools effectively, as sometimes the prepared schedule has entirely dragged them down. The data further projects that with changing scenarios the upgradation of the mode of teaching is required. At the same time 23.8% respondents' view that they are well educated and informed about the various software's necessary for an effectual lecture.

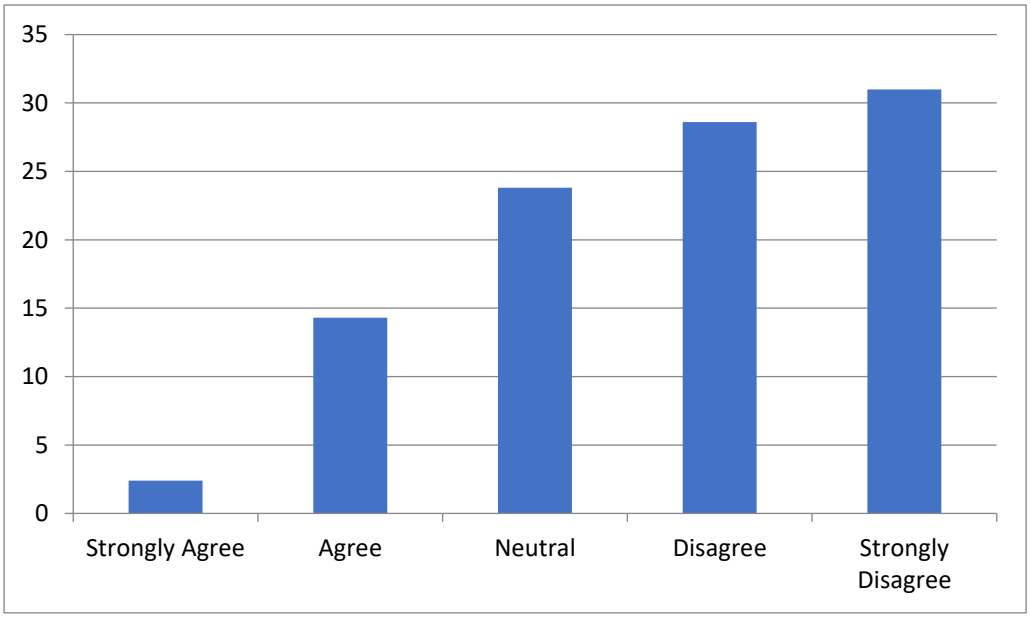

Fig. 3: Flexibility of Online Lectures against Traditional Lectures

Figure 3 shows that the respondents strongly disagree that the online mode of lecturing is flexible in comparison to the traditional mode. The online mode of teaching possesses numerous constraints such as the environment, the self-motivation of students, time management and the grasping capacity. Their experience has proved that technology is unreliable and break downs occur.

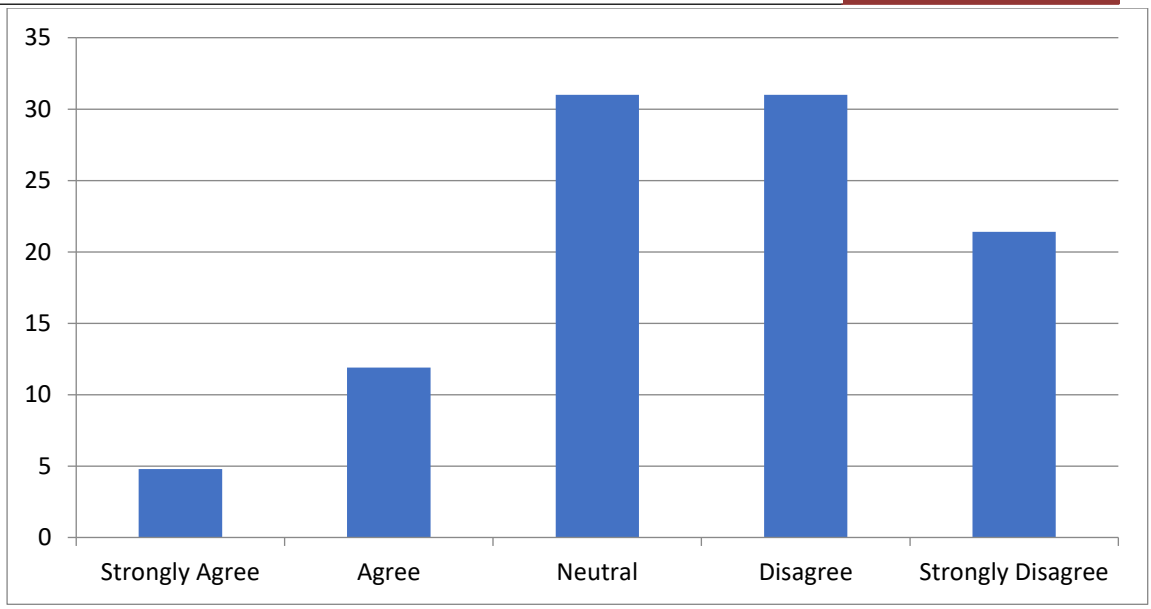

Fig. 4: Students' Motivational Level

Figure 4 shows that the motivation level of the students is lower in comparison to the traditional mode of teaching. The respondents feel that the students are highly distracted in the online mode due to environment and the gadgets. The study proves that the students should be self-motivated and should acquire time management skills to keep up with the pace of the course. Unlike the traditional classroom experience focus on the subject content can't be monitored. The traditional method of teaching is conducive form of learning as it builds a bonding with the teacher and the classmates.

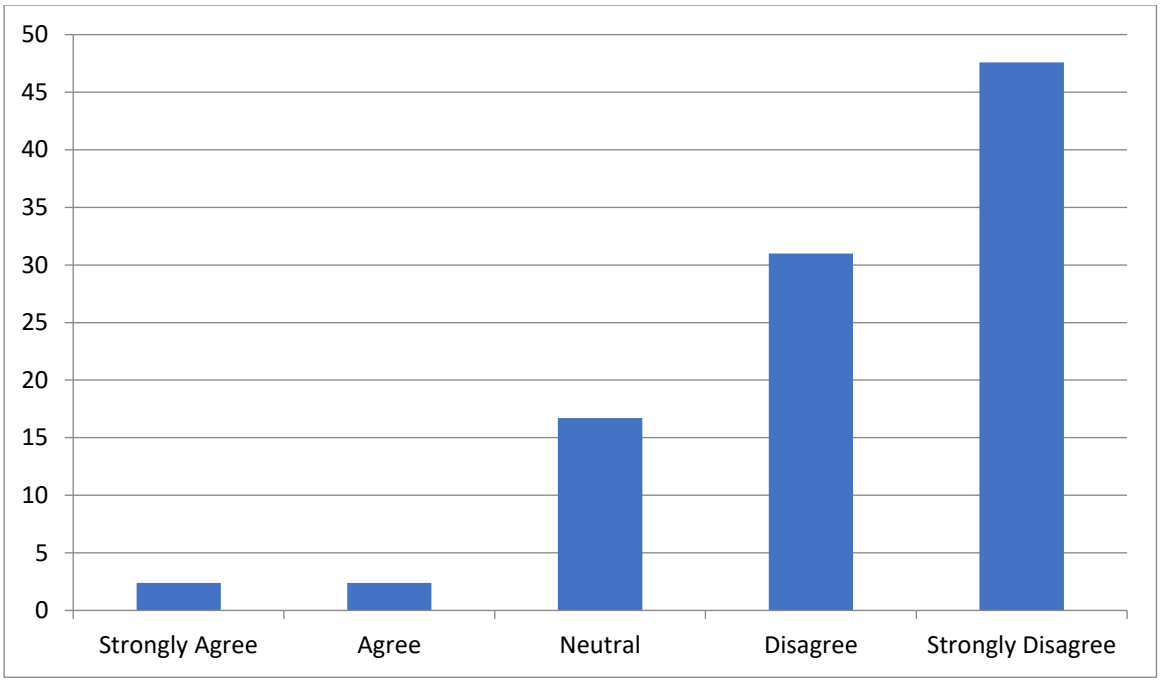

Fig. 5: Effectiveness of Lectures Delivered

Figure 5 shows the productivity and effectiveness of online lectures is a matter of concern. 47.6% of the respondents disagree with the subject. The online mode of teaching is prone to various obstacles caused by the environment and the mode of teaching equipped. This study has proved that the success of an online programme is inclusive of the qualities of an online instructor. The instructor should be appropriately, satisfactorily, modestly trained to deliver lectures.

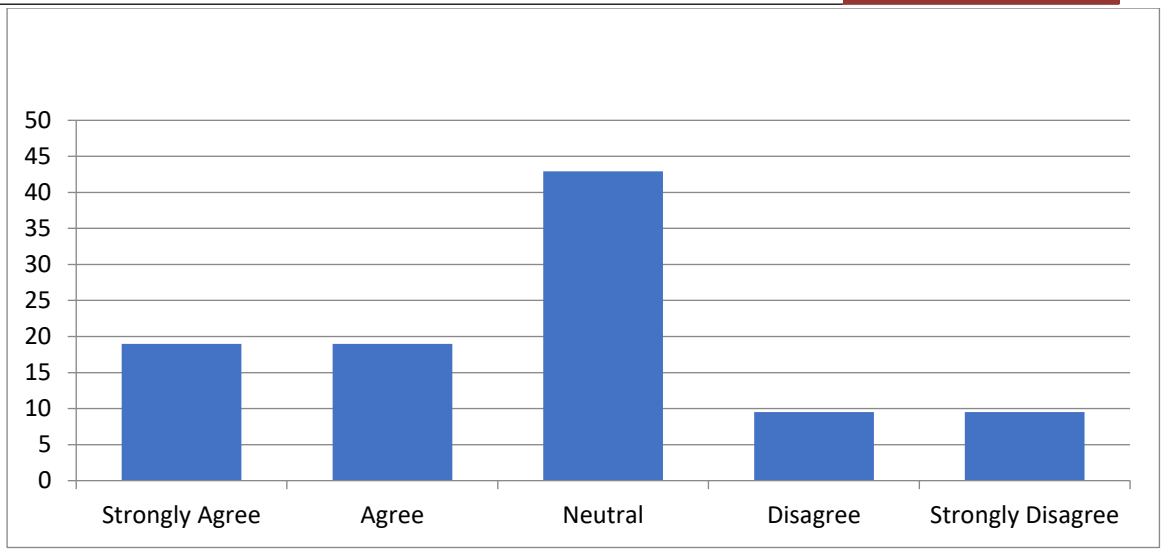

Fig. 6: Impact of Online Teaching -Student-Teacher Relationship

Figure 6 shows that the respondents have mixed views concerning the impact the relationship between the teacher and the student. But a considerable number of respondents observe that online lectures negatively impact the relationship between the teacher and the student. The online mode of teaching hinders the accompaniment and personal attention present in the traditional mode of teaching. The stress on the weaker students becomes a distant reality due to the distanced mode of teaching.

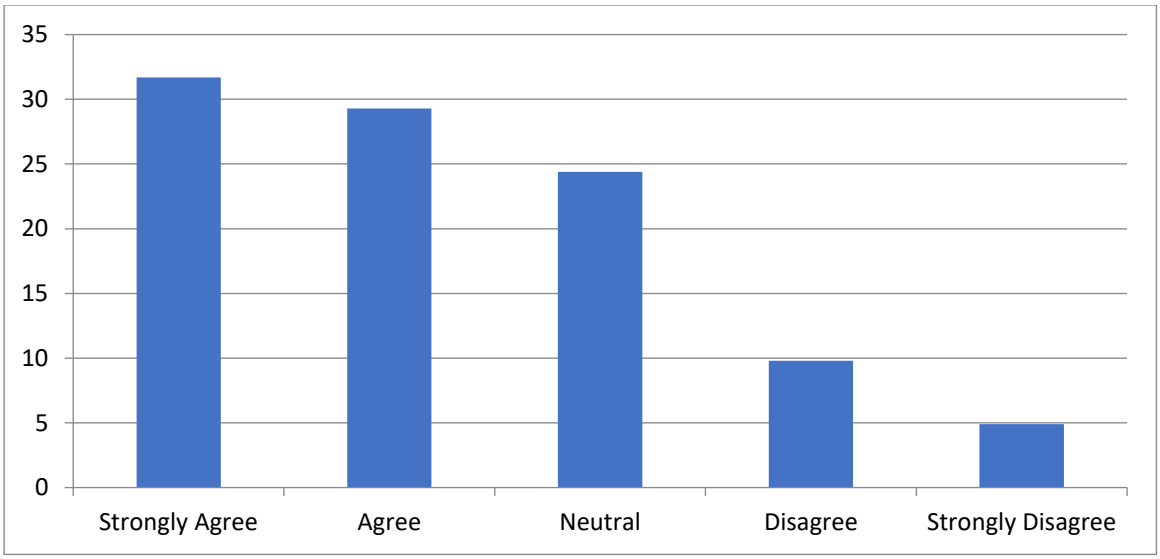

Fig. 7: Challenges for Practical Sessions Online

Figure 7 shows that the online teaching is not only ineffective, but also challenging. 31.7% respondents are of the opinion that teaching a practical session online is a herculean task because these sessions require tools and equipment, as well as a need for a physical instructor.

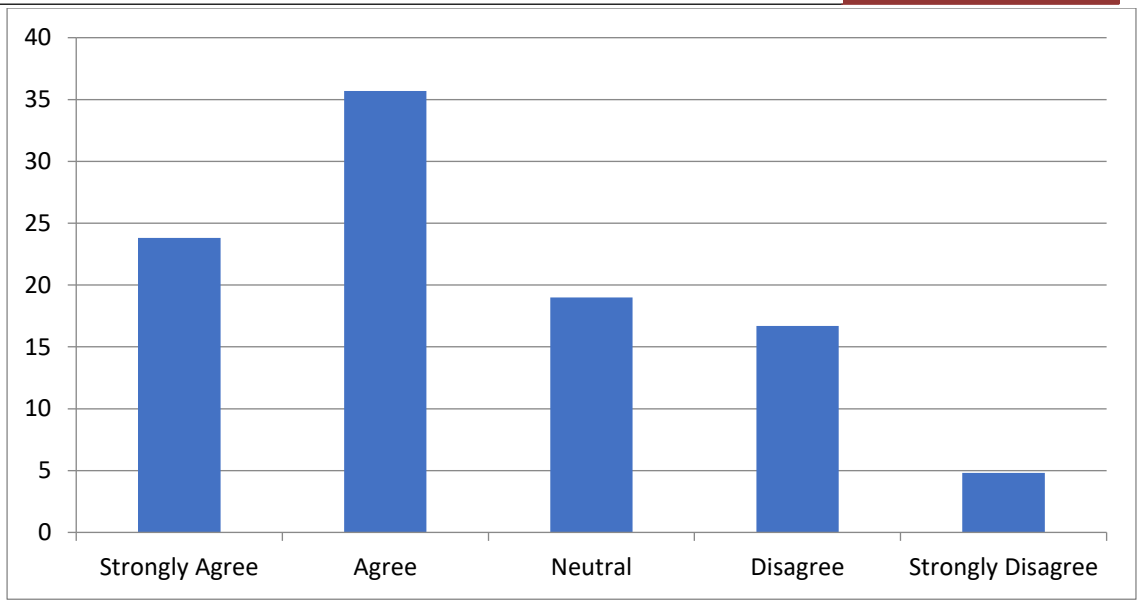

Fig. 8: Stress of Online Lectures

Figure 8 shows that the online lectures are highly stressful because they drain out the confidence level, mental health and emotional well-being of the respondents. The physical activity has gone down drastically and learners are exposed to the screen more than before. An approximate of 35% of respondents agree with the statement. The shift from traditional method of teaching has challenged many teachers to learn a new skill.

8. FINDINGS :

The survey suggests that the credibility of online teaching has to be analyzed through the lenses of a teacher as well, as they are the key role players in the learning process. Teachers lack the necessary training and tools to effectively deliver lectures. Social backgrounds, home environment, mental wellbeing, inaccessibility in regard to materials and methodologies also poses a problem. The motivation levels of students have also been hard hit, with the difficulties constantly rising in conducting math, science and practical classes. A general analysis of the survey report suggests that the cons of online classes outweigh the pros, especially in the present scenario.

9. SUGGESTIONS :

In the survey conducted, the predefined group of respondents were teachers, as they are the executives in the inclusion of students. In due course many institutions would experience a paradigm shift, encouraging, recommending online courses that ultimately witnesses intellectual diligence and accuracy. From this point of view, the uneasiness of the teachers and students as well, must be inquired. This way the success and fruitfulness of online instruction can be ensured and explored. Secondly the age group of children taking online classes matters. Never children below the age group of 10, as they have limited attentiveness and it's strenuous to keep them engaged and interested for a long time. Thirdly initiatives and course of action to be implemented to drill and to upskill teachers with the features of technology. Future studies could contribute in furnishing information, facts and knowledge that's essential for problem solving and making decisions.

10. CONCLUSION :

It's fair enough for parents to have certain expectations of progress in their child. Something that is significant is the improvement, betterment in the acquisition of skills, knowledge, enhancement in courteous behaviour, habits of punctuality, discipline etc. 'The effort to conceive what may be termed as "Education", in the light of changes in the society' (Dewey) [19]. So, one should adapt learner centred approach. Education is all about innovation and creation. Innovative teaching skills are necessary to facilitate students to take part earnestly in the learning process. 'Innovative pedagogy is a creative use of the right teaching methods and learning materials for students' benefit' [20]. Certainly, parents and

teachers play a vital role in shaping child's personality. They do contribute immensely and are proved responsible. And the easiest, convenient and the fastest mode to keep them connected with educators is technology. But the user has to be convinced of the purpose that is being served using technology. If technology adds value in the chosen context and leads one to an enhanced learning experience one must go ahead with it and use it. One should practice moderation and discretion, in the extent to which one uses it. Technology can be addictive and too much is too bad even when the baseline intentions are good.

REFERENCES :

[1] Lalani, Farah and Cathy Li, (2020). The Covid -19 Pandemic has Changed Education Forever from https://www.weforum.org/agenda/2020/04/coronavirus-education-global-covid19-online-digital-learning/

[2] Omar, A., Liu, L. C., Koong, K. S. (2008). From Disaster Recovery to Mobile Learning: A Case Study. *International Journal of Mobile Learning and Organization*, 2(1), 4-7.

[3] Wikipedia. (2021). Education, from https://en.wikipedia.org/wiki/Education

[4] Nali – Kali. A Step Towards Quality Education from http://teachersofindia.org/en/article/nali-kali-step-towards-quality-education-all

[5] Nali-Kali. A Changing Revolution from http://ssakarnataka.gov.in/pdfs/int_lep/nk_report.pdf

[6] Bakiyeva, Fotima, & Mirzahmedova, Nargiza, (2019). Efficiency of Online Training. *International Scientific Journal*, *11*(79), 56-58.

[7] Baytiyeh, H. (2018). Online Learning During Post-Earthquake School Closures: Disaster Prevention and Management. *An International Journal*, *27*(2), 215-227.

[8] Dhawan, Shivangi. (2020). Online Learning: A Panacea in the Time of COVID-19 Crisis. *Sage Journals*, 49(1), 5-22.

[9] Singh, V., Thurman, A. (2019). How Many Ways Can We Define Online Learning? A Systematic Literature Review of Definitions of Online Learning (1988-2018). *American Journal of Distance Education*, *33*(4), 289-306).

[10] Sinha, Radhika. (2020). How can Schools keep student engaged and happy during Lockdown? from https://www.hindustantimes.com/education/how-can-schools-keep-students-engaged-and-happy-during-lockdown/story-JRdiNoUUUa7qg3iIYkPK3J.html

[11] Affouneh, S., Salha, S., Khlaif, Z. (2020). Designing Quality E- Learning Environments for Emergency Remote Teaching in Corona Virus Crisis. *Interdisciplinary Journal of Virtual Learning in Medical Sciences*, *11*(2), 1-3.

[12] Colour Whistle Digital Marketing Services. Interactive E-Learning Web Apps from https://www.google.com/ search?q=various+applications+for+online+class

[13] Barth, Roland. (1990). Improving Schools from within: Teachers, Parents and Principals can make the difference. San Francisco: Jossey Bass Publishers.

[14] Hellmut, E. (1969). Gutenberg's Printing Press and Education of the Public. from https://evrenatlasi.org/en/2019/09/who-is-johannes-gutenberg-first-printing-press-and-publishing/

[15] Onorato, Michael. (2013). Transformational leadership style in the Educational Sector. *Academy of Educational leadership*, *17*(1), 33-47.

[16] Wang, Y. D. (2014). Building student trust in online learning environment. *Distance Education*, *35*(3), 345-359.

[17] Kebritchi, M., Lipschuetz, A., Santiague, L. (2017). Issues and Challenges for Teaching Successful Online Courses in Higher Education. *Journal of Educational Technology systems*, *46*(1), 4-29.

[18] Callaway, S. K. (2012). Implications of online learning: Measuring Student Satisfaction and

Learning for Online and Traditional Students. *Insights to a Changing World Journal*, *4*(2), 10-14.

[19] Dewey, J. (1968). The School and Society. Chicago: U of Chicago Press.

[20] Zhang Able, & et al. (2020). Effects of Innovative and Traditional Teaching Methods on Technical Students' Achievement in Computer Craft Practices. *Higher Education, Education Theory and Practice*, *10*(4), 41-50 from https://journals.sagepub.com/doi/full/10.1177/2158244020982986

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