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## A Paradigm shift in Pedagogy during Covid-19

(Students and teacher's perspective and level of readiness for digital education)

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### ABSTRACT

**Research Problem:** During covid-19, there have been several positive and highly acclaimed statements of educators regarding their incredible way of handling the recent condition through online pattern of teaching. Pandemic repercussions have enforced educational institutions to redefined and reorganized their teaching system. But the question of apprehension is whether this sudden digital transformation is adequate and sufficient, or it is a deception by institutions for academic fulfilment.

**Purpose:** There is a need to study the endurance of online system, whether it has satisfied or perplexed students and teachers. The study focused on the responsiveness and acceptance level towards digital learning and evaluated teaching pattern during covid-19.

**Methodology:** Data has been collected through snowball sampling technique with the help of two structured questionnaires. Sample comprised of 111 teachers and 224 students at colleges and schools of India.

**Findings:** Finding has revealed the unembellished facts that acceptance level of teachers and students for digital learning is not extremely high, but they found sometime satisfied. Existing research has documented both appreciative and antagonistic observations from both samples towards readiness for current digital pedagogy in India.

**Future research:** New learning philosophies must be grounded in alliance along with students and teacher's communication where every learner can contribute to all shells of education. Educational industry required to analysis their current pattern with regular improvised system.

Keywords: lockdown; online pedagogy; students; teachers; perplexed; learning

### 1. Introduction

In 2019 November, the unexpected emergence of COVID-19 has enforced for sudden locked of almost all industries. The effects of Covid-19 have been all over the world, and without any doubt it has disintegrated and will collapsed more in terms of its consequence on entire economy. Union Government of India has also taken decision to enforce lock-down initially for 21 days which has now continued from almost 75 days and still many sectors will be closed after removing lock down. The world has been going through with the phase of lockdown, where this lockdown is an attempt to control the spread of this serious disease i.e., corona virus. Government has been taking a due care and people are strictly recommended for self-isolation. All Industries are dealing with their own pace of survival, few industries are still working with due precaution and providing essential services to the world. However, in this hard reality, there are few sectors, which are carrying out their work relatively reverent such as hospital, FMGC's, IT, software, gaming sector,

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educational industry etc. Some sectors are totally shut and seating anxious without work while many sectors being working at home depending on nature their work. Educational sector is also among those few industry, which appears productive or at least in innocuous sector.

The COVID-19 contagion has given the hardest challenge ever for the whole teaching community. Education industry is the most determining factor for economic growth and one of the persuasive sectors, so it is a big responsibility of education industries to work collectively in this pandemic. The prematurely shut of all educational institution has come up with not pioneering solution to overpower this situation, where the online connection has been made with students to teach them with the same pace, Berberich, R. (2020). It is assumed that COVID-19 would have its own long-term effect on the whole education sector including stakeholders, educators, teachers, staff, researchers, school suppliers, travel agency, and most importantly the students' academic performance and their overall behaviour, Burgess, S., & Sievertsen, H. H. (2020).

In India, march- June is the period of annual exam in schools and colleges. During this crucial time, this sudden closed of university has affected the academic growth of students. But what it extends is still to measure, and Institutions are attempting their best in reaching to students and assisting them with appropriate knowledge in this uncertainty also by allowing them to stay at home without conceding on their educations.

During this closure, there has been a transformation in the whole system and structure of learning, and physical teaching, and shifted to digital teaching. Then, this online pattern was adopted by only few private colleges and schools. Although some of the government and low- budgeted private universities have tries to cope up and adapting by accessing the E-learning 'resolution instead of shutting down completely. But still half of the students in India are deprived of this new opportunity for learning due to no access of any technology, during this time. This contagion has malformed the era-deep-rooted, chalk-talk education model to single driven via being digital. This pandemonium of providing education has enforced administrations to make out the strategies for students and teachers factual involvement while measuring their level of dedication though ensuring wide-ranging e-learning keys and attempting the digital division.

It has been assumed that current digital teaching state can be relate with Nov 2016, when unexpectedly government announced demonetization, and there was a sudden bloom of digital payments companies overnight in India as they were at mainstream. Today, education technology companies are eager for an extra effort in the rouse of the coronavirus eruption and in putting efforts in all areas in quest of stop-gap keys to endure education.

Though India in this current hardest condition of Covid-19 contagion, quantitatively is graveling closer to universal education, but the quality of its teaching has been questioned. Apart from the concern of reaching every possible student for online education, one of the questions to analyse is whether the current online mode is truly even adequate or not. Today, major concerned is not only the course content design and timely execution but also need to study its impact on students and teachers who are dealing with online pedagogy tactic. Online education milieu differs intensely from the physical or traditional classroom state, when it derives to student's enthusiasm, interest, interaction, satisfaction, and collaboration (Bignoux and Sund, 2018). There is necessity to study whether this digital initiative is just one smart move to hold questions on education fraternity by deceiving mind of students and teachers on continuity of academic schedule or it will give long term productive outcomes to all stakeholders. This current paper has attempted to realize and evaluate the degree of constraints confronted by teachers and learners, as digital education in India has performed first time on this large scale, probably it is an enormous societal experiment by Indian education industry.

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## 2. Literature

Due to the contagion, United Nations Educational, Scientific and Cultural Organization, (2020) specified that all over the world almost 72% of world's student population (1.26 billion students) is severely affected by closures of the schools and university. In India, almost 321 million students get away from learning of school, which has extended students' knowledge gaps during lockdown. This pandemic has significantly disrupted the higher education sector also where large number of Indian students enrol in universities abroad like US, UK, Australia, and China. And will now hardly re-join until situation became clear and if this persists more in future, there will be a major decline in the demand of overseas international higher education, Abdullah, M., Husin, N. A., & Haider (2020). MRHD report that 35.7 million registered presently in higher education, currently they are seriously affected; about 12% to 15% of India's income comes from this education segment, 2019. Additional key concern is employment also, as corporate sector is in great lost due to current situation. The centre for monitoring India's economy estimate unemployment from 8% mid-March to 23% in early April, which is almost 3% increase in unemployment. So, this cannot be ignored, and emphasis must be to modify.

As, in April, UNESCO has emphasized on more possible alternative for whole world education system and suggested few strategies for restructuring learning. Globally, it has been noted, that more than half of entire number of students (nearly 82.6 crore learners) are not reachable for any teaching during this pandemic. Nearly 70.6 crore almost 43 % has no computer or mobile or internet at their home, at a time when digitally based distance learning is used to ensure educational continuity in most countries.

Presently analysis is vital for identifying this pandemic enduring footprint on education segment. The technology expansion in India is still a limitless pause as 260 million students are still juggling with technology (MHRD report and National University of planning and administration). The digital division in India specified only 4.4% of rural households are with computer and while 23.4 of urban households are with computer. Further only 14.9% rural households have poor internet connectivity which slow down their learning while 42% of urban households have good connectivity with internet. (Key Indicators of Household Social Consumption on Education, National Sample Survey, 2017-18). Data subjected that it is almost very large percent of students in inaccessible zone where connectivity is not possible to match by built-up mass and this caused sluggish pace in their knowledge. It is extremely hard to create virtual learning at single shot on short span of time. Everyone is struggling to reach expertise in technology, and there are lot of inconsistency, as students and teachers both are exploring online learning techniques and need constant assistance for digital adaptation and representations. In past 10 years, several Start-ups (Vedantu, BYJU'S, Un-academy, EduBrisk, Toppr etc), already had offered frequent digital courses, but then it was not that huge in practice which could be applied in regular school or colleges classes, it was more for extra knowledge, which barely students use in enormous way.

The new digital movement has upraised numerous apprehensions amongst educational professionals, even those at UNESCO & UNICEF. While some have expressed alarm about the potential dangers of internet exposure for young children, and old teachers. This is a serious concern if educational industry is thinking for digital shift after lock down too as it can alienate economically destitute for students who are without this mechanism and for teachers who found it difficult to teach through this mode of digital expertise. Online education has been more practiced and explored mainly from last two decade, where several factors were examined to known digital learning effect on students and teachers. Whether online learning is similar with traditional classroom in terms of knowledge transfer from teachers to students.

Smith et al. (2003) examined an experimental study to confirm the McVay's, (2000, 2001) survey for online willingness and uncovered two-factor structure for online readiness i.e., "Comfort and Self-management" while online learning. Several other factors were examined which influenced e-learning acceptability by academicians such as self-directed learning by Lin and Hsieh (2001) and McVay (2000, 2001), learning drive by Fairchild et al. (2005) and Ryan & Deci (2000), learner control by Reeves (1993), Digital self-efficacy by Bandura, (1977,1986 1997); Compeau and Higgins by (1995); Tsai and Tsai, (2003); Hung et al. (2010) and communication ability by McVay (2000) & Roper (2007), degree of interaction of students and teachers, Hay et al. (2004), flexibility by (Walbert, (1999); McCall, (2002); Schrum, (2002), meeting for knowledge settings by Wise et al. (2004); Kim et al. (2005)), timely proper feedback & strong online learning directions (Brittany, (2015) academic notion (Trautwein et al. (2006); Lim et al. (2007), technical proficiencies (Wagner et al. (2000), organized course content, trained teachers, innovative technologies (Sun & Chen, (2016). All factors have significant role in exhibiting a successful online class for long term.

There is a requirement to evaluate whether current digital classes are significantly able to set and match these factors or still education system is facing challenges while dealing online learning. At this time in India during last month of April 2020 several challenges and major internal concern were examined while dealing with the digital mode of teaching like logging issue has been found as many students using account with forged names & locking tutors from video calls, the internet acquaintance placed kids at the danger of online erotic misuse, creating fake Ids, keeping videos on but not physically present, fear for online exams, no face to face interaction & discussion, not able to give extra efforts for new pattern, non-seriousness about online studies and many more.

Also, other than students, it's been also assumed that if this situation continues and take a large shape than definitely faculties and staffs might face pay cuts, along with hold on bonuses and raises in fact many veteran faculties might asked to leave their job due to no expertise in digital forum. Few teachers, especially veteran is emotionally comparatively less adaptive and energized with current approach of education. (White, 2004 & Navarro and Shoemaker, 2000), Digital competency, enthusiasms, time and insight of student and Teacher leads to actual academic achievement. Even if, Teachers are running behind to design regular lessons and projects and lot of efforts have been put by educators for continuous improvements like free demo for exams, syllabus on high precedence, regularly mentoring over teaching material, assignments, worksheet, solved queries, videos, and explained questions, regular feedback by clearing doubts, but question of similar consistency still worried every students and parents even teachers too. Altogether, last month situation notified, an increase in the number of users on their platform specially a ringing alarm bell for private schools and universities. Academia could turn into a substantial prospect to acquire this new pedagogical expansion, in direction to reinforce the communal response to this tough challenge not only today but into the forthcoming phase too.

The question is still, what will be the situation after lockdown as in June country will be partially open for limited segments, but then again universities and schools are still suggested to close till august or may be after that too. Government projected guidelines stated that after the Covid-19 affects, it is been accepted that only 30 % student's attendance will be there in classrooms, Union Human Resource Development Minister (May 14, 2020). The major concern and an indistinctness are what will be the situation when universities and schools will entirely and spontaneously revive. So, whether the current methodology can be sustained for long term requires to analysis overall. So, beating the right prospect, it is of superlative importance where there could be full protection of the student's health despite the fact also certifying no erratic in their education, Sahu, P. (2020).

Warner et al. (1998) anticipated the notion of willingness towards online learning based on student's way of accepting content from teacher's instruction, students confident & trust approach while access and communicating online and student's ability to participate in self-directed learning. The literature has highlighted diverse factors which offers the elementary context to comprehend the teachers and apprentices' perception regarding online education.

**Research Gap:** This research has discussed a typology of diverse perception of teachers and students in relation to current digital learning mode and evaluate the skills along with the attitude of educators in overcoming with this pandemic. However, only few studies have attempted to understand the students and teacher's opinion and acceptance level for towards digital pedagogy in all over world. Current study will attempt to fill this gap, drawing insights from the literature in conceptualizing the problem, exclusively focusing attention on online learning at all level of classes from primary to higher education.

**Problem Statement:** There has been lot of appreciation for incredible movement of online classes by education sector during this lockdown, but the reality is still unclear, and its actual effects has not yet been evaluated in exact manner. There is no doubt that this new digital forum of teaching will continue at least till the full eradication of this virus. And many institutions are thinking for to continue this mode even after the effect of COVID-19. This new pedagogy can truly be long-term survival, or it is just a simple small measure to avoid this current situation. This paper would attempt to identify the actual picture of online class running during this lockdown period from the viewpoint of teachers and students where attempt has done to know whether It is truly quantitative or has qualitative impact also.

**Purpose:** Paper has attempted to investigate the acceptance level of students of all grade in India regarding their new online study pattern, how satisfied they are with this uncertain methodology. Also, along with that, the paper has also evaluated perception of teachers who are indulge in digital pedagogy during covid-19. Papers have also highlighted potential bottlenecks for success of the online learning in Indian milieu

**Research Contribution:** The research outcomes focused on the relevance of sudden implementation of digital learning because of unprecedented closer levied to control the COVID-19. Research experience of students and teachers will help to education sector in understanding the psyche towards digital

behaviour which must be taken into consideration while incorporating new online learning strategies more comfortable, approachable, and productive for every stakeholder. Post lockdown also the social distancing can become a new normal, where more aptness and promptness will be required towards digital learning.

### 3. Research Methodology

Study domain was teachers and students at different schools and colleges of all level who have joined online class during current lockdown. Snowball sampling was used for data collection where through electronic mode via. email and WhatsApp, two separate structure questionnaires were circulated, which was developed based on current digital pedagogy for teachers and students respectively. Analysis was done based on the sample of 111 teachers and 224 students to examine their perception regarding Digital learning conundrum during Covid-19. One questionnaire is solely dedicated for educators and teachers who are currently taking online classes. Questionnaire is based on six key factors i.e., teacher's self-efficacy, student's adaptivity, content delivery, student's anxiety, institution approachability, job discrepancy and digital friendliness. Second questionnaire was for students who are currently studying through online mode and it was based on exploration of digital simulation and resource, digital behaviour, and collaboration with teachers. Few unstructured interviews on phone calls were taken to accumulate opinions of academicians and teaching experts on current digital pedagogy authentic effect on students and teachers.

#### Research Objective:

- 1) To identify the teachers' acceptance level for digital pedagogy during Covid-19 Pandemic
- 2) To identify the students' acceptance level for digital study during Covid-19 Pandemic

### 4. Analysis

Two individual samples of teachers and students were interpreted objective wise based on frequency analysis.

**4.1 Demographic details of respondents (Teachers Profile):** Chart: 4.1 depicts the demographic variables comprised of age, gender, class level, number of students in one class, and teacher's year of work experience and current online portal.

Result are drawn from whole pan India, where highest respondent is from age group of 30 years to 40 years with 45.45% followed by age group of 20 years to 30 years (25.45%). While least response rate was from teachers of above 60 years with 1.82% only which was followed by 50 to 60 years age group teachers (5.45%). Respondents are found majorly with academic experience of 10 to 20 years (37.04%) followed by experience of 5 to 10 years (29.63%) in education sector while least response was given by teachers with 20 years of academic experience (1.85%). Majority of 54.55% responded that they are taking online class with average number of 20 to 50 students at a time in a single class which is followed by average number of 50-100 number of students in one class.

62.50% respondents are majorly taking classes of graduate's students of university followed by post gradates with 32% while very few with 5.40% found taking class of primary school students. Result of Survey on the usage of online portal depicts that widely with 64% are using Zoom app for conducting online classes which is followed by google meet and classroom with approx. 31% while very few with 1.80 % noticed using telegram or skype app. Although few teachers with 5.40% are perceived using Inhouse apps created by colleges and schools during pandemic.

**4.1.1 Teacher perception on Current Digital Pedagogy:** Chart: 1 to 7 below depicts the teacher's perceptions where frequency and percentage were measured, based on each factor different statements and evaluated on a three-point Likert scale as shown in following charts.

#### Objective: 1) To identify the teachers' acceptance level for digital pedagogy during Covid-19 Pandemic

1. **Teachers self-efficacy:** Results in chart 1 displays teacher's level of self-efficacy in relation to their skills and knowledge. It was noticed that 63.64% respondents believe moderately that online pedagogy has elevated their hidden skills of teaching while only 9.09% believe no upgradation through this pedagogy. 60% with moderate response rate found familiarize with digital teaching inventiveness while 40% strongly and enormously adapting with online pedagogy during Covid-19 Pandemic. 60% teachers exhibit frequently they are learning innovative teaching methods to elevate their skills while only 3.64% perceived rarely taking any initiatives for online learning. Only 5.45% respondents believe that they want this enhanced combination of online teaching with new styles after covid-10 effect also, while mainly with 69% want such integration sometime after lock-down. 52.73% respondents that they are occasionally capable to showcase same teaching skill in online class also which they used to showed in their

Chart 4.1 (Teachers Profile)

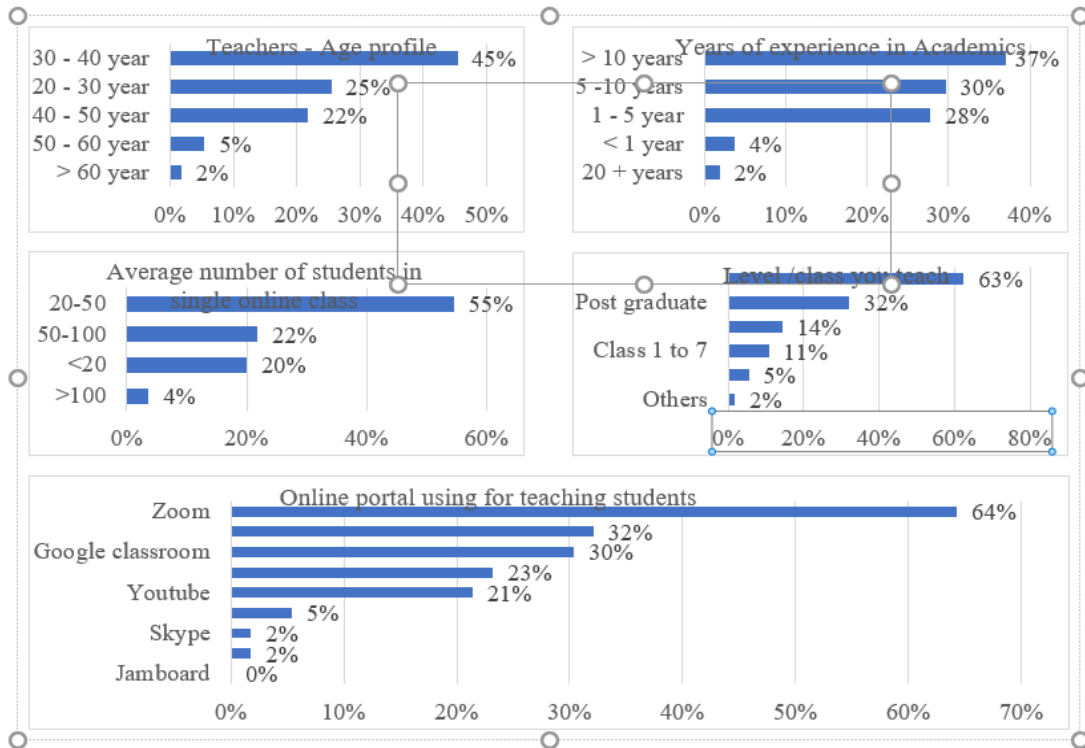
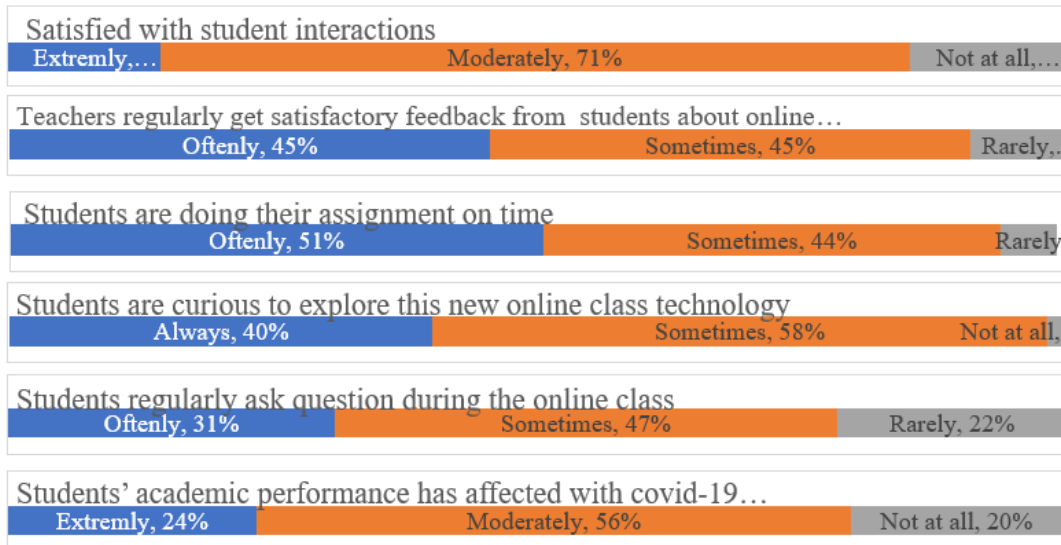


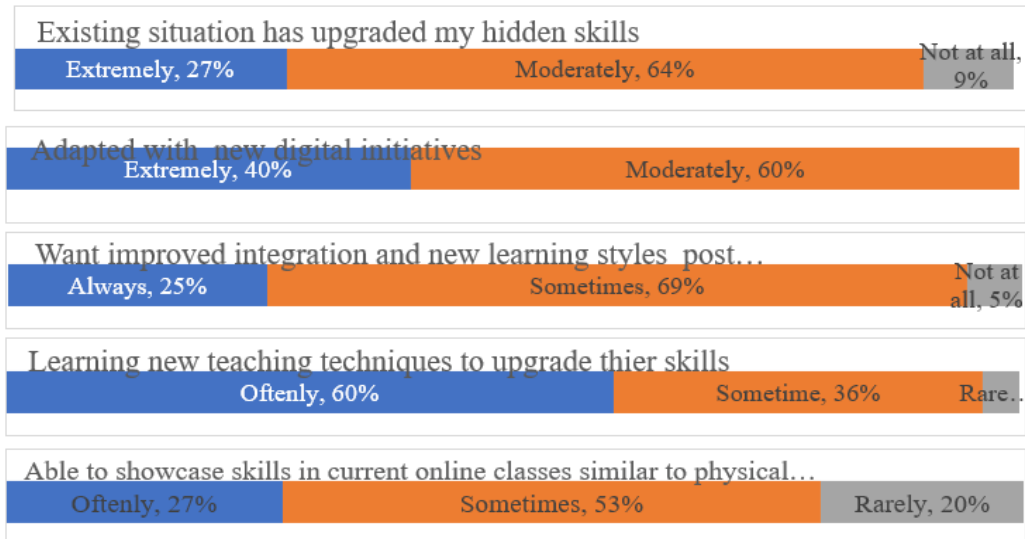
Chart: 1 (Teachers self-efficacy)



- Student's adaptivity: Results in chart 2 exhibits teachers' response on students adaptivity and acceptance level for online study technology and it depicts that commonly with 71% believed that their students moderately interact with them. Response rate with 45.45% exhibits that teacher frequently get reasonable feedback from their students about current online classes while very few with 9% rarely gets feedback from their students. Majority with 58% believed that students are sometimes inquisitive to learn this original teaching technology while 40% teachers believed that they are always wanting to explore online techniques. Teachers with highest response rate of 51% said that their students are frequently doing their assignment on time while only 6% stated that they rarely do so. According to teachers 22.16% stated that their Students' academic performance has extremely affected with covid-19 pandemic while widely with 56% stated their academic performance sometime get

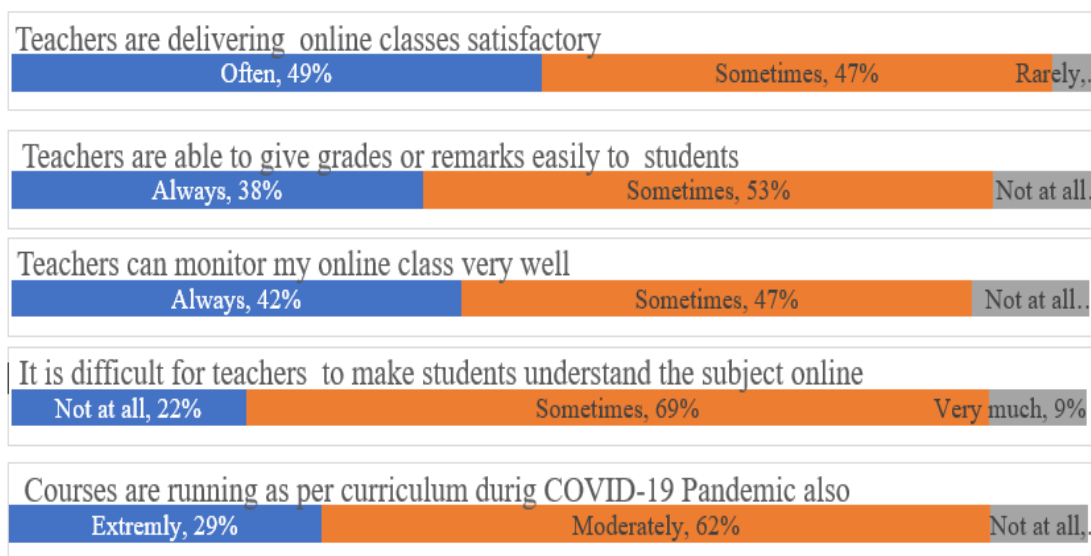
disturbed and 20% teachers still believe that student’s performance has not all impacted due to Lockdown. 39% teachers said that their students repeatedly asked questions related to their study while 21% stated they hardly question during the class.

**Charts: 2 (Student’s adaptivity)**



- Content Delivery:** Below charts 3, Unpredictably mainstream of educators with 49% perceived that they are frequently and highly satisfy with their lecture delivery during online classes while only 4% believed they are not satisfied with their lecture delivery. 38.18% teachers always able to give marks and remarks to their students while 52.73% sometimes able to give scores to their students. 42% always able to monitor their classes very well while only 10% believed that they are not good enough to control their online class. High response rate with 69.09% teachers found sometimes it is difficult for them to make students understand the subject online while only 9% believed not once it is difficult for them to understand the content to their students. 30% stated that courses are always running periodically as per curriculum during lock down too while majority with 62% stated that courses are somewhat going on track presently.

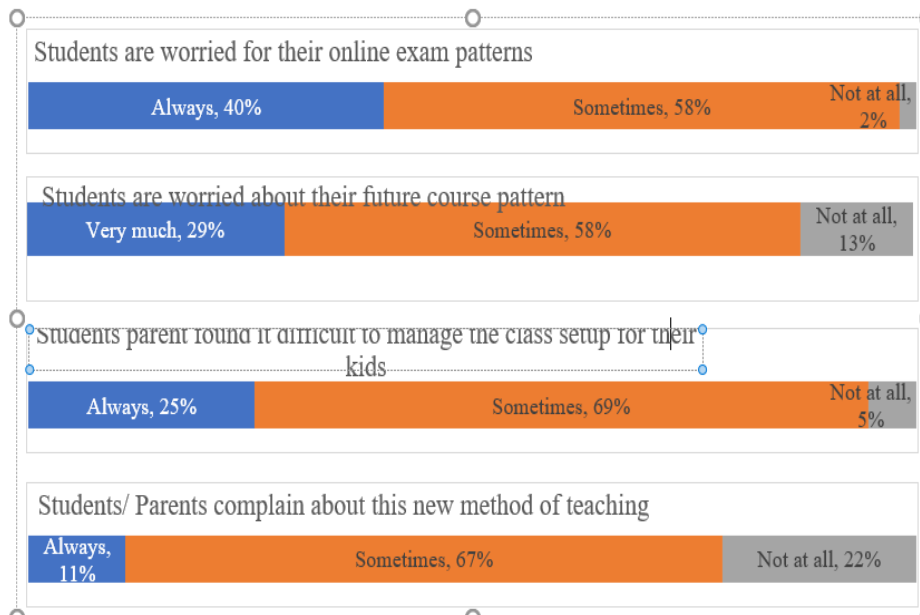
**Chart: 3 (Content Delivery)**



- Students Anxiety:** Below charts 4, depicts that 47.27 % teachers stated that their students are sometimes concerned about the online test patterns, whereas 40% believed that students are always anxious about digital exam pattern. There are very few students who are not at all

worried. Additionally, 58% teachers stated that their students are anxious to know about their future course design, while only 12.73 % believed that students are not at all worried how their future subject course will proceed.

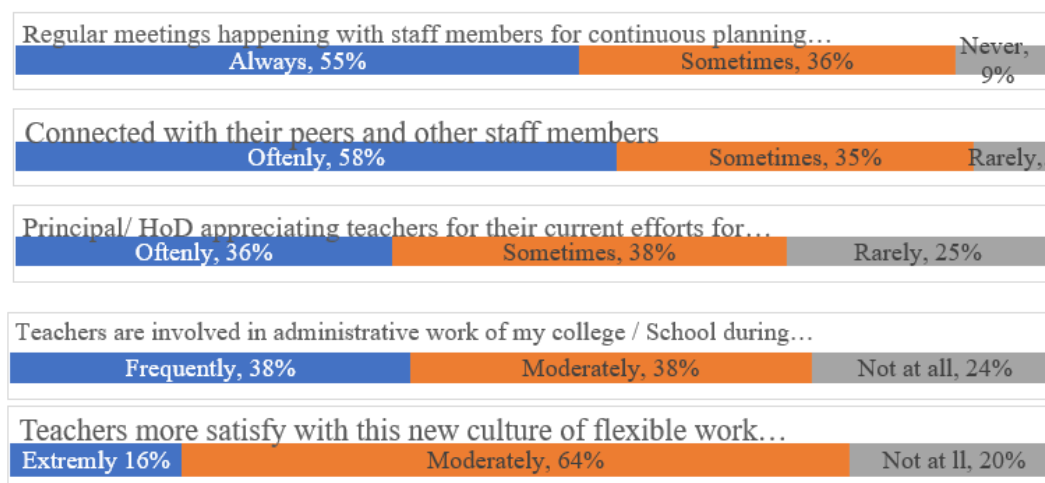
**Chart: 4 (Students Anxiety)**



Data represented that only 11% students and their parents criticize this new digital learning style and 67% believe digital learning do sometimes create problem while 22% have faith in this learning pedagogy and have no complains. Majorly 69% students and their parents sometime find issues in setting online class at their home and 25.45% always have issues in managing online class while only 5.45% faced no problem in online class arrangements.

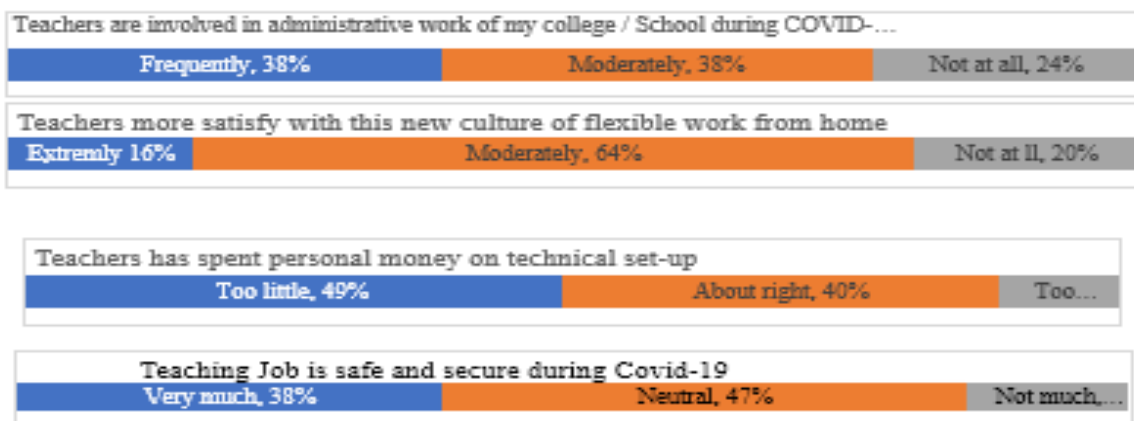
5. **Institution Approachability:** Research was also explored to know the teachers and their respective institutions connectively during lockdown. Data stated below in charts 5, that widely of teachers with 54.55% said that there is a regular meeting are going on with staff members for continuous planning and development in institution during lock down also. 58.18% exhibits that, they relate to their peers and other staff members frequently w.r.t the day-to-day activity. 25.45% perceived that their supervisor hardly appreciated them while working through online mode during lockdown while commonly with 38.18% exhibits they got appreciation sometimes for their extra efforts. Results also depicts that COVID -19 has no such impact on education industry as mainly of teachers with 38.18% still frequently involved in their institution administrative during this pandemic also. Only 20% teachers are found not at all satisfy with their new flexible work from home culture while majority stated that sometimes they are more pleased with this new work philosophy.

**Chart: 5 (Institution Approachability)**



6. **Job discrepancy:** Teachers job role has also prolonged and transformed during this lockdown, result in chart 6, depicts that 15% teachers found major change in their salary structure and 32% have moderate alteration in their income. Although majority with 53% perceived no impact in their salary. Almost 11% teachers have spent ample of their personal money to set up digital portal for online classes while 50% have paid extraordinarily little cost for setting new teaching operational system. During these 3-month period only from March to May, there has been several layoff and termination of employees in numerous industries. Data about education industries stated that mainstream teachers with 53% observed occasionally with positive attitude about their job consistency during this pandemic and on addition to that 38% are overly optimistic and not worried about their future career growth. While only 9.09 % believed that there could not be any change or downfall in their career due to Covid-19. Further 38.18% teachers are highly certain about their job security while majority are neutral in their opinion regarding their current job position safety

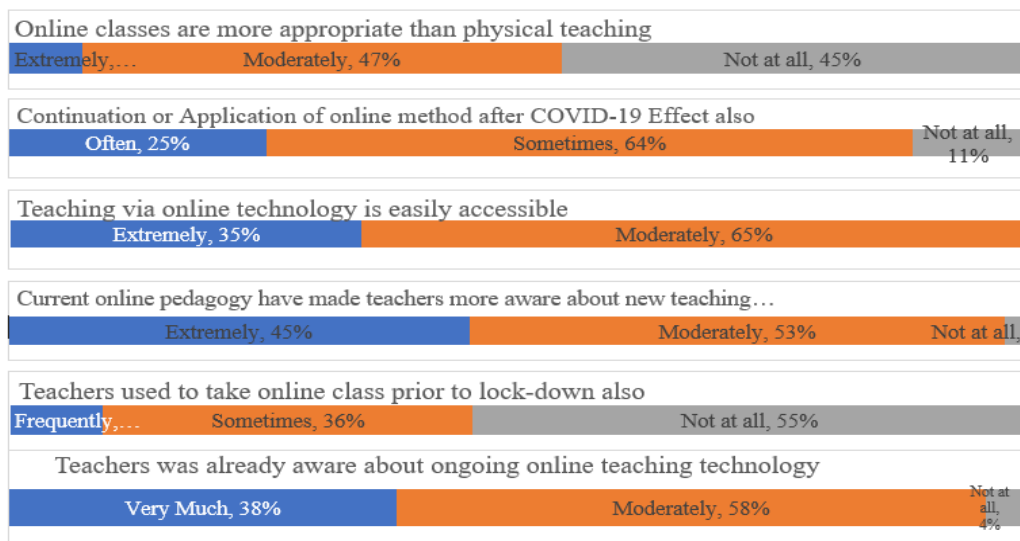
**Chart: 6 (Job discrepancy)**



7. **Digital Friendliness:** In chart 7, teachers sample response on digital accessibility during lockdown stated that only 7.27% teachers strongly believed that online classes are more suitable than physical teaching. While 45.45% never believed this current new digital pedagogy right enough in comparison to face to face physical teaching. Only 10% never want the extension of same online technique later COVID-19 upshot while 63.64% sometimes want to communicate through online application after lockdown. 35% professors seemed enormously simply to access the digital mode of teaching while widely with 65% observed discreetly easy to practice.

Very less responded considered that existing digital pedagogics have made not at all aware about new teaching approaches which they were unaware about in past. While quite a good number with 45.45% supposed that they have strongly explored with new ways of digital teaching which is followed by highest response, where with 53% perceived it sometime. Only 3.64% teachers were not at all aware about ongoing online teaching technology in past while majority with 58.18% teachers reasonably were aware about ongoing online teaching technology already. 54.55 % teachers never took online class prior to lock-down while only 9.09% frequently used to take online classes before lockdown.

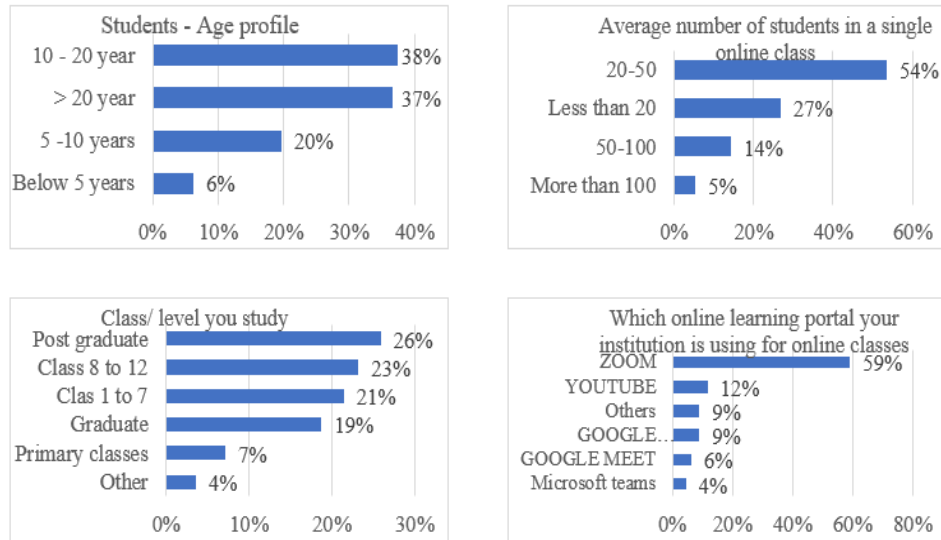
**Chart: 7 Digital Continuity and Friendliness**



**4.2 Demographic details of respondents (Students Profile):** Chart 4.2 depicts the demographic variables of studnets comprised of age, class level, average number of students in one class, and name of online portal they are using currently for online class.



Chart 4.2 (Students Profile)



Response rate was majorly obtained from students of age group of above 20 years who are in colleges while least response was from students of below 5 years (their parents have respondent on their behalf). Response rate was almost equivalent among postgraduates (26%), graduates (19%), class 8 to 12 (23%) and 1 to 7 class students (21%). Majority Students with 59% found using zoom app as online portal for learning and least with 4% were using Microsoft team. 9% usage was noticed from google classroom and institution other in-house portal for conducting online classes.

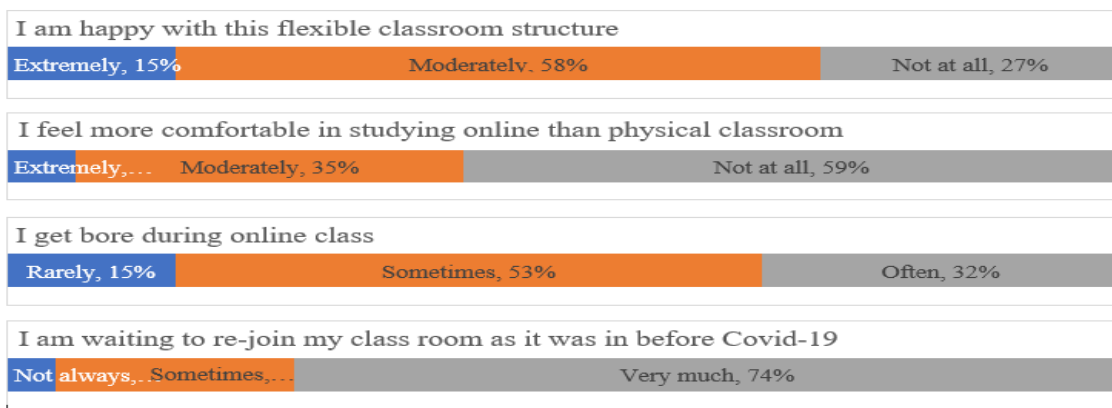
Chart: 8 to 11 below depicts the student’s perception where frequency and percentage were measured for each factor different statements and evaluated on a three-point Likert scale as shown in following charts

**Objective: 2) To identify the students’ acceptance level for digital study during Covid-19 Pandemic**

1. **Emotional wellbeing:** During covid-19, there has been a lot of stress and mental health issues observed among people. When student’s emotional status regarding their online class during covid-19 was evaluated, it was noticed in chart 8, that only 15% students are extremely enthusiastic for learning through new flexible classroom setting while 27% are not at all energetic while studying online and remaining majority with 58% students found occasionally excited with online learning.

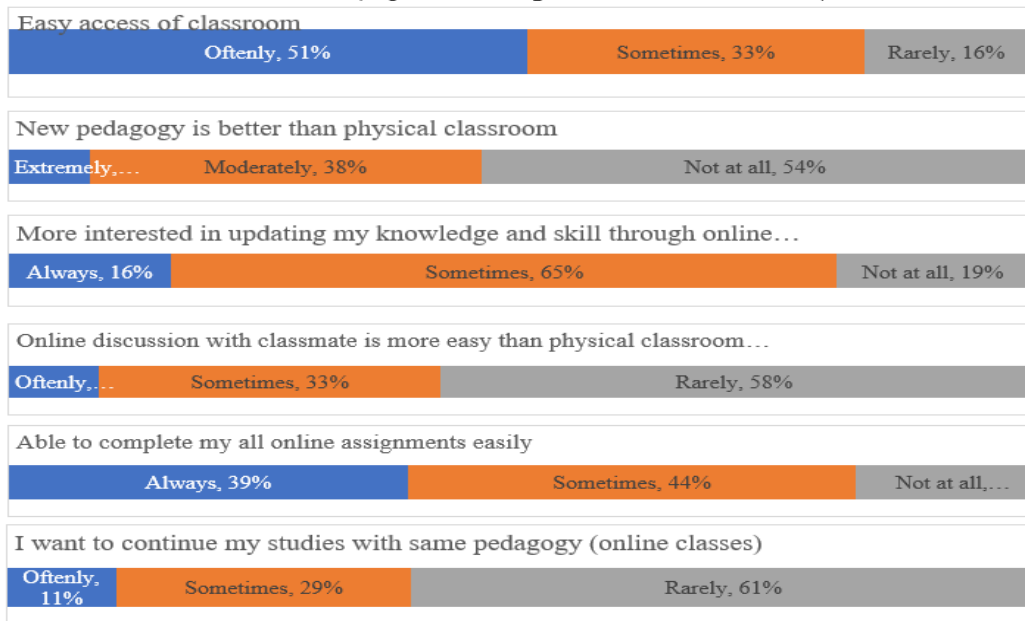
59% students are not all comfortable with online learning whereas only 6% felt relaxed during their digital education in comparison to physical classroom. 53% students are occasionally got bored also during their class while 32% students always uninterested in their online class. Physical classrooms has been extremely missed by students as highest number of students (74%) respond that they are very much waiting to return their class in school and colleges while only 4% said they are not waiting to go institution back.

Chart: 8 (Emotional wellbeing)



2. **Exploration of digital simulation and resource:** In chart 9, almost 51% students said they always find easy more than online class for studying, while only 16% cannot be able to use online portal easily for study. But then again 54% students still believed that new method of learning is not at all better than real classroom while only 8% supposed that new pedagogy is improved one than physical teaching space. High percent of students hardly find online discussion with classmate has more easy mode than physical classroom discussion while 9% do enjoy their online classroom debate more than real one.
- 3.

**Chart: 9 (Exploration of digital simulation and resource)**

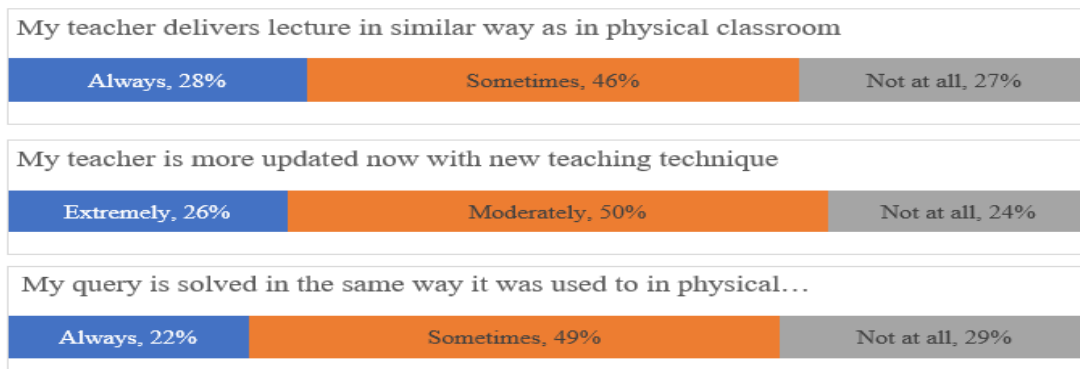


19% students not at all interested in updating their knowledge and skill through online mode while 16% always find online mode more interested in upgrading skill and knowledge. Mainstream students with 61% hardly want to continue their studies with online pedagogy while 11% believed that they are always more ready for online classes to continue. But it is also found that 40% are good enough in completing their all-online assignments easily while 17% never able to do their digital assignment on time but majority of students with 43% do their online task on sometime basis.

4. **Collaboration with Teachers:** Result in chart 10, about the teachers and students' level of connective revealed that almost 27% students perceived that that teacher never delivers lecture in similar way as in physical classroom. Also result depicts same amount of excitement in students stating that their teacher always addresses in identical means what they used to had in their physical classes, while 45.54% believed teachers sometimes do deliver content in same way.

26% students perceived that teachers are now more efficient while teaching through this innovative education technique and 50% depicts that teachers sometimes found more updated themselves while taking online class. Results stated that 29% students query are not solved in the similar way which it was used to in physical classroom while 22% believed their teacher handle questions in same way.

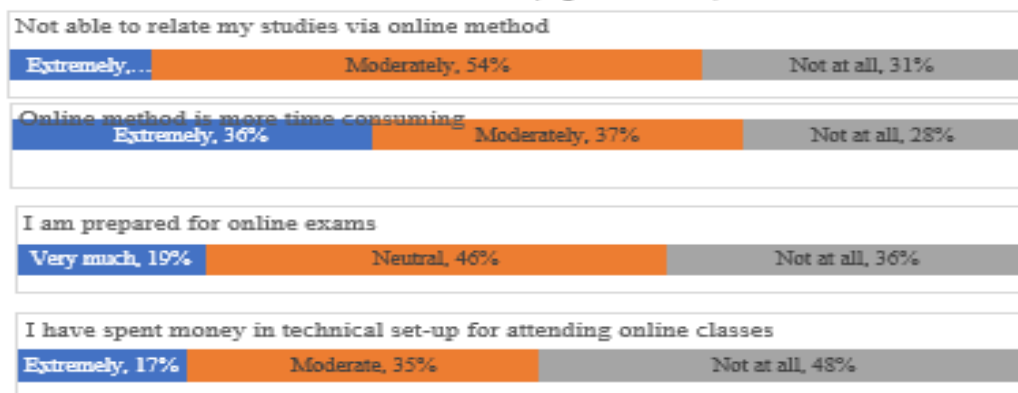
**Chart: 10 (Collaboration with Teachers)**



**5. Digital behaviour:** Students digital friendless was examined in chart 11, and results exhibits that 31% students can relate their studies via online method while 14% always are not able to relate.

36% students perceived that the online method is very time consuming than physical classroom whereas 18% believed online method is not at all take much time. 36% students perceived that they are not at all ready to give exam through online mode. Whereas 19% believed they are confident in giving exam though online mode. Largely students with 48% have not at all spent their personal money in technical set-up for attending online classes and 35% have invested some money while only 17 % have paid large amount of money for online class setup.

**Chart:11 (Digital behaviour)**



## 5. Finding and Discussion

**Research findings** showed that teachers with age of 30 to 40 with more than 10 years of experience are taking highest number of online classes. While Students sample depicts that 10 year to 20 year along with above 20-year students found with highest response and they are availing more online classes which includes Postgraduate and schools' students of class 1 to 12. Class size at single session is preferably observed between 20 to 50 and Zoom application has considered more than any other portal for current online classes from teachers and students' perception.

Large number of teachers were occasionally efficient in adapting new online pedagogy and more than 35% observed extreme on the scale of teaching efficacy, which depicts they carry highly acquired and adapted attitude for online teaching and showed skills while performing onscreen. Self-efficacy is very significant factor for e-learning adaption covered in many past researches by Compeau & Higgins (1995); Eastin & LaRose, (2000); Tsai and Lin, (2004) and Hung et al. (2010). According to teachers, maximum of them revealed moderate to high level of self-efficacy towards adapting and upgrading teaching skills at online platform during lockdown in India. Teachers are inclined to learn new teaching tactics for more improved integration. When level of digital friendliness was measured, the teacher's response from moderate to not at all depicts that they still perceived physical teaching better than online mode. Although some-time to extreme response exhibits that digital teaching is accessible and new pedagogy has made them aware about their hidden skills which they were unaware. Further extensively teachers specified to continue digital mode of teaching often even after COVID-19 effect.

Moderate to high response for content delivery exhibits that teacher is reasonably finding themselves satisfactory while delivering lecture, giving grades and feedback to students and their subject courses are running as per curriculum during lock down also. Also, good number of teachers perceived that they are always able to monitor their class and moderate to never response depicts that teacher sometimes get difficulty in making students understanding the content online.

It also evident by teachers that students can moderately adapt digital learning, and Students are good enough in completing assignments, give feedback to them and observed always curious to learn online. Students competence of interacting with teachers, encourages their rate of intellectual capacity, Picciano, (2002); Hay et al. (2004) & (Arbaugh, (2000). Although few teachers rarely felt that students are interactive and ask question in class and their academic performance getting affected through online class, Adam et al, 2012. Students level of anxiety also spotted sometimes to extreme where they looked worried about their online exam and future course pattern. Largely students and parents moderately complain about the new digital pedagogy and they detected with difficulty in managing class online. Attractive and relaxing mode is required for students to make them more digital friendly, (Wagner et al. (2000).

Extensively teachers exhibited frequent approachability with their respective institution, consistency pretend from moderate to always in online meetings for constant planning and development in institution, (Soo & Bonk, (1998). High number of teachers are often supposed connected with their peers and other staff members for academic purpose and few are still regularly involved in administrative work, they are getting prospects of engaging with colleagues for setting digital backgrounds, Wise et al. (2004); Kim et al. (2005). Even though not much teacher get appreciation for their current extra efforts towards digital teaching from their head of the department and very few teachers exhibits satisfaction with this new flexible work culture from home. Though mainstream spending their personal amount to some extend for setting up digital portal at their home. Low level of work discrepancy obtained in teachers' job due to covid-19, widely exhibits no change in their salary. Primarily teachers are moderate to extremely optimistic with current situation in terms of career and exhibits their job as safe and secure during Covid-19. Shih *et al.* (1998) and McIsaac *et al.* (1999), when student was asked about their emotional connection with digital class, very few found extreme happy with this flexible classroom structure, while widely get sometimes to always bore during online class. Mostly students not at all feel comfortable in learning with digital mode and they are waiting to re-join their physical class after lockdown, Yong, and Wang (1996); Brewer and Erikson, (1997).

Level of exploration of digital simulation exhibits that students often able to access online class, and sometimes interested in updating their knowledge and skill via digital mode, Wagner *et al.* (2000) and majority have not spent much money on online setup. Largely students, sometimes to always depicts they are constantly able to complete their assignment on time. Broadly specified that they rarely supposed online discussion is easy with classmate and mostly students do not feel that new pedagogy is better than physical one and they not often want to continue to study through online classes.

Students level of collaboration with their teachers depicts that teacher sometimes delivers lecture and handle students query in similar way as in physical classroom, also according to students their teacher occasionally found more efficient with new digital techniques. Students behaviour towards the online technique exhibits that sometime only they can relate their studies through online mode, and various feels that online mode is extreme time consuming also. Very few percentages revealed they are ready for online exam which is distinct from the self-directed skill for learning (Guglielmino, (1977); & Garrison, (1997).

### **Discussion:**

This research was conducted with the intention to evaluate the level of acceptance towards technical and behavioural challenges while conducting online classes at home during lock down from the teachers and student's perception of India. Analysis of teachers and student's perception was done regarding the level of quality and similarity digital pedagogy with physical pedagogies and how effective online education appears during lockdown. Paper has also measured whether the Covid-19 has come as a blessing for educational industry or it is just a surplus of time and efforts without productive consequences. Findings revealed that although teachers and students found sometimes online pedagogy as useful in terms of flexibility and suitability and are coping to teach and learn respectively through online mode due to raise of COVID-19 pandemic, Moore and Kearsley (1995), (Chizmar and Walbert, (1999), Petrides, (2002). But very few perceived that online is extremely productive in terms of online accessibility, content comprehensiveness, course structure, class follow up, students query and teacher's assessment and digital competency including communication talent, emotional connection among teachers & students. Although few past research claimed no noteworthy variances in satisfaction of students among digital class & traditional class culture, Nenagh Grieve (2014).

Through the interviewed, it has been observed that small kids are weak and finds issues in understanding the class activities even in the face-to-face physical classroom than how a teacher could make value-oriented learning on computer screen. It has been stated by many parents that online learning hardly makes logic for small kids of primary to 3-5 class. Parents also not looked feasible enough to cope up with their kids during online classes due to their own workloads, Wang, G. & Jiang, F. (2020). Sudden pressure of studying continuously on screen has also resulted physical pressure. Students looked hesitating to answer tough questions by giving reasons of technical issues in their computer system. In physical teaching students responds through non-verbal signs, which seemed as appreciated informal feedback, is a major missing in online class. Although, sensitive analysis depicts that teachers are ready to learn new technique and upgrading themselves for better outcome for students, but many teachers are facing indiscipline issues and perceived themselves difficult in monitoring classes, which it has raised the student's attrition rate, Klingner, (2003); Kim *et al.* (2005). Results of digital belongingness stated that it is not only students, in fact many teachers are technophobia and found difficulty in digital communication, content delivering in the same way as in physical class, which is particularly important for learning, McVay (2000); Roper (2007). Teachers has suddenly changed their study plan and are pressurized to make it effective during conducting online meetings. Several teachers also professed it is difficult to interact students without seeing them and does not get idea of students are struggling with.

Students intensive growth through online is still impossible in India, they required right way of disciple and motivation techniques without getting distracted with other online modes. Teachers must make out the ways to increase student's enthusiasm with sincerity to maintain the quality and similarity with real classroom for long term, Deci & Ryan, (1985) and Ryan & Deci, (2000). Learning is a biotic course of moving the mind (Zull, 2002), empowering pupils to visualize manifold outlooks on subjects and complications (Mezirow, 2000) and pushing pupils over such a dynamic method that includes acquaintance, metacognitive combination and sensitive application is difficult to handle in this short span (Fried, [learningwithmindandheart.com](http://learningwithmindandheart.com), 2020). In a deep way, while comparing traditional or physical education disciplines, it is obvious that one could become bias. Indian teaching paradigms predominantly considered as most significant and appreciated which based on objectivist paradigm. Practically, "if we can't touch, count or see it, it seems unreal". Subsequently online method would ignore the monarchy of human contacts, character growth and self-invention (Baxter Magolda, 1999, Fried, 2016).

As current research has documented both appreciative and hostile observations of faculties and students towards effectiveness of online education. Across 20 nations universities are initiating their best to provide a timely plan of this sudden mid-period teaching retorts to this pandemic. Perception of education providers have been diverse from being positive response to even undesirable response on new pedagogies. However, keeping the recent evolution track of digitalization in mind where not only college level but school level students are emotionally and enormously connected with digital platform for games, music, movies or what not more. As, it is claimed in few past studies that digital learning if considered appropriately, then it could also be effective in same way as face-to-face learnings, Tuan (2015) & Adam *et al.* (2012). During this pandemic, collaboratively efforts of whole stakeholders including educators, administrators, teachers, students' along with parents where they should come out with open handed and prepared themselves for digital learning to overcome this pandemic effect on students' knowledge growth. No doubt, currently there is the sincere call required to maintain this campaign by reframing more strategies and prioritizing unified learning to regain education at all level. There is need for solitude tactics on campus and rapid curriculum redevelopment for fully online offerings in short span of time.

Several online platform must made easily accessible within everyone reach all over across in India. But still literature result depicts that it is tough to carry same form of teaching to every student at the similar level - specifically to children of rural india. More inclusive learning solutions, exclusively for key vulnerable and demoted areas, need to be developed with right source of technology. India is expected to have rapid rise in usability of mobile internet, can reach 85% homes in 2024, as, technology is permitting more universal access and more personalised education even in the remotest zone of the nation. India has always proved to get over in all bad times through countless efforts. Education industry has its own significant role in the economic development, especially during covid-19. Living with the reality that online will be one of the highest sources of communication even in college and schools. So, there is a requirement to welcome technology by reinforcing current education models. University and schools' immediate actions are important to ensure steadiness of education. More open-source solutions and learning management software should be adopted for teachers to conduct classes.

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## 6. Recommendation

Research finding revealed that all Institution must give proper training to every generation teacher; a special training should be there for veteran teachers. Institution should restructure their curriculum as per comfortability of students and teachers. Teacher must get regular appreciation for their extra effort while taking online classes by their seniors in college or school, as teaching online is not that easy as it appears and must upsurge in collective work. Educators must develop and design subject content for interactive session with new innovative solution like daily activities, quizzes, test, assignments, flipped tutorial room model, online exercise for queries, teleconferencing in in-person lectures, showing videos etc.

Through interview many students recommended that government must also focus on student's inactive cross-border undertaking, easy ways for submissive students and must alter policy for student employment also. Though, several learners showed online education as more challenging than face to face class because of the technical constrictions, little interest, low satisfaction, boredom, and less observation of the teachers, (Koumpouras, 2020). More promptness in answering students and collective emotional state is required specially to school students. more student retention, superior discipline, and need of self-motivation & time commitment for education, these aspects must be measured while evolving an online learning for creative outcomes. Students must also work together with other co-learners to increase interaction and participative attitude. So, all the educational institutes need to prepare for shifting majority of the course content through consistency in designing course for e-learning platforms and modify the course structure and curriculum suitably, (Swan et al. 2000).

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## 7. Conclusion

Covid-19 has disrupted whole world and laid entire universe on vigilant mode. Educational industry is also suffering in terms of their students' academic growth and as of this momentary cessation, current invasion had surely disrupted the whole academic calendars at all colleges and schools over a long time. Although among few other industries, education sectors are still attempting to be productive during this pandemic and pursuing to work for their student's constant growth. It's evidently a period of catastrophe in whole world, where due the closer of several companies, businesses and universities, the retaining structure has turn out to be a need of an hour, likewise restructuring the online tutoring is the only key for endurance of existing education system, Bozkurt, A., & Sharma (2020). Currently, education status quo excludes multidimensional and physical appearance interface. Even though government and many private institutions are putting efforts for managing with this uncertainty through constructive contribution in nourishing rigorous education in India. But result of present study exposed a vibrant need of multi-pronged approach to regain the loss of students as well as teachers. Context responsive development of educator is required to build a strong Indian education structure for all short as well as long term uncertainties.

This paper has attempted to identify the challenges and problem faced by teachers & students and their level of acceptance or readiness for current digital pedagogy. The study uncovered the statistic that shifting to online platforms for covering curriculum by institutions, have at least not blocked the knowledge growth of students. Teachers and students have both proved to be a significant learner during pandemic up to some extent. Teachers/Educators should better motivate and train for more exclusive learning pedagogy, need to redesign instruction pattern for small kids specially in times of games, likes and lot more attractive media gadgets. Hard core intensive training should be given to veteran's teachers who still hesitate to use online as platform of teaching. Universities regular assistance and motivation can also boast morale of teacher to pursue their respective students more. Due care must be taken of mental health of teachers and students, Sahu, P. (2020).

Students emotional wellbeing for online is still not strong, they want physical class as soon as possible, exploration of digital simulation and resource is also found less among students, Collaboration with Teachers is also depicting sometime worthy and digital friendliness and behaviour is also not strong. Teachers content delivery, self-efficacy and digital friendliness and its future endurance level found almost reasonable but readiness for this new change in near future is still not too high. Student's adaptivity according to teacher's perception was quite in positive frame, but student's anxiety while learning online is still high. Not much change found in teachers' approachability with their institutions as continuity of work found high as per teachers' perception during pandemic too. During current period, mostly teachers are found satisfied regarding their job security and not much job discrepancy found among teachers.

Although current digital movements have surely instigated an amount of nerve-wracking, but then again it has also incited novel example of education revolution via digital intrusions. It has created a silver coating on a dark cloud in view of the inactive step of transformations in academic organizations. It has endured with new learning tactics and has fixed institutional preconceptions about old teaching methodology. Universally COVID-19 has become a key reason, as comparatively in very short and instant notice, all schools and colleges has followed digital as creative teaching practice, through different mode like, Microsoft Teams, google meet, Zoom, institution own app, live class with Blackboard and many other platforms.

Although, online education is nothing novel but previously it was more for extra knowledge, apart from regular classes in schools and colleges for more imminent knowledge. Today, various productive and extremely acclaimed proclamations of educators about this rapid means of dealing the existing state over digital learning has proved that the proportion of digital connection has raised highly due to Covid-19 for regular classes too.

Currently, it may be too initial to remark that in what way Covid-19 found as blessing in disguise for educational sector and how long students and educators will deal with current digital pedagogy as they believed several constraints which need to reorient to discourse timely. All through in this unprecedented status quo, finding revealed that recent innovative digital learning solutions has possibly supported to bridge the knowledge gap for students and teachers are seemed satisfied with their current pedagogy work profile. Online learning still seems hard to deal for several students specially schools level students. Therefore, post pandemic also blended learning should continue at some level along with physical learning. Online platforms could reach for embracing education at all circumstance if it is being restructured & reconsidered according to teachers and student's preference rather than imposing the new system in order to achieved application target.

**What is already known about this topic:** In India, online education has always been preferred only for extra knowledge by students, but due to current pandemic every educational institution has shift their mode of teaching on digital pedagogy for conducting regular school and colleges subject courses. In India, digital pedagogies have never ever been explored on this huge platform, so it is very imperative to know its level of significance in terms of student's growth and teacher's development.

**What this paper adds:** This research has discussed a typology of diverse kind of perception of teachers and students in relation to current undertaken and evaluate the skills along with the attitude of educators in overcoming with this pandemic. Current study will attempt to fill this gap, drawing insights from the literature in conceptualizing the problem, exclusively focusing attention on online learning at all level of classes from primary to higher education.

**Implications for practice and/or policy:** Papers have highlighted potential bottlenecks for success of the online learning in Indian milieu. Research experience of students and teachers will help to education sector in understanding the psyche towards digital behaviour which must be taken into consideration while incorporating new online learning strategies more comfortable, approachable, and productive for every stakeholder.

**Data Available:** Due to the nature of this research, participants of this study did not agree for their data to be shared freely, so supporting data is not available. Even in some case, the few data of paper that support the current research findings could be accessible on reasonable request from the corresponding author, [SS].

**Ethical Consideration:** The research participants have not subjected to harm in any ways whatsoever. Due respect for the dignity of research participants was prioritised with their full consent prior to the study. The protection of the privacy of all participants was ensured. There has been adequate level of confidentiality of the research data should be ensured. No deception or exaggeration was made regarding the objectives of the study.

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