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MESSAGE

I am extremely delighted to know that Orange City College of social work, Nagpur is organizing one day NAAC sponsored National Seminar on "Digital Intervention in Teaching, Learning and Research: Impact Assessment" on 22nd October, 2022.

I am also happy to note that the proceedings of the Seminar highlighting the major thrust areas-important research papers etc. shall be published on this occasion, which I am sure, will disseminate information for the benefit of the delegates.

I appreciate the aims of the Seminar to provide a platform for the speakers to discuss on Digital Intervention in Teaching, Learning and Research: Impact Assessment and, therefore, hope that the thoughts, views, ideas of the guests, key note speakers, resource person and the paper presenters who enriched the seminar with their insight and those of the contributors who had published their research papers in the proceeding would be immensely helpful in paving new way for the knowledge and experience for everyone associated with the seminar and for those accessing the proceeding as well.

I extend my best wishes for successful organization of the National Seminar.

Nagpur/October 13, 2022

(S.R. Chaudhari)

CHAIRMAN MESSAGE

Our Motivation

Chief Patron
Dr. Chandansingh Rotele
Hon. Chairman.

The world is growing through the great phase of transformation since the advent of the Covid at pan global level. It is a turning point in the history of mankind, that will leave its imprints in the sand of time for ages to come. The irretrievable impact has been on the education system. Where the digital play in the field of education had been heralded, since long, it was the Covid that comprehended the need of digitalization in the field of education. It can be said that where digitalization was a guest in the field of education, it now became a family member. Like different fields, the face of education has additionally evolved drastically over the period. Earlier, teachers had been the most effective medium to create a bridge between education and students. They were using traditional pedagogical strategies to explain the subject matter or to provide notes. However, modern training sees a significant scenario that inspires learners to study profoundly and study to fulfill their curiosity. In recent years, we are getting introduced to unique modern teaching methods, and the introduction of generation together with progressive approaches to educate has introduced a revolution in the education sector. So, new technology that adapts to teaching learning process needs to be understood and accepted with open arms.

The most prominent significant to be remembered in this entire process is that it doesn't get mechanical, but human touch should always be active. As a matter of fact, the digital education that is so vigorously endorsed, comes with its own bunch of flowers and thorns. The students, teachers, administrators, parents are all the stakeholders in this entire process. It is inevitable that the academic stakeholders, primarily students should be equipped with the gradually evolving world of digital education. The students, from the remote areas of the globe have found themselves lagging behind at the expense of the academic loss of the couple of years, until the education started offline. These challenges amplified with the impact of temporary school closures due to Covid-19. The reason for this scenario had been absence of access to digital access to education, especially in the remote areas of the country. The research relates that some of the teachers, headmasters/ principals and management have also shown helplessness in implementing these modern tools of education for online learning. The parents found themselves in a similar fix as well. It is evident that despite the digital revolution at the wake of pandemic, not all the academic stakeholders seem to enjoy the fruits of the same.

The era of digitalization has been instrumental in a paradigm shift in the field of Teaching Learning and Research. However, where on one hand we enjoy the fruits of the said revolution, it is also important to take into consideration as to how the same has been received by all the stakeholders of the pedagogy and what future it beholds for the academic fraternity.

The digital resources have lately emerged as a significant source of data and information in the field of Teaching Learning and Research. The digital resources are potent to provide varied information at the finger-tips of the users. The researcher can avail the qualitative information at the click. The vast volume of information and knowledge that are available comes along its own pros and cons. The digital resources should be taken with a pinch of salt. The teachers ought to cross verify the authenticity and creditability of these resources. Similarly, the students ought to refrain from the pitfalls of the digital resources. The threats of plagiarism are mounting in the field of research. The reputed universities and research journal are adhering to strict plagiarism checking tools to avoid plagiarism in research. Consequently, opportunities and threats of digital resources in teaching, learning and research should be taken into consideration.

I am sure that the present seminar on **'Digital Intervention in Teaching Learning and Research: Impact Assessment'** would attempt to ponder over the effect of the digitalization in the area of Teaching Learning and Research. The views and expressions churning out of the NAAC sponsored National Seminar would have a fruitful impact on one and all help us to decide our future course of action in this regard. I congratulate the organizers, the IQAC for organizing such an insightful seminar and wish them all the success in future.

Dr. Chandansingh Rotele
Hon. President
Orange City College of Social Work, Nagpur

Vice-President's Message

Our Inspiration

The 21st century is the age of digitalization. The growing impact of digitalization can be seen in almost all the spheres of life. The education field in India might be hesitant to embrace the digital interventions, but is now slowly accommodating digitalization in the field of Teaching Learning and Research. The New Education Policy stresses the inclusion of children from the remotest part of the world in the mainstream education through digitalization. However, every kind of progress comes with a new set of challenges. Even if the government promotes digital play in the field of education and research, the question remains if the prevalent system of education and research is conducive to these changes. Where on one hand the digitalization is vociferously proposed, there are many provocations that need urgent address. Similarly, it would be sagacious to analyze and interpret these provocations and challenges, with suitable responses, so that the after effects can be effectively dealt with. The era of digitalization has been instrumental in a paradigm shift in the field of Teaching Learning and Research. However, it is also important to take into consideration as to how the same has been received by all the stakeholders of the pedagogy and what future it beholds for the academic fraternity.

The digital education has paved way for health impairments among the people. The mounting usage of mobiles, laptops, computer, tablets, etc. by the students has created various problems among the students. Online education has taken a huge toll on the mental and physical health of students as well as their teachers. The problems of eyesight, lack of classroom ethics, bad ergonomics, lack of physical activities, lack of Vitamin D, calcium deficiency, etc. are some of the major flaws of digital education. One of the major consequences of the transition to online learning is its impact on student health, specifically sleep habits. Students in different time zones, than their institutions, have to sacrifice their sleep to wake up for classes online. Research explained how the lack of sleep can affect learning outcomes as the sleep deprivation causes deficits in the prefrontal cortex, which normally keeps our amygdale, the emotional and impulse region of the brain, in check.

I am happy that the seminar has turned out to be a huge success, that reflects well over the number of paper so received and appreciate the efforts taken by one and all for the successful organization of the seminar. I am also certain that the present seminar on **'Digital Intervention in Teaching Learning and Research: Impact Assessment'** would attempt to successfully ponder over the effect of the digitalization in the area of Teaching Learning and Research and open new avenues of insight. Best wishes to all.

DR. KEDARSINGH ROTELE

Hon. Vice-President
Orange City College of Social Work, Nagpur

Director Massage

The Guiding Beacon

The digital age in India beginning in 90s have seen drastic transformation. From the use of computers to tablets and smart classrooms, India has come a long way. However, the adjustment and adoption with the current digital revolution is a problem. The New Education Policy 2020 remarks that India is a global leader in ICT and in other cutting-edge domains. Educational technology will play an important role in the improvement of educational processes and outcomes. It also stresses the extensive use of technology in teaching and learning, removing language barriers, increasing access for *Divyang* students, and educational planning and management. However, there are some serious problems of adjustment and adoption with the digital revolution. The paradigm shift to online education during Covid has exposed many issues regarding adjustment and adoption with digital education. Students faced specific problems like connectivity and video issues due to the remoteness of their location and could not compromise the quantum of time required for machine learning.

At the very onset of the lockdown, teachers had to struggle with the use of WhatsApp, Email and telephonic conversation for imparting teaching. Since, students were to return to their home town located at remote rural setups without 4 G internet connectivity or broadband services and uninterrupted power supply, there were compatibility issues with regard to two-way interaction. It is now evident that the digital resources have easy access to a world of information and that too in mini seconds. But this increases the responsibility of the users, particularly from the research fraternity, to adhere to the ethics and principles. Unfortunately, the same are overlooked. The digital resources like E-Books, blogs, catalogues, websites, etc. are used without the cross verification of its authenticity. The internet is full of websites providing unauthorized, often untrue and unreliable, information which the researcher especially young scholars, admit as the final say. Moreover, the students are forgetting the charm of reading hard bind books or newspaper.

The present seminar on **'Digital Intervention in Teaching Learning and Research: Impact Assessment'** is the need of time to evaluate the impact of digitalization and suggest remedial measures if needed on the same. The pains taken by the college are truly worthy of appreciation. Such seminars would definitely provide the new outlook of knowledge and perception and add more to the knowledge corpus.

Ms. Kajol Rotele
Patron
Director, OCCSW, Ngp.

Preface

The 21st century is the age of digitalization. The growing impact of digitalization can be seen in almost all the spheres of life. The government promotes digital play in the field of education and research; however, the question remains if the prevalent system of education and research is conducive to these changes. Where on one hand the digitalization is proposed, there are many challenges. Similarly, it would be sagacious to analyze and interpret these provocations and challenges, with suitable responses, so that the after effects can be effectively dealt with.

The research relates that some of the educators have also shown helplessness in implementing the modern tools of education for online learning. The parents found themselves in a similar fix as well. It is evident that despite the digital revolution at the wake of pandemic, not all the academic stakeholders seem to enjoy the fruits of the same. The teachers and the students ought to cross verify the authenticity and creditability of these resources, threats of plagiarism. Accordingly, opportunities and threats of digital resources in teaching, learning and research should be taken into consideration.

The digital education has paved way for health impairments among the people. The mounting usage of mobiles, laptops, computer, tablets, etc. by the students has created various problems among the students. Online education has taken a huge toll on the mental and physical health of students as well as their teachers. The paradigm shift to online education during Covid has exposed many issues regarding adjustment and adoption with digital education. The digital resources like E-Books, blogs, catalogues, websites, etc. are used without the cross verification of its authenticity. Taking into consideration these challenges and state the organization of the seminar National Seminar on **'Digital Intervention in Teaching Learning and Research: Impact Assessment'** was thought of.

We acknowledge our gratitude to **Dr. Chandansingh Rotele,** Hon. President, Orange City College of Social Work, Nagpur for his support and patronage, that inspire us to achieve new heights of success every time. We are thankful to **Dr. Kedarsingh Rotele,** Hon. Vice-President, Orange City College of Social Work, Nagpur for providing his zealous motivation to do something new. We express our gratitude to **Madam Kajol Rotele**, Hon. Director, Orange City College of Social Work, Nagpur. We thank whole heartedly **Prof. Amolsing Rotele,** Athawale College of Social Work, Bhandara and honourable member of IQAC for his support and guidance. A special thanks to **Dr. Devendra Kawade,** Hon. NAAC Advisor, Bengaluru, who provided us support and guidance from the very moment of inception of the seminar preparation. We are grateful to **Dr. M. M. Meshram,** Officiating Principal, Orange City College of Social Work, Nagpur for his support from time to time.

We extend our gratitude to **Dr. Vijay Tupe**, Vice-Principal, Orange City College of Social Work, Nagpur for providing his support, faith and expertise during the preparation and organization of the seminar as a special task. We are thankful to all the Honourable Guests, Resource Person, Paper Presenters, Participants, without whom the seminar could not be possible. As an IQAC Coordinator and the Seminar Convener, I feel thankful to all the management, administrative, teaching and non-teaching, students, alumni, GO and NGO representative members of IQAC for rendering their support and encouragement

We hope that the present seminar including the publication would give way to the new ideas brooding over the effect of the digitalization in the area of Teaching Learning and Research through the NAAC Sponsored National Seminar on **'Digital Intervention in Teaching Learning and Research: Impact Assessment'**. As it is said that the end is the beginning, may this seminar open up new avenues of thoughts and ideas for one and all.

Dr. Kalpana Jamgade
Editor & Coordinator, IQAC
Orange City College of Social Work, Nagpur

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"Digitalization and Practices for Improvement: Innovative Digital College Model for Rural India"

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Abstract

The aim of this study was to create a model which describes the main elements for improving College with digital technology and helps to reveal differences between rural colleges and identify their best practices and challenges. The innovative digital college offers a framework for research but also a research-based model for college to examine their own practices with digital technologies. The model combines previous research on rural colleges improvement, creation of innovations, and digital technology in education as a special case of innovations and learning as knowledge creation to define six main elements describing an innovative, digital College: visions of the college, leadership, practices of the teaching community, pedagogical practices, college-level knowledge practices and digital resources. The model was applied to investigate five bachelor degree colleges. The results indicate that the model worked: we found essential differences between the rural college and their best practices and challenges for improvement. It worked particularly well for those elements, which are mainly the responsibility for leadership inside a college. The differences of various elements between college were not based on socioeconomic background but on the college-level practices. As a conclusion, we suggest that to improve rural college with digital technology, all elements of the model should be included in the evaluation and development process.

Introduction

In today's world, education is facing major challenges, it is expected to provide students with competencies they will need in the future, to consider informal ways of learning, and to apply digital technologies and modern pedagogical methods to answer these challenges. However, the rural college have not managed to meet all these challenges e.g. digital technology has not yet been applied much in education, although it is widely in use elsewhere in the society and in work life; students do not acquire sufficient competence at college to undertake university studies (such as collaboration, planning, independent learning, digital competence or working with knowledge); and there are major differences between countries and college in reaching these skill levels (such as problem-solving skills. There have been promising results that some pedagogical practices related to student centredness, real-life activities and group work have increased at colleges between 2010 and 2020. Such pedagogical practices are often linked to the use of digital technology.

There is a large body of research about using digital technology in college, in classrooms and among teachers and students, but often these studies concentrate on only one or two phenomena of education and technology (e.g. classroom cases, or technical competence of teachers and students), thus isolating the object of study from the broader context of college. Unless a more comprehensive view is adopted in the efforts of developing

a rural college, there is little chance of innovation programmes having any lasting effect. An investigation the connection between information and communication technology (ICT) implementation and pedagogical change. They concluded that organisational interventions and pedagogical interventions interacted with each other in effecting changes in student learning. An introduced an innovative rural college community model, which addresses the development of four elements: students' learning and learning environments, teachers' professionalism, leadership and partnerships, as central to the advancement of educational innovation related to versatile use of digital technology. The model is generic, which leaves considerable room for interpretation in examining how current practices in a college should be evaluated and improved.

A college is an environment of collaborative, social activities of teachers, pupils and other participants; and their activities shape and transform its culture, values, practices and other specific characteristics. This approach also has an impact on our methodological choices, we mainly investigated practices rather than beliefs or thoughts. The interest in the present study is in exploring the critical elements to be considered and the development processes needed in schools for reforming college education. Our specific focus is on the use of digital technology, how new digital technology has been applied and how it could be used to improve pedagogical and knowledge practices.

Aim and Research Questions

The aim of the present study was to examine how the model can be used to evaluate the existing practices of the schools used as examples and to make recommendations for improving the practices. The following research questions were constructed:

- How does the innovative digital rural college model help to identify good practices and points for improvement in using digitalization for change in the example college?
- How does the model reveal the essential differences in using digital technology for school change between the example college.

Context:

Five bachelor degree colleges participated in the study, located in the rural area of Nagpur District. The rural area of Nagpur where colleges were situated, has also provided good opportunities for in-service training about digital technology. However, the colleges also have some capacity to acquire resources of their own choice, such as by participating in national development projects.

Discussion and Result

In the following section, we first describe how the study relates to previous research approaches and then introduce the innovative digital school (IDI school) model: its basic elements and their connection with previous research. The framework has been applied in our study to examine schools. In the empirical section, the application of the model has been examined through case studies from three comprehensive schools.

- **School is a complicated object to study:**

It consists of various administrative levels, from the national policy level to classrooms; various actors, such as school staff and pupils inside a school as well as parents and local school administrators outside a college; contradictory aims, such as aiming to ensure relevant competence levels for pupils in the future, but simultaneously, carrying on the

traditions and history of society. For the complexity of a college as a research object, the theoretical background for the present study is multifaceted, research about college improvement, research about innovation, research about pedagogical practices (especially the collaborative knowledge creation traditions) and studies about digital technologies in education. The connection to societal goals is essential for a college; it forms the external structure and resources for college-which certainly have a strong impact - but the responsibility for improving an individual college from the inside rests with the principal and the teachers. For this reason, the focus in the present study is on the elements and practices inside individual college, bearing in mind the external factors and stakeholders.

The reason for leaving the external administration outside the approach of the study is pragmatic: we want to create a model for rural college for their own use, to reflect and improve those practices that they are able to change themselves. An individual school can seldom affect upper-level administrative decisions, but college always possess some autonomy to make changes in the work of teachers and pupils. As Lemke emphasised, educational researchers should be explicit about the level of phenomena and the primary unit of analysis that the investigation is focusing on, but also be aware of the influence of the phenomena at upper and lower levels (e.g. municipal-level administrative decisions or individual teachers' personal motives). Leclerc investigated individual principals and teachers and made school-level conclusions based on these data. This was similar to work by Peck, when they were investigating innovations in college. The present study focuses on classroom and college-level practices by interviewing individuals (teachers and principals), observing teaching practices and by conducting surveys for teachers and pupils. We presuppose that there is a strong and essential interaction between the different levels; this is a major starting point of our study.

- **Technology Adoption as an Innovation in Rural Colleges**

The expectations about rapid acceptance and implementation of digital technology into educational practices have not been fulfilled (EU 2013), although some promising results indicate the connection between new pedagogical practices (= less teacher-centred) and the use of digital technology. In rural college, technology is often still used for prevailing teaching methods, such as information sharing, or doing simple exercises, rather than for promoting collaborative or creative activities, solving complex problems or improving students' digital competence. Two alternative explanations for transforming educational practices associated with ICT have been suggested. The first is a 'slow revolution' and support for existing practices, in which small changes accumulate over time and create a slow-motion transformation towards new ways of working. Only routines are replaced, and no changes are made in learning content or pedagogical practices.

This explanation is anchored to the notion of a time lag between the invention of new technology, the adoption of innovations and the slow spread of its virtues through the general population. According to this explanation, the adoption of technology is an inevitable result which will come about anyway. The second explanation, 'active transformation' tries to account for the sustaining of teacher-centred practices, teachers and college make plans and decide how technology should be implemented in how best to answer to the specific challenges the school has. The curriculum content and/or processes will be changed, and these

are changes that could not have taken place without digital technology. There is a large body of studies about how digital technology has been implemented in education; e.g. what resources schools, teachers and students have; how much digital technology is used in classrooms; and what practices digital technology is used for. First, it is essential that teachers and students have the opportunity to learn to use digital technology, and second, that they have meaningful and necessary resources to use it. Teachers' digital competence, related to pedagogical understanding of using technology in education, is the corner stone of supporting students' digital competence. The elements of pedagogical practices and digital resources are based on the studies presented here.

Research on Learning as Knowledge Creation.

Those theoretical approaches emphasising learning as collaborative knowledge creation have strongly influenced our views concerning the pedagogical development in schools through digital technologies. According to these approaches, teaching should primarily promote knowledge innovation and collective advancement of shared knowledge products. Arguments for these approaches are the requirement to promote adaptive expertise, collaboration skills and capabilities to work creatively with knowledge, which are the competencies needed in education, working life and society in general. Recent discussions concerning the learning of '21st Century Skills' have similarities with these ideas, college learning should focus more on supporting the development of the relevant competencies that are needed to cope with the challenges of the unknown future, instead of concentrating on content learning and routine tasks.

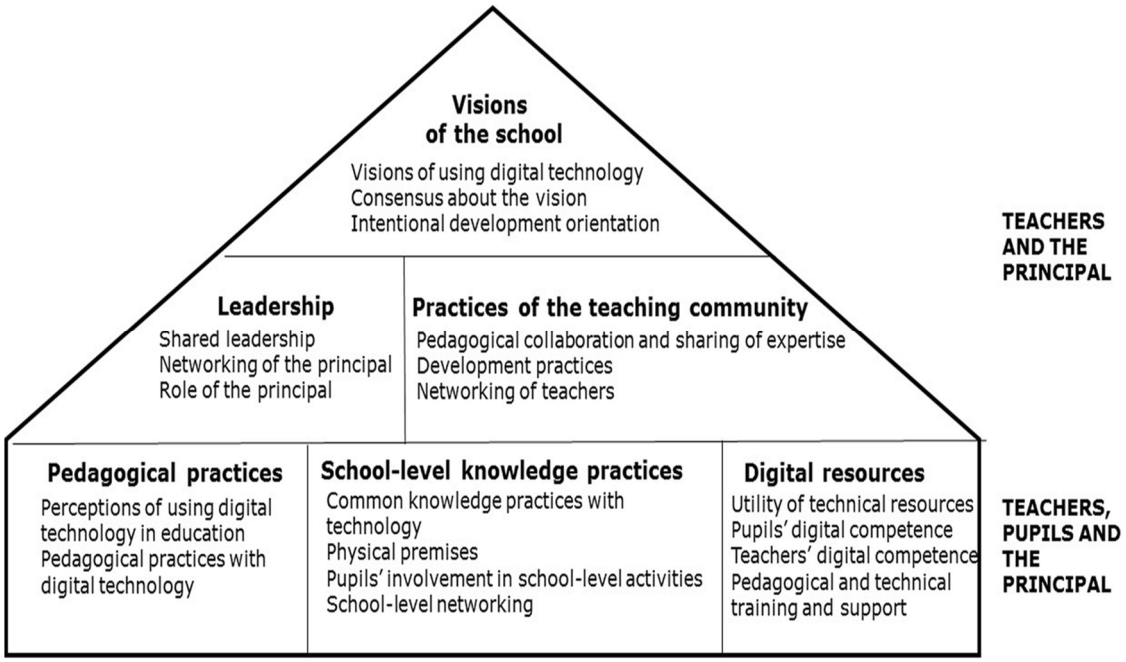
Features of pedagogical practices representing the collaborative knowledge creation approach include learners' engagement, goal-oriented production of knowledge objects for relevant purpose, collective efforts and resources and versatile use of modern technologies. The role of technological applications in such practices is often to provide flexible tools for communication and networking, co-authoring of shared knowledge products and managing joint working processes. The elements of pedagogical practices are based on the studies presented in the two previous chapters. It is suggested that to help students to succeed in the knowledge society, college should become knowledge-building organisations, in which students are members, not clients. Their suggestions are in line with the ideas of learning as knowledge creation in which tradition they have a profound contribution.

- **The Elements of Innovative Digital Rural Colleges**

Based on previous research approaches reviewed above and our own studies, we created the innovative digital rural college (IDI college) model for investigating whether colleges use digital technology in an innovative way to improve pedagogical and working practices. In developing the model, we have emphasised leaning on relevant previous research approaches to avoid criticisms about creating a model based on occasional empirical findings, which leads to a quasi-theoretical model. However, we have also used a data-driven approach with extensive data from everyday practices of schools in order to avoid the gap between the theoretical model and ordinary practices in the field. Such data-driven elements, also acknowledged somewhat by research, are especially elements in college-level practices, physical premises and pupils' involvement in school level activities. Table - 1 presents the relationship between the elements of IDI college model with relevant research approaches, the

main conclusions of previous studies related to the elements of our model and the main references.

Fig. No. 1 : The elements are presented in visual form



- **Pedagogical practices with digital technology**

Teachers were asked about the use of various digital applications and Internet services in their own teaching; there were no statistically significant differences between schools in how much they reported using various applications and the Internet. Teachers were also asked about using digital technology in various pedagogical practices. In Table 2, the means and SDs of all practices are presented. There were a few statistically significant differences in the reported use of digital technology. The statistically significant differences were found in the following items: small-scale projects $F(2,54) = 13.233$, practicing skills, $F(2,54) = 10.988$, $p = .000$; small-scale products (like writings) $F(2,54) = 9.084$, $p = .000$; and information presenting and support for illustration $F(2,54) = 5.934$, $p = .005$. Tamhane's T2 post-hoc comparisons were used for calculating the differences between the schools.

- **Teachers' digital competence**

The results showed, first, that there were no statistically significant differences between schools in teachers' self-evaluated digital competence, and that teachers evaluated their competence in basic digital application as being quite high (scale 1–5), such as using email (mean 4.7), searching for information on the Internet (mean 4.7), word processing (mean 4.4), loading files from the Internet (mean 4.2) and using the digital learning environment (mean 3.8). These formed a group of basic digital competence. The second group of applications were using spreadsheets (mean 3.2), digital image processing (mean 3.1), graphics (mean 2.9) and social forums (mean 2.9). The lowest means were in virtual meeting tools (mean 2.3), creating www-pages (mean 2.3), publishing tools (mean 2.2), writing a blog (mean 2.2), publishing www-pages (mean 2.0), producing information to wiki (mean 1.9), voice and music (mean 1.9) and programming.

Fig. No. – 2: Teachers' need for support and training of digital technology.

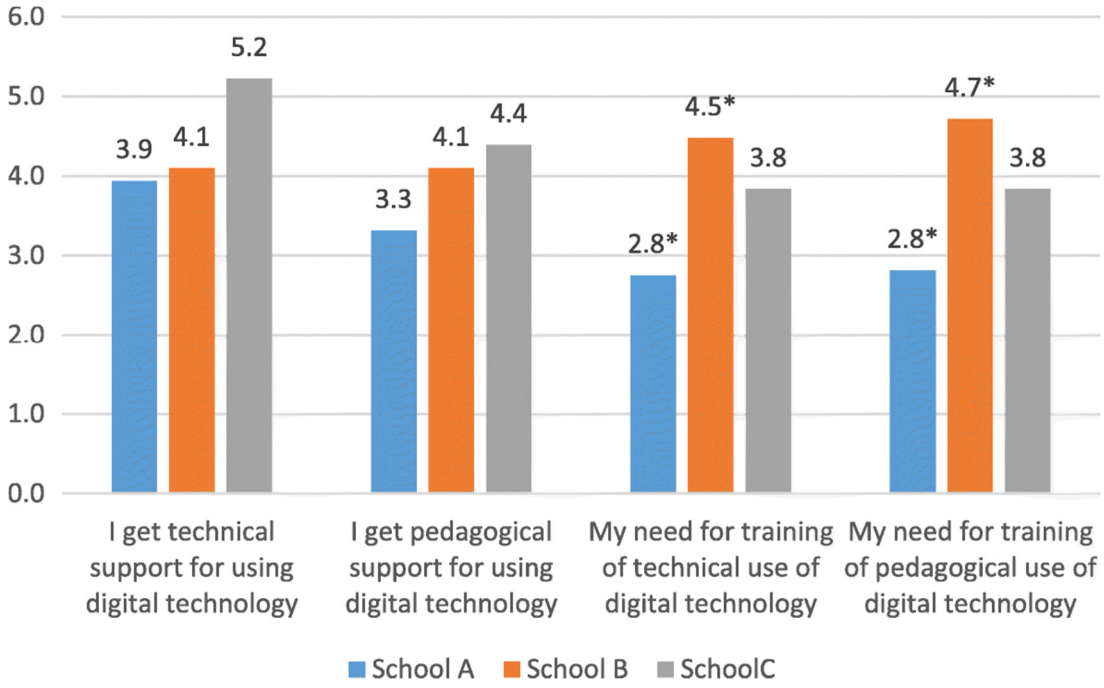


Figure - 2 shows the means of teachers' need for support and training for using digital technology.

- **Pedagogical and technological training and support**

The statistically significant differences were found in the following items: small-scale projects $F(2,54) = 13.233$, practicing skills, $F(2,54) = 10.988$, $p = .000$; small-scale products (like writings) $F(2,54) = 9.084$, $p = .000$; and information presenting and support for illustration $F(2,54) = 5.934$, $p = .005$. Tamhane's T2 post-hoc comparisons were used for calculating the differences between the schools. The evaluation of teachers at school A was that they needed both technical and pedagogical training less than teachers at the two other schools, and there was a statistically significant difference in the rural college need for technical training: $F(2,54) = 9.993$, $p = .000$; and in need for pedagogical training: $F(2,54) = 12.719$, $p = .000$, indicated with * in Fig. 2.

Conclusion:

In the study, we investigated the practices at three schools based on six elements defined in the innovative digital rural college model. We aimed to find out, first, if those elements could help in defining good practices and suggestions for improvement for developing the rural college with digital technology; and second, if the model revealed essential differences between the college. Among the characteristics of rural college, were advanced and established practices in shared leadership, practices of the teaching community, advanced pedagogical practices with technology and college-level knowledge practices, including involvement of pupils and systematic promotion of their digital competence through pedagogical activities. However, shared visions about digital technology were only emerging, teachers' digital competence was only average and the perceptions in the pedagogical usage of

technology had considerable variety between teachers, although there were examples of inspiring pedagogical methods.

Professors did not report needing support for using technology which probably indicates both quite a good level of digital competence and well-organised support practices in the school. Pupils' self-reported digital competence was at a high level especially concerning basic applications. Pupils reported using technology quite often during leisure time for school-related activities, and at school for various basic activities, but also for collaboration and networking. Based on the results, the following suggestions for improvements can be made for rural college: (1) the teaching staff should focus on crystallising and sharing the school's visions in using digital technology as the basis for further development; (2) professors should share their pedagogical ideas and experiments, e.g. in organised meetings and workshops; and (3) professor should develop their digital competence, such as by making use of the training resources made available by the city and by organising school-level small-scale training.

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"Health Impacts of Online Education"

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Abstract

Online education has drastically changed the way we study but the year and half of attending online classes from home have led to a string of mental and physical health issues for both students and teachers. Covid-19 has caused destruction and devastation worldwide in ways nobody could anticipate. The world in one way or another came to a standstill. Life as we knew it changed. And this change became the new constant. Educational institutions took to online teaching. The start of this change felt rather very enticing for the students with not having to rush and get ready to reach the institutions, and being in the comfort of their homes. However, this peace didn't last as long. Online education has taken a huge toll on the mental and physical health of students as well as their teachers.

INTRODUCTION:

The Covid-19 pandemic has forced schools, colleges and educational institutions to shut down since March. At an age when the primary fulfilling factor is interaction with classmates and enjoying school-life, a school shutdown can wreak havoc in the daily life of students, and cause a number of mental health issues even if they are not easily traceable. According to a survey carried out by the Indian Psychiatry Society, there was a 20% rise in the number of cases of mental illness at the end of March 2020. Since then, things have become much worse. Students are missing out on the crucial balance between studies and play. The emotional effects of being physically distant from their friends, combined with the impact of losing out on playtime could potentially induce stress in students.

The pandemic-induced normal is causing students to break from their habits and Prakash says that expectation management is very important at this time. Another aspect they should manage is balance creating a balance between work and play can help destress to a great extent.

- **Main mental health issues**

Following common mental health issues seen which produced by the online education:

- ✓ Irritability and mood swings.
- ✓ Anxiety and low mood
- ✓ Dependence on video games.
- ✓ Emotional eating (excess eating to cope up with emotions such as frustrations, stress, boredom, and fear)
- ✓ Increased social media use which aggravates negative feelings such as comparison, low self-esteem, body image issues etc.
- ✓ Anger, outbursts, isolating self, and video fatigue.
- ✓ Feeling numb and suffering from low motivation.
- ✓ PTSD if exposed to intra-familial violence.

- ✓ Experiments with high-risk behaviours, such as gambling, sexting, watching pornography etc.

There are a few mental health problems in students that are specifically increasing due to online and digital education**,** were noted the following:

- ✓ Behavioural and emotional disorders due to spending long screen hours.
- ✓ Depressive thoughts and recurrent suicidal thoughts because of social isolation.
- ✓ Feeling of distrust due to not being able to physically meet with friends and other peers.
- ✓ Anxiety related to exam preparations and exam results this becomes worse due to the repeated postponement of exams and attending exams online or in ways not attempted before.

Objectives:

- ➢ To understand perception of students on online education and find out the challenges of online education on students' health.
- ➢ To find how online education affected students' physical, mental and emotional health as well as the behaviour change.

Hypothesis

- ➢ Online education has a significant impact on students' perception and health.
- ➢ Students faced stress and anxiety due to online education which produce them academic stress and poor emotional wellness.

Analysis and Discussion

Mental health problems in students have been on the rise since Covid-19 due to Online or digital education. It has drastically changed the way we study but the year and half of attending online classes from home has led to a string of mental and physical health issues for both students and teachers. Here's what is making things worse and tips for parents, teachers and students to handle the situation.

- **How online education affected mental health**

- ➢ **Lack of interest**

Humans are social animals, and the most introverted ones also need to see faces and have human interactions once in a while. The children have grown to lose interest in their classes. Most of them switch off the camera and go about their other activities. The lethargy has inculcated the loss of interest in not only the studies but everything overall. The pressure of after-school homework and assignments has triggered a great toll on the mental health and mood.

- ➢ **Stress and anxiety**

The concentration levels of students dropped in online learning as the eye meanders elsewhere on the screen. This in response made it difficult for most students to keep up with the teachings. The pressure to concentrate and produce the required results has resulted in a great amount of stress and anxiety. Tasks, assignments, and homework slacked. Most children were seen lagging behind and succumbing to the pressure. The mental state of the children was fragile and tampered with.

- ➢ **Zoom fatigue**

Zoom fatigue refers to the exhaustion after having attended zoom classes, or video conferences. With the screen time increasing drastically, the mind is overwhelmed with information and the brain finds it rather difficult to register all the information. Over involvement of parents also has added to the pre-existing anxiety and stress. Parents are confined to the walls of their houses and have taken it upon themselves to get extensively involved with their children and their online classes.

- **Effects of online classes on physical health**

➢ **Eyesight problems: -**

Increased screen time has increased the strain on the eyes, resulting in major headaches. This was applicable not only to the students but also to teachers.

➢ **Lack of classroom ethics: -**

The classroom ethics have been compromised to great lengths. The posture, regularity, lack of routine, attentiveness has all resulted in health hazards. Constant sitting has caused weight concerns as well. No physical activity has made the students restless and frustrated. This too took a toll on the eating habits, thus resulting in damages to the physical health.

➢ **Bad ergonomics: -**

Human factors and ergonomics is the application of psychological and physiological principles to the engineering and design of products, processes, and systems. Studying online has resulted in poor/bad ergonomics, thus resulting in a lot of issues as regards back pain and fibromyalgia pains.

➢ **Lack of physical activities**: -

The lack of physical activities has caused children to become obese. Thanks to binge eating and watching, it's only gotten worse. Muscle spasms, muscle rigidity, and lack of calcium, etc are all based on lack of physical activity.

➢ **Lack of Vitamin D: -**

Online Education surprisingly has resulted in a lack of Vitamin D. Lack of sunlight, poor diet, and exercise have resulted in more problems than one could anticipate.

➢ **Calcium deficiency: -**

As weird as it sounds, the lack of physical activity and calcium has resulted in trivial injuries, thus resulting in extensive injuries further. In conclusion, we can say that online education initially started as a great advantage but took a drastic turn and didn't work so much in the same spirit. With the increased screen time, eyesight issues, headaches, and strain have increased a great deal. Not only that, children have also been exposed to stress and anxiety from an early age and parents only add to the pressure. Physical well-being has gone for a complete toss. It is important for us to keep in mind all these aspects to prevent any future harm that might turn into lifelong problems.

SUGGESTION

Aiming at above research results, the following suggestions are proposed in this study. The teaching effectiveness could be enhanced merely when the system functions are rich and diverse to be close to user perception and attract students logging in the system for learning. In regard to the dilemma encountered in the mixed digital learning, the administration of schools could provide teachers with software and hardware support and assistance, according

to the needs, to reduce the doubt of digital learning and, with encouragement, integrate teachers with interests to form an organization similar to professional communities to promote digital learning. After all, cooperation of a group could better prolong the management of digital teaching than an individual to significantly develop the teaching effect. When there is not a computer assisted teaching team to develop software, teachers could collect relevant resources from the Internet and self-develop software or make web pages to achieve the information assisted teaching effect. What is more, the promotion of team teaching among teachers for collaborative development and promotion of learning web pages would be more productive and could benefit more students.

The key in developing the effectiveness of digital learning on teaching lies in teachers. In other words, the promotion of digital learning could provide alternative innovation of class teaching. Making changes in traditional teaching modes would encounter some difficulties, but such difficulties would be overcome when teachers often exchange teaching experiences with peers or experts or sharing and learning through web communities to advance the teaching methods and improve the classroom management as well as to present, he professionalism and self-development. With the advance of information technology and the relevant technologies, digital learning would be accepted by students and teachers. It is the goal and task of teachers to have students receive systematic knowledge through network and possess correct use concepts.

CONCLUSION

The investigation reveals that students agree with the assistance of digital learning in the subject learning. Particularly, the increasing learning time for students with digital learning relatively enhances the learning performance. It relies on teachers matching with the class teaching to make good use of teaching strategies, according to the class climate and create the learning situation for students being willing to use digital learning so that students bravely propose questions in the discussion and increase the online interactive learning with teachers. Integrating digital learning into class teaching does not simply benefit students, but teachers would also have different gains. In addition to the promotion of personal professionalism, teachers could perceive that students realize teachers' efforts and passion on teaching.

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A Study on Menstruation of Indian Adolescent Girls in an Urban Area

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Abstract:

Menstrual cycle is an important indicator of women's reproductive health. However, menstruation has a different pattern within a few years after menarche, which might not be well understood by many adolescent girls. A cross-sectional study was conducted on 536 healthy menstruating females aged 10–19 years. Standardized self-reporting questionnaires were used to obtain relevant data. The categorical data were analysed using Chi-square or Fisher's exact test. Mean age of menarche was 13 ± 1.1 years with wide variations, i.e., 10–17 years. 73.1% had cycle duration of 21–35 days. More than half of them reported 5–6 days' duration of menstrual blood flow and 12% of the participants had >7 days of flow. Long blood flow duration was more prevalent in early than in late adolescence. 30.1% reported abundant blood loss. 66.8% had dysmenorrhea and no difference was observed between early and late adolescents. Menstrual cycles tend to be shorter in early adolescence period. A comprehensive school education program on menarche and menstrual problems may help girls to cope better and seek proper medical assistance.

Keywords: Adolescence, females, menstruation

Introduction:

Adolescence is the period of transition between puberty and adulthood. Menarche is one of the markers of puberty and therefore can be considered as an important event in the life of adolescent girls. Studies suggested that menarche tends to appear earlier in life as the sanitary, nutritional, and economic conditions of a society improve. For most females, it occurs between the age of 10 and 16 years; however, it shows a remarkable range of variation. The normal range for ovulatory cycles is between 21 and 35 days. While most periods last from 3 to 5 days, duration of menstrual flow normally ranges from 2 to 7 days. For the first few years after menarche, irregular and longer cycles are common.

Menstrual disorders are a common presentation by late adolescence; 75% of girls experience some problems associated with menstruation including delayed, irregular, painful, and heavy menstrual bleeding, which are the leading reasons for the physician office visits by adolescents. Menstrual patterns are also influenced by a number of host and environmental factors. However, few studies in India have described the lifestyle factors associated with various menstrual cycle patterns. We therefore surveyed the current changes in the age of menarche in India adolescents. We also evaluated general menstruation patterns, the incidence of common menstrual disorders. Historically, the age at menarche has gradually decreased by about 4 months in every 10-year interval.

Menstrual symptoms are a broad collection of affective and somatic concerns that occur around the time of menses. Some women manage their monthly periods easily with few or no concerns, while others experience a number of physical and emotional symptoms that

may cause psychological and physical discomfort. Some of these menstrual characteristics, such as irregularity in the menstrual cycle, premenstrual pain and discomfort, pain and discomfort at the time of menstrual discharge, and a heavy menstrual discharge, may affect the general and/or reproductive health of a woman.

- **Material and Method**

A cross-sectional study was carried out on 82 female students recruited from the educational institutions in the urban areas of a major city in South India. The selected women were explained about the protocol and the purpose of the study and were requested to complete the questionnaires to elicit information relating to demographic features, menarche age, and menstrual characteristics. The chronological age and age at menarche were also elicited.

Discussion and Results

The data were analysed using SPSS for Windows version 16 (SPSS Inc., Chicago, IL). Descriptive statistics were used to determine mean and percentages wherever applicable. The categorical data were analysed using Chi-square or Fisher's exact test. Subjective information is presented in table No. 1; the participants' age ranged from 10 to 19 years, with a mean of 15.6 ± 1.6 years.

- **Sociodemographic of the Adolescents Girl**

In the present study, the mean age of menarche was 13 ± 1.1 years, which is essentially similar to many other studies. Menarche age is the most widely used indicator of sexual maturation and influenced by many factors such as genetic and environmental conditions, family size, body mass index, SES, and level of education. Female anthropometry that reveals body composition has strong influence on their reproductive characteristics marked by the menarcheal age. An early menarcheal age is associated with increased risk for breast cancer, obesity, endometrial cancer, and uterine leiomyomata.

Furthermore, several studies have reported that age at menarche may relate to subsequent reproductive performance, such as age at first intercourse, age at first pregnancy, and risk of subsequent miscarriage. Majority of the participants (80.2%) belonged to the families practicing Hinduism, and 86.5% of girls were from nuclear family. The girls belonged to low (43%), middle (48.2%), and high (8.8%) SES. Family size of the participants varied between <4 and >8 members; large families were less prevalent.

Table 1: Sociodemographic characteristics of the selected adolescents

Sociodemographic variables	*n* (%)
Age (years)	
10-15	227 (42.4)
16-19	309 (57.6)
Mean age	15.6±1.6
Religion	
Hindu	429 (80.2)
Muslim	86 (16.1)
Christian	8 (1.5)
Other	12 (2.2)
SES	
Low	231 (43)
Middle	259 (48.2)
High	47 (8.8)
Family size	
≤4	287 (53.4)
5-8	243 (45.3)
>8	7 (1.3)
Type of family	
Joint	10 (1.9)
Nuclear	462 (86.5)
Extended	62 (11.6)

SES: Socioeconomic status

This is controversial as several studies noted that older women are more likely to report decreasing severity of primary dysmenorrhea. However, another study found that the severity of dysmenorrhea was not associated with age as an isolated factor. Abundant menstrual blood loss was also a common problem among the adolescents in this study. The most common cause of heavy menstrual bleeding in adolescents is dysfunctional uterine bleeding related to anovulation; therefore, it is expected to be higher in the adolescence period. The present study showed that the menstrual cycle and the duration of menstrual blood loss tend to become regular and shorter, respectively, with the increase in age, suggesting a gradual accomplishment of ovarian maturity during the time.

Table No. 2 : Menstrual characteristics of young adolescent girls in Mysore, in India

Variables	*n* (%)
Menarche age	
Early menarche (10-12)	28 (5.5)
Medium menarche (13-14)	446 (87.5)
Delayed menarche (15-17)	36 (7.1)
Mean age of menarche (years)	13±1.1
Cycle length (days)	
<21	79 (16.1)
21-27	173 (35.3)
28-35	185 (37.8)
>35	53 (10.8)
Duration of flow (days)	
≤4	196 (36.6)
5-6	275 (51.4)
≥7	64 (12)
Menstrual blood loss	
Scarce	223 (42.2)
Moderate	146 (27.7)
Abundant	159 (30.1)
Dysmenorrhea	356 (66.8)
Severity of dysmenorrhea	
Mild	104 (29.2)
Moderate	174 (48.9)
Severe	78 (21.9)
Regular periods	413 (77.9)

- **The Menstrual Pattern of the Adolescents Girl**

The menstrual pattern of the selected female students is presented in table No. 2. It can be seen that mean age of menarche was 13 ± 1.1 years, exhibiting wide variations, i.e., 10–17 years among the participants. Cycle duration of 21–35 days was reported by 73.1% (*n* = 358); more than half of them reported 5–6 days' duration of menstrual blood flow. Hence, 12% of the participants had >7 days of flow. Tt is of concern as it is associated to higher blood loss, increasing the risk of anaemia. Scarce-to-moderate blood loss during menstruation was reported by 69.9% (*n* = 369) of the population.

Abundant blood loss was experienced by 30.1% of the population. The overall prevalence of dysmenorrhea was 66.8%, and among them, 21.9% experienced severe pain. Regular cycles were reported by 77.9% of the participants; therefore, it is evident that irregularity of menstruation is frequent among adolescents. Although this condition is found in a such a small part of the population. When we surveyed general menstruation patterns, we found that frequency of irregular menstruation was higher in early adolescence, but contrary to our expectations, no significant association was found between age and frequency of irregular menstrual cycles.

Table No. 3 : Menstrual characteristics of adolescent girls according to their age.

Variables	Age groups		χ^2
	Early adolescence	Late adolescence	
Cycle length (days)			
<21	46 (22.7)	33 (11.5)	13.525
21-27	74 (36.5)	99 (34.6)	$P = 0.004$
28-35	63 (31)	121 (42.3)	
>35	20 (9.8)	33 (11.5)	
Duration of flow (days)			
≤4	78 (34.5)	118 (38.3)	3.630 (NS)
5-6	114 (50.4)	160 (51.9)	
≥7	34 (15.1)	30 (9.8)	
Menstrual blood loss			
Scarce	91 (41.2)	132 (43.1)	1.879 (NS)
Moderate	68 (30.8)	78 (25.5)	
Abundant	62 (28)	96 (31.4)	
Dysmenorrhea			
Yes	157 (69.5)	198 (64.7)	1.328 (NS)
No	69 (30.5)	108 (35.3)	
Severity of dysmenorrhea			
Mild	48 (30.6)	56 (28.3)	0.563 (NS)
Moderate	73 (46.5)	100 (50.5)	
Severe	36 (22.9)	42 (21.2)	
Regular periods			
Yes	168 (75.7)	244 (79.5)	1.082 (NS)
No	54 (24.3)	63 (20.5)	

NS: Not significant

- **Menstrual Characteristics of Adolescent Girls**

The present study was conducted to explore the menstrual characteristics among the unmarried adolescents across different age groups and to find out association with menstrual pattern. Adolescents comprise nearly one-fifth (22%) of the India's total population. The country also has the world's largest adolescent girl population (20%).

About 15.1% of the participants in the early adolescence period experienced long blood flow duration, while it was only 9.8% for the late adolescent participants. Statistically, we found a significant difference between duration of blood flow and adolescence period. It is evident from our results that 28%–31.4% of the participants in the two age categories, i.e., 10–15 and 16–19 years, respectively, experienced excessive bleeding (scores >80) as per the pictorial chart and 69.5%–67.4% were found to have dysmenorrhea. There was no significant difference among two groups according to the severity of menstrual pain. Menstrual irregularity however was of less frequent occurrence; 24.3% of participants in the early adolescent group (10–15 years of age) experienced frequent irregular menstruation than those in the late adolescence group.

Table No. 4: Frequency of the menstrual symptoms among adolescent subjects

Menstrual symptoms	*n* (%)
Tiredness	269 (50.1)
Back pain	148 (27.6)
Anger/short tempered/irritable	72 (13.4)
Mood swings	43 (8)
General aches and pains	56 (10.4)
Acne	56 (10.4)
Headaches	76 (14.2)
Insomnia	24 (4.5)
Vomiting	27 (5.0)
Cramps	17 (3.2)
Painful/tender breasts	18 (3.4)
Altered appetite	33 (6.1)
Nausea	8 (1.5)
Diarrhea	6 (1.1)
Craving	15 (2.8)

- **Menstrual Symptoms:**

The frequently occurring symptoms of menstruation are presented in table 4. The most common symptoms among girls during the menstrual periods were tiredness and back pain. The prevalence of dysmenorrhea in our study was almost the same as other reports from India. Menstruation and menstrual health issues which is one of the major areas of concern in reproductive health affects a large number of women throughout their reproductive life from adolescence. Dysmenorrhea is the most common (66.8%) gynaecological problem associated with adolescent females. Several other studies reported its prevalence range from 25% to 90% among women and adolescents' girls. We found higher percentage of experiencing dysmenorrhea among participants in the early adolescence period (69.5% vs. 64.7%); however, statistically difference was not significant. Majority of the participants experienced dysmenorrhea during menstruation although more than three-fourth of them had mild-to-moderate pain. However, about 30% of them complained of severe pain. Comparing with other reports from India in higher age group (adults), our results showed higher frequency of severe menstrual pain and it may be due to effect of age on severity of pain.

- **Conclusion**

Dysmenorrhea and menstrual irregularity are more prevalent among adolescent females. Common menstrual symptoms are tiredness, backache, and headache. It appears that occurrence of dysmenorrhea is increasing in the population; such sufferings would affect the productivity among females. Therefore, it can be stated that a comprehensive school education program on menarche and menstrual problems may help girls to cope better and seek proper medical assistance. The most common symptom present in the adolescent girls during the menstrual periods was tiredness (50.1%), and the second most prevalent symptom was back pain (27.6%). Our observations were similar to that reported by Agarwal and Agarwal. In the present study, occurrence rate of certain discomforts among adolescents indicates the extent of sufferings; the adolescence females undergo with each cycle of

menstruation. The information suggests that treatment approaches should be developed as the target group is vulnerable (the target group was adolescents who are more vulnerable than adults.

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Technological Advancement in Digital Learning: Models for Development

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ABSTRACT

This paper contends that technology changes advance online education. A number of mobile computing and transformative technologies will be examined and incorporated into a descriptive study. The object of the study will be to design innovative mobile awareness models seeking to understand technology changes for mobile devices and how they can be used for online learning. These models will take information from technology vicissitudes, online education systems, along with mobile device literature, and build a picture of past, current, and future trends for online learning. The application of such an approach should lead to a better definition of mobile awareness requirements and greater online visibility relative to selection of the appropriate model criteria and requirements. The models will identify online problem definitions, hardware and software advancements, analysis mobile objectives, and the selection of evaluation criteria and requirements to design online mobile awareness. By using technology vicissitudes, online education systems, and mobile device variables that are found in the literature, models can be designed to achieve awareness for online learning and changing technologies. These futuristic models can help to identify the appropriate techniques and methods to be used in facilitating the overall effort in future mobile devices for online learning. Hopefully, seamless technology integration and borderless networks for mobile awareness will motivate and benefit all future online teaching and learning groups.

Keywords: Technology; Digital Learning; Devices; Hardware and Software; Models

Introduction

Technology, online education, and students continue to change. As technological innovation occurs involving the Internet and computer software, we need to think of new progressions for online education. With this awareness, educators need to deliver a positive and innovative experience for every online student. Educators must consider different approaches to online design and development that considers mobile responsive. The goal is to create mobile friendly visual framework that allows for comprehensive viewing in all online environments. Keeping in mind that online learning can take place anywhere, anytime - the increase of mobile devices can create new online educational direction. This direction, using collaboration tools, can allow professors, students, and remote experts to visually connect with each other. Collaborate tools can allow for information being more accessible and that can result in new models of online learning. Collaborate tools and their applications can create models of borderless online networks. Thus, the approach of borderless networks can create dynamic online learning opportunities. Before reconnoitering online education, one has to define technology that allowed the online landscape to be created.

According to Shane (2009), technology was the application of materials, processes, techniques, and tools for human activity. Next, we must define both invention and innovation in relation to technology. Shane (2009) defined invention as the discovery of a new idea that

creates knowledge to solve a problem and innovation as the process of using knowledge to solve a problem. Given these definitions, we perceived that technological innovation was the use of knowledge to apply materials, processes, techniques, and tools for human activity. Today, the World Wide Web (Web) is thriving within corporate workplaces and higher education campuses. The presence of the Web and online environment has changed the relationship between those who are entrusted to train and teacher – and those learners who will benefit from new online experiences. With this change, trainers, teachers, and learners can move towards a more active and collaborative learning experience. First, we must establish the current technologies driving our online landscape. Second, one has to consider the vested partners in that online landscape. Vested partners include business, government, and higher education. All will have consigned interest in designing, modelling, and developing new training, teaching, and learning paradigms.

Lastly, the new science would see the most potential in the production of large systems, such as telephone communications that would switch telephone circuits and perform data process, establishing powerful computers organized in completely different ways. Overcoming disruptive technologies leads to invention and innovation – in turn accelerates technology adoption. Thus, identifying and understanding the barriers will lead to seamless technology integration and borderless networks that will motivate and benefit future training, teaching, and learning groups. The global world has been with us for over 35 years. Technological developments, such as the Internet, the Web, mobile and wireless computing, and their related applications, allowed for the creation and expansion of a global world. During those 35 years, and certainly within the last 10 years, our technologies have transformed how people interact and collaborate with each other. Our technologies have transformed how we use our resources and services. Finally, our technologies have transformed how organizations, such as business, government, and education, function in a global world.

Analysis, Discussion and Results

In discussing technological advancements, a brief review of the literature is appropriate to gain an understanding of technology changes over the past several decades. Presently, we are undergoing a fast pace of technological advancement.

- **Internet Communication Tools**

1990 - 2010 Increasingly complex technologies have and will continue to revolutionize our way of communicating. From the invention of the movable type print by German Johannes Gutenberg in the 15th century, to the advent of the Internet in the late 1980's, worldwide communications have continued to accelerate. Communication has moved from printing, radio, telephone, cell phone to the Internet and digital technologies, videoconferencing, and Skype peer-to-peer Internet telephony protocols. This has allowed more people to gain access to broader areas of information. As a result, the Internet has become a major channel for communication around the world. The proliferation of technology changes in the late 20th century and early 21st century has made communication personal and powerful and has greatly impacted our culture and commerce. The eight Internet communications tools from technological developments and prominently adapted for business, training, and online learning from 1990 to 2010 are shown below:

- **World Wide Web:**

We begin the review of the eight communication tools for this time period with the World Wide Web. Tim Berners-Lee was credited with the software program known as the World Wide Web (Web) in 1989. The popularity of the Web began to grow and eventually made an impact on business, government, communication, and education. The Web made it possible to retrieve and access documents on the Internet. Significantly, the Web made it possible for computer users around the world to connect to each other.

- **Electronic Mail:**

The second communication tool for this time period was Email. Email was a function of the Internet and was virtually instant. Users could access it from numerous devices, such as cell phones, computers, and personal digital assistant (PDAs).

- **Instant Messaging (IM):**

The third communication tool was instant messaging. Instant messaging was done on keyboards over the Internet. However, instant messaging innovation may have reached its peak early in 2000's, giving way to the more interactive social media platforms.

- **Voice over Internet Protocol (VoIP):**

The fourth communication tool was Voice over Internet Protocol (VoIP). VoIP was technology that bypassed the telephone network, allowing for voice calls using the Internet instead of a regular telephone line.

- **Interactive video conferencing:**

The fifth communication tool was Interactive video conferencing. Interactive video conferencing was a live video connection between people in separate locations for the purpose of commination or interaction, allowing people to communicate visually from anywhere in the world. With online video conferencing, any organization can communicate effectively with their key audience. Uses of video-conferencing has been a great benefit for distance learning, sharing lectures with students at other universities, giving and receiving lectures/presentations from remotely located sites around the world, and conducting meeting between research groups and academics based at different universities.

- **Skype:**

Skype was a peer-to-peer VoIP client developed by KaZaa in 2003 and it encrypts calls end-to-end while storing user information in a decentralized fashion. Almost seamlessly, Skype allowed users to communicate with peers by voice using a microphone, video by using a webcam, and instant messaging over the internet.

- **Mobile/Smartphones:**

Mobile phones were devices that could make and receive telephone calls over a radio link moving around a wide geographic area. Smartphones were mobile phones built on a mobile operating system. Mobile phones offered text messaging, Multimedia Messaging Service (MMS), email Internet access, short-range wireless communications, business applications, gaming, photography, and more general computing capabilities. We eventually see Smartphones with more advanced computing capability and connectivity than mobile phones. As a final point, Smartphones had the functionality of portable media players, compact digital cameras, pocket video cameras, Global Positioning System (GPS) navigation units for form one milt-use device with high-end resolution touchscreens and web browsers.

Lastly, the eighth communication tool was social networks, such as Twitter and Facebook, which were forms of mass communication, where messages were spread to many recipients. Usage of social media sites has sparked and expanded communication within a community of friends and family.

- **Social Networks:**

Social media technologies have facilitated social awareness that encouraged everyone to use social media and networking tools. The communities created by social media sites inspired more frequent collaboration and information between family and friends. Finally, from the literature review we can conclude the three Internet communication tools most favoured by online educationalists; email, IM, and asynchronous discussions (text, Web based, messages sent via email). Email had the benefit of providing a written record of the online communication that transpired with speed and convenience. IM messaging was more instantaneous than email and users could include videos, images, files, links to websites, and sound. Of great value to online education are asynchronous discussions, which are an educational online tool by which professors and students could interact via discussions without the constraints of time and classroom. As a result, through the use of right Internet communication technologies, both educators and students developed new experiences in education.

- **Technology And Online Learning**

Having reviewed the technology changes from the 1950's to the present, we can now focus on how these changes affected online learning during that time period. The early timeline of online education ranges from the 1950's to the 1980's. Recorded in 1959, Daniel Alper and Don Bitzer created PLATO, a home for the first internet-based community designed for learning purposes. The milestone event that recognized online education in the United States occurred at the University of Illinois during the 1960's, with a classroom system based in linked computer terminals. This was the first online learning experience, leading ultimately to education presented over the internet on a vast array if subjects. In 1968, the University of Alberta Department of Medicine began to offer rudimentary online courses. At the same time, the United Kingdom (UK) government created a wireless university. In 1969, the Open University was formed and distance teaching was introduced with online classes through the CICERO program. Coastline Community College became the world's first fully remote community college in 1976. Lastly, the New Jersey Institute of Technology, through its computerized conferencing and communications center, began to study the outcomes of online and computerized learning environments and helped defined the electronic frontier. Before Web learning, training was available to organizations using mail and telegraph. As the computer industry started to expand in the 1980's, online training became a potential creation.

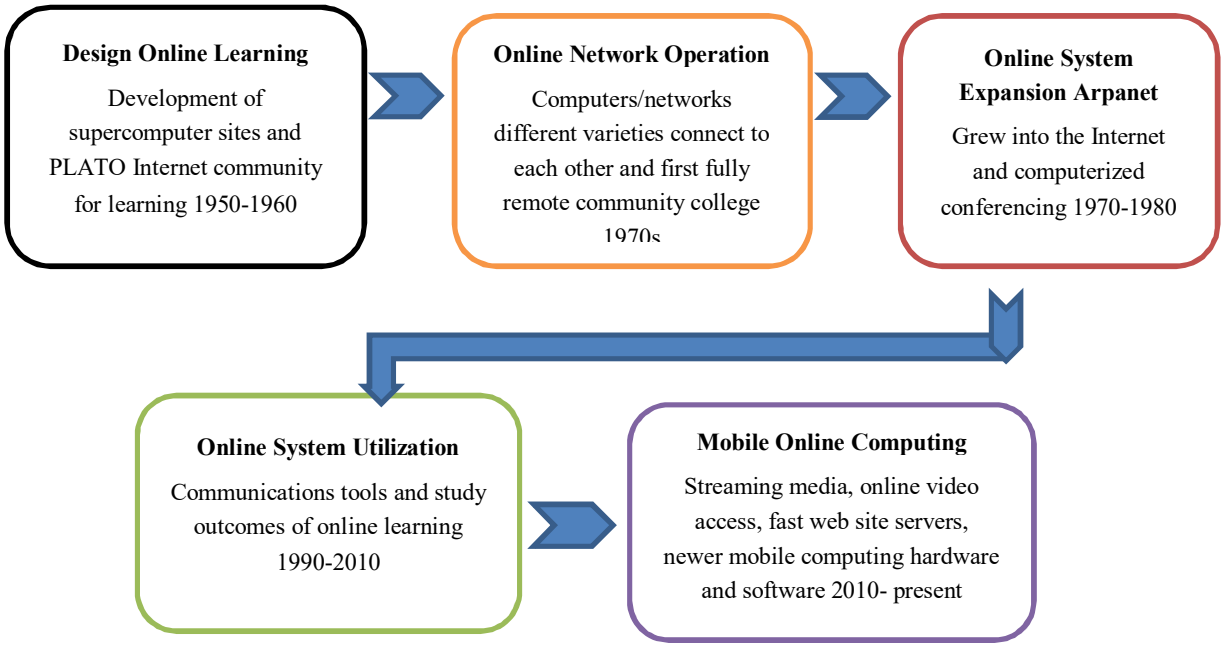
The multimedia age was developing with the use of multimedia programs. Companies began online training for new employees and used multimedia programs to visually enhance presentations. As the 1990's ended, the millennium provided new technology for the computer industry. With computer industry expansion, e-training and multimedia was soon readily available for everyone. Corporate America started using PowerPoint to enhance company presentations. Without doubt, technology was moving forward with video games

and other multimedia programs. As these technological advances expanded, the first type of online education began in the mid-1990's.

- **Technological Advancement in E-Learning Modeling**

The millennium would mark a new period for technology with online education courses designed and developed for online learning. E-learning with online education courses became popular within both colleges and businesses. Rapidly, online education was aided with streaming media, online video access, and fast web site servers. This has led to online education and Internet training that provided people with a new incentive to learn. From this literature review, a model of technological changes could be created for that time period. An information processing models have evolved since 1949 and methods have been proposed to extract requirements from policies and regulations using formal models.

Figure No. 1. Technology Change Model 1950 – 2010



Technology Change Model 1950 – 2010 (TCM) Source: Aranda (2006); Cook & Sonnenberg (2013)

Modelling can be used as a tool for performance analysis and optimization strategies; modelling design can extend functionality in extracting valuable information and knowledge from model parameter settings. modelling can explain the technology for online learning with the ability to collect and organize data and information, solve problems, and support communication exchanges between and among faculty and students. Thus, modelling is an appropriate tool for identifying, analyzing, and evaluating technology trends for present and future online learning. The model is presented in the form of an overview, with the objective of establishing a frame of reference for technology changes and online learning from the 1950's to 2010's. The Technology Change Model (TCM) 1950-2010 has a seven-step process for advancing online learning: design for online learning; produce online linked systems; digital online network distribution; online network operation; online system expansion; online system utilization; and, improved mobile computing hardware and software.

- **Conclusion**

This paper contended that technology changes advanced online education. Online education systems, along with mobile device literature from 1950 to our present time in order to build a picture of past, current, and future trends for online learning and technology changes. The object of this descriptive study was to create several models to understand technology changes for mobile devices and how this understanding can be used for online learning. The application of this approach led to a better definition of mobile awareness and greater online visibility relative to the selection of the appropriate model criteria and requirements. Several models were created to show hardware and software advancements to design mobile awareness which highlighted borderless networks to benefit online teaching and learning groups. Technology is rapidly transforming the way education is delivered through online and mobile systems. The online learning experience today is a fundamentally different environment than the traditional classroom. Online education takes advantage of innovative collaborate tools and their applications to create models of borderless online networks. With borderless online networks from innovative devices, hardware, and software, we can create dynamic online learning opportunities. Complex technologies allow more people to gain access to broader areas of information.

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Influences of Digital Education on the Wellbeing of Youngers

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Abstract

The research examines the influence of digital education on the health and well-being of students who have taken online programmes since COVID-19 began. In their study, examine the impact of digital education on the young generation. The fatigue experienced by learners during online classes that our brain has to put extra effort to stay attentive in online classes, which leads to mental fatigue resulting in students' failure to stay focused. Mendoza further argues that the transition of the traditional classes into a virtual space has made the student more conscious of their facial expressions and postures. Online classes through video conferencing put all your faces side by side on one screen, even when you are not speaking. This order of extensive exposure to peers and course-instructors adds to the cognitive overload that blocks the unimpeded information processing.

Keywords: Youngers, Wellbeing, Digital Education, Online Classes, Mental Health, Students,

Introduction:

The world today is going through a phase of ontological insecurity and uncertainties triggered by COVID-19. Every aspect of human life has been severely affected by the ongoing pandemic. The hauntological presence of insecurity and uncertainties has proved to be detrimental to the learners' mental health and wellbeing. The students reported that the computer screen contains a lot of information, which is difficult to fathom and extremely difficult to comprehend. It creates chaos in their minds, thus leading to stress and exhaustion. The youngers find it extremely difficult to understand which information must be assimilated and what they can safely ignore. Hence, we can conclude from the data that students' cognitive filtration of the information is hindered in the online classes.

Online classes undoubtedly allow students to catch up on the classes they have missed. Still, prolonged exposure to screens without a break is causing severe health issues like dry eye syndrome, burning sensation of eyes, loss of focus flexibility, near-sightedness, retinal damage, etc. Nowadays, eye problems are becoming more and more common. 6 out of 10 people wear spectacles. Such a statistic sends a frisson down the spine of most parents concerned about their children's health and well-being. We conducted a survey that aims to determine the number of people who feel strain in their eyes while attending online classes. Below are our findings. 86.5% of the students feel strain in their eyes and feel the requirement for eye lubricant or glasses.

Computer screens and digital devices lead to clinical issues such as eye strain, eye fatigue, and Insomnia. One of the main reasons for these conditions is the excessive exposure to blue light which is emitted by the screens of digital devices. It is interesting to note that both the sun and indoor lights emit some level of blue light, but our eyes have inbuilt

mechanisms to reduce the exposure to blue light occurring naturally. Staring at the screen for a long time can cause irritation and dryness in the eyes. According to various studies, people blink far less often while concentrating on screens, which leads to dryness in the eyes. For a clear vision, a clear and stable tear film on the eye must be maintained. According to our case study, 50.5% of students do not use blue lenses, and 16.8% of the respondents have never heard of it. The facts are alarming.

The medical expert states that during COVID-19, students have frequently visited his clinic with complaints of dryness in their eyes and frequent blinking of eyes. These problems have arisen due to excessive screen time. He suggests that a proper viewing distance has to be maintained to avoid clinical issues. One more concerning factor linked to online classes is the blurring of vision, dry eyes, and headaches. The students, without realizing, keep the gadgets close to their eyes which puts excessive strain on the muscles of the eyes and ultimately leads to computer vision syndrome. Our study corroborates with study of the digital eye strain in the era of the COVID-19 pandemic. Bhattacharya et al. argue that due to the lockdown, the online classes have started without specific guidelines. Students have to stay online facing the screen for eight to twelve hours to cope with the institution's demand. The range of eye problems that emerge from extensive online interaction is clinically termed Digital Eye Strain (DES) or computer vision syndrome.

Objective:

The objective of the paper is as follow:

- To gauge the relevance of the new paper reports and blogs discussing the devolution of the health and mental and well beings of youngers.
- The disturbances in the minds of the youngsters due to the sudden shift from in-person to online classes.

Methodology

The research paper is a descriptive in design with a qualitative assessment of the students' responses and media narratives on the increasing issue of young people's well-being. To get acknowledge of issues of the wellbeing's faced by youngers, the younger who pursuing 12^{th} science at Nagpur City, who are carry to online education on computer for minimum 8 hours each day. Online questionnaire form was used for primary data collection then analysis and interpret the collected data on the basis of the aim and objectives of the paper for the presentation of the social reality and conclusions.

Analysis and Discussion

Online learning produces cognitive overload that reduces the quality of comprehension, prioritization, and deep-level processing of incoming information, thus leading to insufficient processing and internalization of content disseminated by the course instructor. In that same Gallup poll, 45% of parents said that separating their child from classmates and teachers is a "major challenge." Junior Maggie Gross agrees. Lack of physical interaction has killed my mental stability. Online video calls are socially draining as it takes more work to pick up social cues and not see people's faces and bodies in real-time. A National Geographic article explains that a typical video call impairs these ingrained abilities, and requires sustained and intense attention to words instead. This is referred to as Zoom

fatigue. School routines are essential coping mechanisms for children having psychological issues. However, when schools are closed, they lose an anchor in life, and their symptoms could relapse. Going to school had been a struggle for some children with depression before the pandemic, but at least they had school routines to stick with, "Now that schools are closed, some of them refused to take showers or eat food some have difficulties in sleeping. When the school reopens, children suffering from depression might have a problem adjusting to everyday life.

- **Computer Vision Syndrome**

American Optometric Association defines computer vision syndrome as a group of eye-and-vison-related problems triggered by prolonged digital device usage. The association argues that the unique characteristics and the high visual demands of the computer, and the unregulated screen time make individuals susceptible to vision-related syndrome. Studies of scholars like Swati Agarwal et al. (2021) and Chee Wai Wong et al. (2021) discuss a range of ocular problems like discomfort leading to tearing, tired eye, burning sensation, headache, blurring vision, redness, and double vision that has augmented during the COVID-19 pandemic.

- **Insomnia**

Medically, Insomnia may be defined by the presence of an individual's report of difficulty with sleep. Sleep is a state in which the body rests by reducing its interaction with its surroundings, which helps the body recover from daily fatigue. Sleep deprivation and irregular sleep cycle can have a negative impact on memory, concentration, and performance. Rosenberg et al. (2019) stated that spending a lot of time in front of digital screens has severely affected sleep quality, and they find it difficult to fall asleep. Morin (2021) argues that online work culture has generated for many people "significant stress, anxiety, and worries about health, social isolation, employment, finances as well as the challenge of combining work and family obligations. Such a major stressful life event is also likely to have impaired sleep and circadian rhythms, at a time when healthy sleep is particularly important to cope adaptively with this crisis and uncertainty about the future.

In a similar vein, Ruchir Khare et al. (2020) state that during COVID-19, the extension of the screen time has an adverse effect on the sleep health of the students. The blue light emitted from digital devices is known to problematize the normative functioning of the endogenous circadian melatonin release. The disturbance in hormonal functioning leads to an increase in evening alertness, sleep latency, and the timing of rapid eye movement sleep.

- **Orthopedic Pains**

Although a few blog pieces are written on the interconnectivity between orthopaedic pains and online classes, we cannot retrieve scientific research articles on this issue. Therefore, the following section on the findings might be a humble attempt from our end to fill in the research gap. These devices cause harm by emitting short high energy waves that can penetrate eyes and can eventually contribute to photochemical damage to the retina cells, a making an individual vulnerable to a variety of eye problems.

- **Depression and Anxiety**

Depression is an affective phenomenon. It may be defined as the state of stativeness that ruptures the patient's understanding of selfhood. People suffering from depression

experience sadness and loneliness for no known reason. The COVID-19 pandemic has a severe impact on the mental health and well-being of the population. Social isolation due to online classes contributed to the risk of clinical depression as one cannot interact with teachers and academic. The Head of the Department of Andhra Medical College, P Venugopal states that in schools and colleges, students have free slots which they can use for socializing. Unfortunately, online classes offer little scope for this, thus causing strain in the growing minds. Internet addiction can cause social isolation, which ultimately leads to depression. The ongoing mental health concern by stating that online classes impair the social cognitive abilities of learners. Online classes hinder the normative development of affective factors such as empathy, teaming, and peer relationships, thus contributing to isolation and alienation that are medically conceived to be the etiology of depression and anxiety. From the above review of the existing research, it may be concluded that although health issues in the current era of the global pandemic have received satisfactory attention, limited research has been produced to understand the correlations between the students' responses to the health issues triggered by online classes and media narratives. Thus, this research paper attempts to contribute to the comparative study of subjective responses and media discourse.

Conclusion:

Online classes have affected the students' health in different ways, as mentioned in the research article. Students face many vision issues like dry eye syndrome, burning sensation of eyes, loss of focus flexibility, near-sightedness, and retinal damage due to the prolonged exposure to screen. In addition, spending a lot of time in front of digital screens has severely impacted the \quantity of sleep, and in some cases, it also leads to difficulty in falling asleep. Due to this sleep deprivation, many teenagers felt symptoms of Insomnia and depression. But depression has not come into play just because of sleep deprivation but also because of the isolation faced by students mentally due to online classes. The issues need to be addressed explicitly if online education has to become a viable option for imparting education to every nook and corner of our vast country.

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Impact of Online Classes on the Health and Wellbeing of Students in India

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Abstract

The paper discusses the impact of digital education on the health and well-being of students who have been taking online classes since the onset of COVID-19. The paper also investigates the authenticity of the media reports that have been reporting about the decline in students' health due to the extensive presence of screen time. The study is primarily descriptive research with a qualitative and quantitative investigation of the narratives related to health issues such as impaired cognitive functions, eye problems, orthopedic disorders, insomnia, depression, and anxiety. Google form as an online survey tool is used to collect data later compared with the media reports to conclude. The findings conclude that students' responses corroborate with the narratives of emergent pathological culture reported by news agencies. The present study will help sensitize the stakeholders of the society about the detrimental impact of online classes that might create ground for adopting immediate corrective measures for protecting the future of our nation. The study's novelty lies in its approach to offer a comparative study of the media reports and the students' responses to cognize the severity of the evolving health issues amidst the pandemic.

Keywords: Online Classes, Media Reports, Mental Health and Physical Ailments, Students.

Introduction

Studies conducted in the area of mental health and disability have suggested that although the "COVID-19 pandemic does not fit into prevailing Post-Traumatic Stress Disorder (PTSD) modals or diagnostic criteria, yet emerging research shows traumatic stress symptoms as a result of this ongoing global stressor. The pandemic has brought significant changes in the life of millions of students throughout the world. Schools and colleges have been closed to prevent the spread of the pandemic, and there is no certainty as to when the students can re-experience campus life. Needless to say, the government, in its wisdom, has continued to insist that educational institutions should remain closed; however, this strategy has far-reaching consequences on the academic and social life of students throughout the globe.

Across the world, including India, great emphasis has been laid to ensure continuity of educational instruction to prevent students from losing an academic year. As a result, education through digital means or online education has become the norm of the day. Online education may be defined as education through electronic modes where relevant educational material is made available through text files, animated or audio files, streaming videos, and images. Every student who has a computer and a broadband connection can avail the opportunity to learn through online modes. Online platforms such as Byju's, Udemy, Tutorix, Vedantu, NPTEL, Edx, Microsoft Teams, G-meet, and Zoom Classes have emerged as the

new mode to compensate for the in-person classroom instruction. Technology has made all this possible. However, a country like India is grappling to solve the disparities triggered by the digitalization of education. A range of research articles is being published to draw the education policymakers and administrator's attention to the challenges of imparting education through digital mode.

In their study, examine the impact of digital education on the young generation. They argue that the practice of online education has led to the emergence and reinforcement of varieties of digital divides, such as polarization between students who are technologically equipped to make a quick transition to the digitalized education platform and those who are not. Children from diverse social backgrounds are not equivalently well equipped to embrace the digitalized future.

Aims and Objectives

The paper aims and objective was to draw society's attention to the impact of online classes on the health and well-being of the students. In addition, this article intends to focus on health issues such as impaired cognitive functions, medical issues relating to eyes, orthopaedic disorders, Insomnia, isolation leading to depression and anxiety.

Methodology

The study is descriptive research with qualitative investigation of the students' response and media narratives on the emerging mental health and physical health issues. To gain insight into the health problems being faced by students, we have specifically tried to elicit responses from students in the age group ranging from 17 to 20 years pursuing engineering degrees at our university who are supposed to sit in front of the computer for more than 8 hours a day. 184 students from our university have participated in our survey. Google form as an online survey tool is used to collect data that is later compared with the media reports to arrive at a conclusion.

Findings and Discussions

The data analysis has shown that 81% of the students have stated that online classes can act as an add-on to education, but it cannot be a complete substitution of the real-life classroom. The respondents state that online classes are held throughout the day, leaving little room for extracurricular activities. Furthermore, 65.2% of the students have agreed that online classes have negatively impacted cognitive processing, thus leading to poor academic performance.

- **Insomnia**

According to our survey, 62% of the students feel drowsy and struggle to concentrate during online classes. This was caused mainly due to changes in the sleep pattern and sleep deprivation. 54.9% of the students said that they are going through various stages of Insomnia. As there are no fixed hours for the classes, the easy availability of recorded lectures gives ample scope to the students to use the digital devices at any time of the day. An unintended consequence of this facility is that the students use time, otherwise available to them for relaxation, self-care, and socializing, to revise their lectures, thus spending substantial time

before their screens. This leads to a reduction in the number of hours available for sleep, thereby affecting the students' performance the following day.

Most of the respondent's state that their quality of sleep is affected due to their bedrooms being converted into a stressful place of work. The respondents stated that their minds are mentally conditioned to consider the bedroom as a place for relaxation. However, online classes have changed this perception, and after a day full of stressful online classes, they find it very difficult to sleep in the same place. Most of the respondents stated that this change has severely affected the quality of sleep. According to our survey, approximately 60.9% of the student's state that online classes have severely affected sleep quality.

- **Orthopedic Problems**

Our survey showed that the continuous use of digital devices for online classes has led to several orthopaedic problems in a substantially large proportion of students. The main reason for this issue is the "bad posture" characterized by an overly bent spine, slouched or slumped back, lurched shoulders, and an awkwardly bent arm or wrist (Dhar, 2020). Pains and aches are also related to the design of the laptops and the amount of time spent on the bed or poorly designed chairs at home. Our survey showed that 5 out of 10 people were suffering from neck or back pain due to the students spending long hours in an awkward position before their laptops. The problem is significantly compounded for those students whose laptop screen has inbuilt keyboards. Such devices cannot be separately arranged for efficient viewing and typing. Without the proper posture and the right kind of study desk, students complain about extreme pain in their backs, shoulders, and neck muscles because of slouching or straining for long periods. Some even experience stress, tingling sensations, headaches, muscle fatigue, and decreased performance because of bad posture.

- **Depression and Anxiety**

The study shows that approximately 15.8% of the respondent agree that online classes may be one of the leading causes for triggering depression. In addition, the data reveals that 82.1% of the students firmly believe that academic productivity has significantly declined due to the forced confinement and online classes. Nearly 65.2% of students believe that online classes are causing a negative impact on academic life. Online classes have forced children and their parents to change daily routines. Video calls may potentially replace in-person classes, but it affects an individual's mental and physical well-being. A similar narrative is captured in the student's news sites named "The Northern Light", operated by Portage Northern High School: Nationwide, 29% of parents studied in a Gallup poll said their child is "already experiencing harm" to their emotional or mental health because of social distancing and closures. However, 14% said their child could continue online school for a few more weeks until their mental health suffers. The online school doesn't have the social element of the in-person school, which is crucial to students' social and emotional learning.

Conclusion

This study stands as a reference for considering the health issues while designing online courses and classes in the near future. The study conclusively proves that it is imperative for educational administrators, institutes, and government to earnestly consider the social and medical impact online education has on students' physical and mental health and

recommend suitable strategies to lessen the impact of these issues. Our research shows that the majority of people prefer in-person classes over online classes. However, considering the impact of the pandemic, a collaborative approach involving teachers, students, and parents can be initiated to make online teaching more meaningful. In addition, specific strategies need to be designed to cater to students with cognitive impairment and other disabilities. Course design, online presentation, and the quantity and quality of the information provided have to be restructured to ensure that the students don't spend most of their quality time in front of their screens. A conscious effort should be made to encourage students to take up extracurricular activities, and excessive overload of the academic curriculum should be avoided. More emphasis should be laid on group activities and group learning to ensure that students don't feel isolated to the extent possible. In addition, parents should be sensitized about the infrastructures and study postures that need to be maintained while doing classes.

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Impact of Digitalization of Education on Students in India

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Abstract

The entire education system moved out of traditional classrooms made up of bricks and mortar with the onset of the COVID-19 pandemic. Teachers needed to shift to the online mode to teach students as a result of its outbreak. The aim of the study is to explore the positive and negative impact of digitization of education on teachers in India along with providing some recommendations in order to improve the online learning models. A qualitative research design was adopted in this study. The method of observation and case studies from previous studies were taken to reach out to the main objective. For analyzing purposes, Pestele analysis and cost-benefit analysis were used. According to the results of this study, teachers are facing a lot of issues like irritation, depression and hampering of their social relationships in this digital education phase. However, some positive things for teachers include a rise in teachers' income and a better career in the near future as they are now familiar with technology. The cost-benefit analysis further confirms that the negative impact of online education on teachers outweighs the positive counterparts. The study also provides recommendations for making online teaching easier.

Keywords: Coronavirus pandemic, traditional classrooms, online learning, students,

Introduction

The Covid-19 Pandemic has brought about a sudden shift in the student-teacher interaction throughout the world. The educational institutes were forced to close down overnight and forcefully accommodate the transition to online means of education, due to the rapid spread of the coronavirus. For students and teachers, this shut down implied more than just a pay-cut or a professional setback, it shook the basis of everyday learning and teaching. It was observed that the educational system in India faced unprecedented problems not only in adapting to, but also implementing new modes of learning. Several positive things can be acknowledged in the context of online learning. Technology has helped in keeping the practice of learning functional. However, digitization does not always indicate positive changes. Students, along with teachers in India, are faced with certain implicit negative impacts in the process of transition. In fact, more than the students, teachers had to undergo concerns of anxiety, fear due to the pandemic, maintaining a healthy work-life balance and difficulty imposed by the remote learning-teaching experience.

- ✓ **The Flipped Classroom:**

Educational systems throughout the world have undergone a paradigm shift in recent times. The traditional school practices have been turned into a socio-digital participation setup. The teachers with little training and even fewer resources have had to switch from working in face-to-face interaction to distance teaching mechanisms. Earlier, teachers were able to act as a pedagogue (a person who is able to make a perfect match between students'

needs and learning styles), Now the phenomena has changed to intensive online interaction which has resulted in hectic multitasking on the part of the teachers. The absence of face-to-face interaction in the new flipped classroom restricts the better implementation of students' needs-driven teaching.

✓ **What Is Digitization of Education?**

Distance learning is a formal learning activity that is carried out by teachers and students involving different forms of media such as google teams, zoom, and other forms of indirect face-to-face learning. Distance learning has existed in developed countries like the USA and UK, but India started to offer such learning activities only after the onset of the Covid-19 pandemic. The Indian education system, for ages, has propagated the practice of face-to-face learning in natural surroundings. However, if related to the current situations in India, distance learning inevitably must be carried out so that students can fulfil their responsibilities as students and get their equity to learn.

✓ **Availability of Resources and Student-teacher Interaction:**

All distance-learning activities must be sustained by technology or software that is a bridge so that learning can run smoothly. Online learning as a more liberal model of teaching, includes teaching content or learning experiences that are specifically delivered or activated by electronic technology and combines a variety of learning strategies and technologies, from CD-ROM and computer-based learning to learning video conferencing.

In India, the applications used to support distance learning include Google Forms, Google Meets, Zoom, Google Classroom, and others. The applications that have been mentioned help educators interact with students through video conferencing, for a more class-like learning experience. In addition, there is a substantial need to address the hindrances posed by this distance learning, especially for the teachers. Along with recognizing the factors like the digital revolution in education, the psychological changes in teachers and their resistance to change needs to be given due attention. A drastic shift in one's work and workplace require the exercising of serious stress management and coping techniques. Therefore, the purpose of the present study is to explore the positive and negative impact of digitization of education on teachers in India. The study uses qualitative research and analysis methods and provides recommendations for better online learning-driven models.

✓ **Context:**

The Teachers' Shift From Status Quo With the onset of distance learning in the system, many researchers took into consideration the underlying facets of digital learning mechanisms through qualitative or quantitative studies. Many recent studies have focused on several problems that arose with the digitisation of education, along with its positive pay-offs like the introduction of ICT (Information and communication technology) in education.

✓ **A Paradigm Shift:**

In Education Research depicted that a new approach is imperative in this online paradigm. Regular schooling ensures that the emotional, behavioural and social health of children is on a good track, which is opposite to the concept of social distancing. Thus, in post-pandemic times, a huge shift in the mindset of children is required, which further disrupts teachers' work-life balance. This is because teachers need to come up with new ways to inspire students to continue learning. It was shown that teachers are as important as health

workers because they are maintaining the social, mental and emotional well-being of children. This amplifies the need to discuss the behavioural changes in teachers in this new home-learning model.

Higher Education Institutes (HEIs) are swiftly adapting to alternative pedagogies with the aim to engage students virtually and to continue the learning processes. The new learning mechanism "Teach-From-Home-Students-At-Home" situation. It was shown that this is pandemic pedagogy that is completely different from the concepts of online education or distance learning. Online learning is a concept where teachers are given proper training and then allow teachers to teach from anywhere and anytime. The modern generation is called a generation with social and digital participation. But pandemic pedagogy refers to the sudden switch to online teaching in order to continue traditional educational programmes after the onset of pandemic. This is an emergency situation where teachers do not have the luxury of ideal teaching infrastructure.

The teachers may be delivering the lecture while doing household chores like cooking for their family. And, at the same time teachers are not much comfortable with online teaching tools and technology which puts them in a double whammy situation. Therefore, it opens up a gap to be fulfilled in terms of analysing the impact of pandemic pedagogy on teachers. The difference between traditional school practices and ICT (Information and Communication Technology) based educational practices. The difference between socio-digital participation (ICT based education) and traditional school practices is depicted in the following table. On one side, traditional school practices involve offline working with face-to-face interaction between students and teachers whereas on the other side ICT based education is featured with digital networking applications. ICT based education replaces 'teaching using blackboard' with 'teaching on screens.' Teachers need to make PPTs and PDFs to share in groups virtually instead of students taking down notes offline. It was pointed out that the internet provides a constant and intensive online interaction with different people. The fact that ICT based education has lots of advantages is true but the fact that cannot be denied is that teachers are forcefully imposed with online education models. Teachers did not face a smooth transition from traditional school practices to this new socio-digital education model.

- ✓ **Who is Teaching the Teachers:** (The Need for a Teacher's Mentor)

Several studies have already discussed the quality of education in government schools in India with recommendations on what can be done to improve the same. The need for the inception of the teacher-mentor model was highlighted in the pre-covid times. A teacher mentor acts like a guide to government school teachers of India and ensures their professional growth. Their role ranges from training, observations and providing effective feedback that results in the holistic growth of the teachers. For Zilla Parishad (ZP) schools in India, there is a formal post of 'Cluster Head' whose responsibilities are the same as that of a teacher mentor. The transfer of professional support from mentors to teachers is in two significant ways-classroom support and creating learning spaces. The facet of creating learning spaces need not be limited to just face-to-face trainings. An example could be the Massive Online Open Course (MOOC) for English teachers, which was conducted by the Regional Academy Authority of Aurangabad which helps the teachers in consuming online modules. Through

this, the teachers will not only get the professional training but implicitly learn how to use the technology that can be further incorporated into teaching.

The mentoring of teachers had been a high value-added method before the onset of the health crisis, it is still significant as moving to a virtual environment is as tricky as transitioning a classroom. Studies have proven that educators need a person to connect within these times of online education, even if it is on a computer screen or a mobile phone to get immediate responses to help them in setting virtual classrooms. The study of the behavioural changes of teachers with digitisation of education becomes significant, given the fact that teachers were in need of a guide or a mentor even in pre-covid times. The fear and anxiety caused by the pandemic along with the burden of household work made the life of teachers difficult.

Methodology

- **Research Design**

The paper tried to evaluate the impact of digitisation of education on teachers in India through a qualitative research design. The aim was to examine the teachers' ongoing behaviour in the online classrooms through observation. The qualitative research method was adopted to understand and evaluate the consequences or ramifications of the transition to online modes of teaching from a teacher's perspective. The specific method adopted for this research study was the method of observation. Since this method of observation is beyond control and is subject to different interpretations, thus previous studies on the related subject were taken for validation purposes.

- **Analytical Methods**

The methods of analysis employed in this study are PESTELE analysis and cost-benefit analysis. PESTELE analysis tool was used to get a comprehensive picture of the impact of online education on teachers. The main goal of the study was to get an overall picture in terms of both the positive and negative impact of distance learning models on Indian teachers, a comprehensive analysis tool like PESTELE analysis therefore is most suitable. Along with recognizing the overall impact of distance learning on teachers, an evaluation between costs and benefits to teachers from this model was intended for the purpose of giving recommendations. Therefore, the cost-benefit analysis tool was used.

Results and Discussions

The following results depict the impact of digitisation of education on teachers in India in the form of various analysis methods. The findings are organised into the following heads: PESTELE Analysis, and Cost-Benefit Analysis. Citations from previous studies were used as validation.

- **PESTELE Analysis**

The paper focused on analysing the impact of distance learning on teachers in India using the PESTELE Analysis. PESTELE Analysis is used in order to explore the effect of pandemic pedagogy on teachers on various grounds like social, economic and technological grounds.

- **Political:** Teachers with the onset of the pandemic needed a favourable political scenario to keep going strong. In this tough time of pandemic pedagogy, teachers need favourable policies and rules from several agencies of state and central governments.

Various state and central government' agencies have helped them in this regard. Studies from Wadia (2020) have shown that the state and central government had banned online classes for very young children and had restricted the length of online class time to lower down the struggles of teachers. Thus, the political environment is supporting teachers in order to curb their menace in online teaching.

- **Economic:** With the onset of a new teaching style using online tools and media, it cannot be denied that somehow this entire scenario has opened lots of opportunities for teachers. After months of struggling with online teaching tools, teachers have now become quite familiar with technology. This will definitely aid teachers in the near future, once technology is synthesized with traditional classrooms in the future. Thus, the paper came to the result that somehow this pandemic pedagogy is related to the increased income and a better career for teachers.
- **Social:** This 'emergency online education' situation has had a great effect on the attitude of teachers. Prior to the pandemic, a comparatively small number of teachers were using technology in order to make students understand the concepts in a better way. The pandemic pedagogy has affected the teachers work-life balance as they need to do both teaching and household chores simultaneously. Online classes are a headache for teachers as half of the time of the online class is spent in asking students whether they could listen to teachers or not (Shah, 2020). In some schools, teachers are instructed to teach in three shifts which further cause a delay in cooking and feeding their children. Teachers are consulting psychologists and asking about stress-management (2020). These effects lead to irritation and depression among teachers as they are stuck in lots of issues altogether. This also hampers the social relationships of teachers with their family members.
- **Technological:** Despite the challenges faced by teachers in the recent past due to the digitisation of education, some-how they have learnt how to use the technology in teaching processes. In this way, a positive change has been felt by teachers who are now able to integrate traditional classroom practices with technology and innovation for a better learning-driven model. The digital education has also strengthened the digital infrastructure of India as lots of ed-tech companies focus on the personalization of learning. As a result, students can learn at their own pace and learning paths are customized with artificial intelligence and data analytics for students' academic growth.
- **Environmental:** The impact of digitization of education on teachers on environmental grounds is neutral. On one side, politically and legally teachers are getting support through supportive policies and easing of evaluating methods. But on the other side, the natural environment created in a teacher's home might not be conducive for teaching online. Environmentally, a teacher might not be in a position to focus entirely on teaching students online. There might be lots of disturbances in the surrounding of a teacher caused by his/her children or due to other reasons, making it difficult for teachers to teach properly in a virtual scenario.
- **Legal:** Legally, teachers are not under any pressure to abide by some rules and regulations strictly. Rather, political parties are trying to create some good policies in

order to lower down the teachers' problems arising due to online education. Hence, teachers' situation is not getting affected more due to strict enforcement of unfavorable laws.

- **Ethical:** Ethically, teachers were put in a difficult situation with the onset of the pandemic. Morally, educational institutions and government agencies should have given proper training to teachers to get familiar with digital technologies in order to teach virtually. Teachers with the onset of the pandemic were supposed to switch to the online mode of teaching by themselves. Hence, ethical aspects are not in the favor of teachers amid the online education scenario.

- **Cost-benefit Analysis:**

The paper also intends to undertake an evaluation of the costs and benefits faced by teachers in online learning models. This cost-benefit analysis is undertaken in order to find out whether the costs to teachers outweigh the positive impact of online education on teachers. This analysis is significant for augmenting the paper with some recommendations for the improvement of flipped classrooms. The costs to teachers due to the digital education involve the hampered work-life balance, irritation, depression and hampered social relationships. These issues altogether are attacking the mental health of teachers that further induce them to seek for stress-management things. On the other side, the benefits to teachers involve better opportunities in the near future as they now have become familiar with technology. The future potential increase in their income and a better career in the near future are the positive things for teachers in this online education phase. The comparison of these costs and benefits that teachers are facing points out that surely, costs outweigh benefits. The costs in terms of irritation and depression that teachers are facing are severe as these affect the mental health of teachers. And, the degradation of mental health further affects the physical health of teachers. Plus, there is no certainty in regard to better career options for teachers in the near future. Therefore, the cost-benefit analysis discloses that teachers' situations are degrading in digital learning phase.

Conclusion:

The study lists recommendations to make the life of teachers easier to cope with the challenges they face in distance learning times. Teachers can put their efforts in teaching only core lessons, leaving non-important lessons to be studied by students themselves. This will not only make the life of teachers easier but will also inculcate a habit of self-study in students. By implementing this technique, teachers can have short teaching sessions that will further provide them enough time to engage themselves in household chores. Plus, teachers can let students take control in these difficult times. Students can decide on difficult topics that need to be taught in virtual classrooms. Students can come up with some innovative ways to learn like through a virtual group discussion among students that will also result in up-gradation of students' communication skills.

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Abstract

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Higher Education Institutes (HEIs) are swiftly adapting to alternative pedagogies with the aim to engage students virtually and to continue the learning processes (Pujari, 2020). The study from Pujari (2020) called this new learning mechanism "Teach-From-Home-Students-At-Home" situation. It was shown that this is pandemic pedagogy that is completely different from the concepts of online education or distance learning. Online learning is a concept where teachers are given proper training and then allow teachers to teach from anywhere and anytime. But, pandemic pedagogy refers to the sudden switch to online teaching in order to continue traditional educational programs after the onset of pandemic. This is an emergency situation where teachers do not have the luxury of ideal teaching infrastructure.

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- ✓ **Who is Teaching the Teachers:** (The Need for a Teacher's Mentor)

Several studies have already discussed the quality of education in government schools in India with recommendations on what can be done to improve the same. The need for the inception of the teacher-mentor model was highlighted in the pre-covid times. A teacher mentor acts like a guide to government school teachers of India and ensures their professional growth. Their role ranges from training, observations and providing effective feedback that results in the holistic growth of the teachers. For Zilla Parishad (ZP) schools in India, there is a formal post of 'Cluster Head' whose responsibilities are the same as that of a teacher mentor. The transfer of professional support from mentors to teachers is in two significant ways-classroom support and creating learning spaces. The facet of creating learning spaces need not be limited to just face-to-face trainings. An example could be the Massive Online Open Course (MOOC) for English teachers, which was conducted by the Regional Academy Authority of Aurangabad which helps the teachers in consuming online modules. Through this, the teachers will not only get the professional training but implicitly learn how to use the technology that can be further incorporated into teaching.

The professional development is critical to facilitating the transitions to virtual learning models amid the ongoing pandemic. Just like mentoring of teachers had been a high value-added method before the onset of the health crisis, it is still significant as moving to a virtual environment is as tricky as transitioning a classroom. Studies have proven that educators need a person to connect within these times of online education, even if it is on a computer screen or a mobile phone to get immediate responses to help them in setting virtual classrooms. The study of the behavioural changes of teachers with digitisation of education becomes significant, given the fact that teachers were in need of a guide or a mentor even in pre-covid times. The fear and anxiety caused by the pandemic along with the burden of household work made the life of teachers difficult.

Methodology

- **Research Design**

The paper tried to evaluate the impact of digitisation of education on teachers in India through a qualitative research design. Qualitative research is an iterative process in which improved understanding of the scientific community is achieved by making new significant distinctions resulting from getting closer to the phenomenon studied. The qualitative research method was adopted to understand and evaluate the consequences or ramifications of the transition to online modes of teaching from a teacher's perspective. The aim was to examine the teachers' ongoing behaviour in the online classrooms through observation. Since this method of observation is beyond control and is subject to different interpretations.

- **Analytical Methods**

The methods of analysis employed in this study are PESTELE analysis and cost-benefit analysis. PESTELE analysis tool was used to get a comprehensive picture of the impact of online education on teachers. The main goal of the study was to get an overall picture in terms of both the positive and negative impact of distance learning models on Indian teachers, a comprehensive analysis tool like PESTELE analysis therefore is most suitable. Along with recognizing the overall impact of distance learning on teachers, an evaluation between costs and benefits to teachers from this model was intended for the purpose of giving recommendations. Therefore, the cost-benefit analysis tool was used.

Results and Discussions

The following results depict the impact of digitisation of education on teachers in India in the form of various analysis methods. The findings are organised into the following heads: PESTELE Analysis, and Cost-Benefit Analysis. Citations from previous studies were used as validation.

- **PESTELE Analysis**

The paper focused on analysing the impact of distance learning on teachers in India using the PESTELE Analysis. PESTELE Analysis is used in order to explore the effect of pandemic pedagogy on teachers on various grounds like social, economic and technological grounds.

- **Political:** Teachers with the onset of the pandemic needed a favourable political scenario to keep going strong. In this tough time of pandemic pedagogy, teachers need favourable policies and rules from several agencies of state and central governments. Various state and central government' agencies have helped them in this regard. Studies

have shown that the state and central government had banned online classes for very young children and had restricted the length of online class time to lower down the struggles of teachers. Thus, the political environment is supporting teachers in order to curb their menace in online teaching.

- **Economic:** With the onset of a new teaching style using online tools and media, it cannot be denied that somehow this entire scenario has opened lots of opportunities for teachers. After months of struggling with online teaching tools, teachers have now become quite familiar with technology. This will definitely aid teachers in the near future, once technology is synthesized with traditional classrooms in the future. A study from describes the most important skills that teachers need to stand out while looking for a job in the corona era. The study explains that teachers need to have basic knowledge of using technology for teaching purposes. Thus, the paper came to the result that somehow this pandemic pedagogy is related to the increased income and a better career for teachers.
- **Social:** This 'emergency online education' situation has had a great effect on the attitude of teachers. Prior to the pandemic, a comparatively small number of teachers were using technology in order to make students understand the concepts in a better way. The pandemic pedagogy has affected the teachers work-life balance as they need to do both teaching and household chores simultaneously. A study clearly stated that a teacher might be giving a lecture virtually while working in the kitchen. A study from explains that teachers get questions from students the entire day irrespective of the time. Students believe that teachers are at their disposal 24/7. Online classes are a headache for teachers as half of the time of the online class is spent in asking students whether they could listen to teachers or not. In some schools, teachers are instructed to teach in three shifts which further cause a delay in cooking and feeding their children. Teachers are consulting psychologists and asking about stress-management. These effects lead to irritation and depression among teachers as they are stuck in lots of issues altogether. This also hampers the social relationships of teachers with their family members.
- **Technological:** Despite the challenges faced by teachers in the recent past due to the digitisation of education, some-how they have learnt how to use the technology in teaching processes. In this way, a positive change has been felt by teachers who are now able to integrate traditional classroom practices with technology and innovation for a better learning-driven model. The digitisation of education has also strengthened the digital infrastructure of India as lots of ed-tech companies focus on the personalisation of learning. As a result, students can learn at their own pace and learning paths are customised with artificial intelligence and data analytics for students' academic growth. Lots of lucrative opportunities will be opened for teachers in the near future as they are now accustomed to online meetings, conferences, and presentations. Studies have proven that instructors with no experience in teaching online have discovered new approaches to teaching in order to overcome the challenges of current times.
- **Environmental:** The impact of digitization of education on teachers on environmental grounds is neutral. On one side, politically and legally teachers are getting support through supportive policies and easing of evaluating methods. But on the other side, the

natural environment created in a teacher's home might not be conducive for teaching online. Environmentally, a teacher might not be in a position to focus entirely on teaching students online. There might be lots of disturbances in the surrounding of a teacher caused by his/her children or due to other reasons, making it difficult for teachers to teach properly in a virtual scenario.

- **Legal:** Legally, teachers are not under any pressure to abide by some rules and regulations strictly. Rather, political parties are trying to create some good policies in order to lower down the teachers' problems arising due to online education. Hence, teachers' situation is not getting affected more due to strict enforcement of unfavourable laws.
- **Ethical:** Ethically, teachers were put in a difficult situation with the onset of the pandemic. Morally, educational institutions and government agencies should have given proper training to teachers to get familiar with digital technologies in order to teach virtually. Teachers with the onset of the pandemic were supposed to switch to the online mode of teaching by themselves. Hence, ethical aspects are not in the favour of teachers amid the online education scenario.

- **Cost-benefit Analysis:**

The paper also intends to undertake an evaluation of the costs and benefits faced by teachers in online learning models. This cost-benefit analysis is undertaken in order to find out whether the costs to teachers outweigh the positive impact of online education on teachers. This analysis is significant for augmenting the paper with some recommendations for the improvement of flipped classrooms. The costs to teachers due to the digitisation of education involve the hampered work-life balance, irritation, depression and hampered social relationships.

These issues altogether are attacking the mental health of teachers that further induce them to seek for stress-management things. On the other side, the benefits to teachers involve better opportunities in the near future as they now have become familiar with technology. The future potential increase in their income and a better career in the near future are the positive things for teachers in this online education phase. The comparison of these costs and benefits that teachers are facing points out that surely, costs outweigh benefits. The costs in terms of irritation and depression that teachers are facing are severe as these affect the mental health of teachers. And, the degradation of mental health further affects the physical health of teachers. Plus, there is no certainty in regard to better career options for teachers in the near future. Therefore, the cost-benefit analysis discloses that teachers' situations are degrading in this online learning phase.

Conclusion:

The study lists recommendations to make the life of teachers easier to cope with the challenges they face in distance learning times. Teachers can put their efforts in teaching only core lessons, leaving non-important lessons to be studied by students themselves. This will not only make the life of teachers easier but will also inculcate a habit of self-study in students. By implementing this technique, teachers can have short teaching sessions that will further provide them enough time to engage themselves in household chores. Plus, teachers can let students take control in these difficult times. Students can decide on difficult topics that need

to be taught in virtual classrooms. Students can come up with some innovative ways to learn like through a virtual group discussion among students that will also result in up-gradation of students' communication skills.

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'Kids Mental Health Impact on Online Education'

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Abstract

Online education, spurred by the Covid-19 pandemic, can have a long-term impact on a child's mental health. Here's how to extend a helping hand. Covid-19 changed how teachers and students communicated. A heap of assignments, back-to-back classes, online competitions and the need to spend some time alone - there's so much to do and so little time! Well, such is the life of students these days, where they are under the constant pressure of something or the other, posed by online education. Schools that are able to provide engaging online classes along with co-scholastic activities and regular peer-to-peer interaction have seen better mental health among students.

Keywords: Kids, Mental health, Pandemic, Online Educations, Behavioural problems.

Introduction

The exposure children receive during school years, the experiences they have with peers, teachers and the activities they get involved in, shape their personality and prepare them for their future life. With such a major shift in the mode of education, children have lost the opportunity to go to school and have a normal life, where they get to meet their friends. Education is not just about classroom learning; it is learning from anything and everything, be it classroom lectures, being involved in co-curricular activities, learning life skills or even having discussions with peers. Children learn through all sorts of stimuli around, and sadly because of Covid-19. According to a study, as compared to pre-Covid times, children now have a sedentary, anxious, and depressed lifestyle. Additionally, this time has also led to increased phone usage and decreased physical activity.

The pandemic is a social crisis for children growing up in a world that is facing a public health crisis. Due to the closure of educational institutes, 1.6 billion students in 190 countries have been directly impacted. For children, brief periods out of education can have a lasting and adverse effect. Many have forgotten what they had initially learnt in school. Although online education has taken over, we must not forget that it still is not a viable option for many living in remote areas or for those who are not financially well-off. Not every child has the privilege of an appropriate environment meant for pursuing education from home. Such children have been affected the most, which in turn, has impacted their intellectual development.

Children are very resilient and can easily cope with the changes around them. But with so many things changing, it is crucial to take care of our mental health and well-being, while understanding how things around impact it, such as online education. Even when it's posing as a challenge in today's time, children can very well learn to enjoy the comforts of online world and grow. Do you get worried the minute your little one starts crying? The baby may be hungry, or maybe not! Find out other possible reasons behind it. Even before children can talk, he or she will show signs of hunger or fullness. Understanding your child's

signs of hunger is important so that you can put him or her to the breast while he or she is still calm. This technique is called responsive feeding. Here, you must watch out for any hints that your bundle of joy might give, and respond promptly to him or her. In this type of feeding, you feed the baby in the right way and let him or her stop when they are full. Responsive feeding is very important for the overall development and nourishment of the child. All you must do here is provide and the rest, your child will decide.

Objectives of the Study:

- To understand the perception and challenges of students by online education on their health.
- To find how online education affected students' physical, mental and emotional health.
- To find out how the behaviour of students changes before and during the pandemic.

Method and Scope of the Study:

This empirical research aims to see whether students in higher educational institutions are satisfied with technology-assisted Online Education and its effect on their physical mental and emotional health. The study used data collected through an online survey to learn how students are dealing with online education, which has been around for a long time but is still underutilized, and how satisfied they are with it. During June 2021, data was obtained. The online survey form was kept open for a week to allow respondents to reply. The participating population does not have a regional boundary.

Discussion and Analysis

There's a good side to online classes and a bad side too. For others, it has become monotonous, which has led to a rise in anxiety and hyperactivity among children. In this regard, Education. World spoke with a few child experts to know why they think this is happening and how it can be addressed.

- **Signs of children's mental health impacted by online education.**
  - ✓ Fatigue
  - ✓ Irritability and sudden mood changes
  - ✓ Low mood
  - ✓ Emotional outbursts in the form of anger and crying spells
  - ✓ Involvement in high-risk behaviour like gambling and porn addiction
  - ✓ Sudden weight gain or loss
  - ✓ Social isolation
  - ✓ Feeling demotivated
  - ✓ Restlessness and anxiety

The new rush of not going to school and sitting comfortably in pyjamas must have been very exciting to start with, but getting used to the new "normal" where children are supposed to attend online classes and work on assignments and other homework throughout the day has been hard. From not having a routine anymore, to not meeting any of their friends when the world around is crumbling because of a deadly virus hasn't been anything but traumatic for children.

- **Difficulties children faced since switching to online education:**

Humans are a resilient species and learn to adapt and evolve. When we as a nation have been through such a tough time and found a way out of it, we can definitely learn to make online learning fun.

- **Deterioration in physical and mental health:**

There's a very strong correlation between physical and mental health. With the shift to online mode, children are facing a lot of concerns like disruption in routine, no physical exercise, problem in body posture etc. Not getting any physical exercise also has a grave impact on the mental health of children, as they are facing social isolation.

- **Zoom fatigue:**

The new excitement of not rushing to schools, lying in pyjamas and attending classes was soon replaced with boredom of attending classes online. It has led to mental fatigue and burnout, because of sitting in front of a screen for long. A lot of children have developed social anxiety.

- **Self-esteem issues:**

Social learning is a very important part of education and children learn a lot through the same. Collaborative learning, learning through doing and peer learning play a very important role in not just helping children learn new skills but also building their self-esteem and image. In the absence of such close friendships and not being able to find safety in such relationships, children are now facing. These are just some of the challenges children are facing as a result of online teaching.

- **Children Should be Made the Things on the phase of online education:**

There's definitely been a lack of playtime with their peers, and interaction in class, which has affected children's social skills. Paediatricians saw an increased prevalence of delayed speech and language in kids.

- **Maintain a routine:**

Even though going out and following their previous lifestyle is compromised, children can seek stability by maintaining a routine. Having a fixed time of waking up and going back to sleep, and getting ready for online classes just like they would for school, and taking breaks in between can help break the monotony.

- **Create a study corner:**

Having a physical space separately can help children avoid distractions. Make this space as comfortable as possible by having comfortable furniture, good lighting and all the resources required in an organized way. It will not just help work without distractions, but also provide them with a comfortable and safe space designed by you with love.

- **Healthy diet and sound sleep:**

It's easier said than done in today's era to have a healthy diet when we have so many options of fast food available, which also act as our "comfort food". Instant gratification is what we all seek which makes us feel good in the moment but has a terrible effect on our health in the long term. So, try to make your children have a balanced diet, and help them exercise and sleep well. Make sure they eat well and exercise.

Conclusion

Children everywhere were not getting the same social exposure that they used to get in schools. It has been proven time and again that past traumatic or unnatural childhood experiences have a negative impact on an individual's development. The past one and a half year has brought in isolation and uncertainty. Many children don't have a healthy atmosphere at home owing to parental angst, family arguments, etc. It is also seen that work and family

pressure has led parents to spend less time with their children. Due to this, some have developed feelings of loneliness. For many, the pandemic has caused an unhealthy lifestyle. Online classes have disrupted the daily schedule and sleeping cycle for children and their parents (more so for toddlers). Some schools have also overburdened students with excess assignments, which has not helped. Sitting for long hours in front of a screen for classes has taken a toll on every child, with Zoom fatigue setting in.

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Digital Transformation: Reflection and Research Agenda

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Abstract

Digital transformation and resultant business model innovation have fundamentally altered consumers' expectations and behaviours, putting immense pressure on traditional firms, and disrupting numerous markets. Drawing on extant literature, we identify three stages of digital transformation: digitization, digitalization, and digital transformation. We identify and delineate growth strategies for digital firms as well as the assets and capabilities required in order to successfully transform digitally. We posit that digital transformation requires specific organizational structures and bears consequences for the metrics used to calibrate performance. Finally, we provide a research agenda to stimulate and guide future research on digital transformation.

Keywords: Digital business, Business models, Business strategy

Introduction

Digital transformation is particularly relevant for incumbent firms. Incumbents will face challenges and barriers when searching and implementing business model innovation for digital transformation given their legacy. In sum, digital transformation is a company-wide phenomenon with broad organizational implications in which, most notably, the core business model of the firm is subject to change through the use of digital technology. However, these new online retailers do not limit their reach to traditional retail industry; they use their digital resources to enter markets that were previously thought to be completely unrelated to retail, in search of further growth opportunities. Banks such as ING, consider Amazon as a major potential competitor, while one of the largest global shipping companies Maersk is facing potential competition of Alibaba. Such market disruptions have affected other industries as well: with Spotify substantially changing the music, TiVo and Netflix disrupting the TV broadcasting and film industry, and Booking.com and Airbnb fundamentally altering the hotel industry.

Despite the ubiquity and visible impact of digital transformation and resultant new digital business models, the academic literature has so far paid surprisingly little attention to these developments, only recently starting to address the topics of digitization, digitalization, and digital transformation. Until now, digital change has received most attention within specific business disciplines. For instance, marketing researchers have mainly focused on digital advertising and social media effects including attribution model developments and multi-channel and omni-channel developments. The strategic management literature has mostly focused on the conceptualization, operationalization and renewal of digital business models. In the information systems literature, researchers have traditionally paid strong attention to technical developments regarding adoption and use of digital technologies and resultant business value.

Digital transformation affects the whole company and its ways of doing business and goes beyond digitalization - the changing of simple organizational processes and tasks. It rearranges the processes to change the business logic of a firm or its value creation process. For instance, digital transformation in the healthcare sector is manifested by broad and deep use of IT that fundamentally changes the provision of healthcare services. The use of IT is transformative and leads to fundamental changes to existing business processes, routines and capabilities, and allow healthcare providers to enter new or exit current markets. Moreover, digital transformation utilizes digital technologies to enable interactions across borders with suppliers, customers and competitors. Hence, digital technologies can help to attain a competitive advantage by transforming the organization to leverage existing core competences or develop new ones. Therefore, digital transformation is inherently linked to strategic changes in the business model as a result of the implementation of digital technologies.

In pursuit of digital transformation, firms thus search for and implement business model innovation. To summarize, we describe the key characteristics of digitization, digitalization and digital transformation. They are often forced to deal with conflicts and trade-offs between existing and new ways of doing business. The move to digital may often require a marked departure from the status quo, and may lead to the obsolescence of existing business models. Incumbents may start with minor changes to gradually transform their traditional business into a digital one. For instance, automotive companies that enhance their customers' experiences by providing digital media access and enhanced security features via sensors that detect activity in blind spots to avoid accidents. Ultimately, they may transform their businesses. For example, Volvo Cars is hiring C-suite digital officers and dedicates a major part of its R & D investment to digital initiatives to speed up digital projects such as autonomous driving and concierge services.

Aim and Objective

In this paper, we aim to reflect on the phenomenon and the literature from multiple fields to aid an understanding of digital transformation and to stimulate future research by providing strategic imperatives and presenting a research agenda.

The objective of the paper is to identify the external factors of the research that have strengthened the need for digital transformation.

Analysis and Discussion

Commonly it is used flow model to describe the drivers, phases or levels, and imperatives of digital transformation. With the discussion on the external drivers of digital transformation, which presents the background of our discussion. Next, we analyse the literature from multiple disciplines to discuss the phases of digital transformation. Based on an understanding of these phases, we discuss the strategic imperatives that result from digital transformation.

- **Digital Transformation**

To conclude our discussion, we propose a research agenda for future research on digital transformation including digital resources, organizational structure, growth strategy, and metrics and goals.

- **The need for digital transformation:**

To identify three major external factors driving the need for digital transformation. First, already since the coming of the World Wide Web and its worldwide adoption, an increasing number of accompanying technologies e.g., broadband internet, smartphones, Web 2.0, SEO, cloud computing, speech recognition, online payment systems, and crypto-currencies) have risen that have strengthened the development of e-commerce. E-commerce global sales were $2.3 trillion in 2017 and e-retail revenues are projected to grow to $4.88 trillion in 2021. The omnipresence of big and advent of emerging digital technologies, such as artificial intelligence (AI), blockchain, internet-of-things (IoT), and robotics, are projected to have far-reaching effects on business. Although perhaps not each of these technologies will be as powerful as expected, the wide entrance of new digital technologies clearly signals the need for firms to transform their business digitally. Moreover, these new digital technologies may also affect the firm's cost structure through replacing costlier humans during service delivery with the help of robots or virtual agents or optimizing logistic streams and reducing supply chain costs through the use of AI and blockchain.

Second, due to these new digital technologies, competition is changing dramatically. In retail, technologies have disrupted the competition landscape, shifting sales to relatively young digital firms. Not only has the competition become more global, the intensity has also increased as big, information-rich firms from the U.S. and China start to dominate numerous industries. Notably, changes in firm valuations strongly reflect this shift. Just a decade ago, the five most valuable firms of the S&P 500 Index included Exxon, GE, Microsoft, Gazprom and Citigroup, only one of which was truly digital. On May 2018, the S&P's top five most valuable firms were all digital including Apple, Alphabet, Microsoft, Amazon and Facebook. The dramatic rise of digital firms is even more noticeable given that the FAANG stocks (Facebook, Apple, Amazon, Netflix and Google), which constitute just 1% of the S&P 500, caused a massive surge between March and May 2017 of $260 billion in market valuation, while the remaining 99% lost $260 billion in the same period.

Third, consumer behaviour is changing as a response to the digital revolution. Market figures show that consumers are shifting their purchases to online stores, and digital touchpoints have an important role in the customer journey affecting both online and offline sales. With the help of new search and social media tools, consumers have become more connected, informed, empowered, and active. Digital technologies allow consumers to co-create value by designing and customizing products, perform last-mile distribution activities, and help other customers by sharing product reviews. Mobile devices have become important in today's consumer behaviour and facilitate showrooming behaviour, the practice of examining merchandise offline, and then buying it online. Consumers also strongly rely on apps, and new AI-based technologies, like Amazon's Echo and Google Home, that are entering consumers' lives. These new digital technologies are likely to structurally change consumer behaviour, and, consequently, the use of new digital technologies can easily become the new norm and defy traditional business rules. If firms cannot adapt to these changes, they become less attractive to customers, and are likely to be replaced by firms that do leverage such technologies.

- **The phases of digital transformation:**

Given the multidisciplinary nature and broad coverage of digital transformation research, we reviewed the multidisciplinary literature to understand what is known about firms' digital transformation. To better understand the existent knowledge, the intersection of different fields must be studied rather than relying on a single field. A cross-discipline exchange of knowledge helps to better grasp the strategic imperatives of digital transformation, as it involves multiple functional areas, including marketing, information systems, innovations, strategic and operations management. Treating digital transformation - as existent research has done - in functional silos would potentially lead to ignoring relevant aspects or not optimizing cross-fertilization opportunities. For scholars, understanding the different research streams helps to stimulate the cumulativeness of research.

We conducted a scoping review approach to understand how the multiple disciplines have conceptualized and defined digital transformation. Our review of the different fields of information systems, marketing, innovation, and strategy reveals that all streams identify multiple phases or stages of digital change, ranging from relatively simple to more pervasive changes. Based on our scoping review, we identify three phases of digital transformation: digitization, digitalization, and digital transformation. Most of the literature subscribes that the first two more incremental phases are needed to attain the most pervasive phase of digital transformation. *Digitization* is the encoding of analog information into a digital format such that computers can store process, and transmit such information. Research also refers to digitization as a change of analog to digital tasks, or conceptualized it as the integration of IT with existing tasks, and, more broadly, as the development or enabler of cost-effective resource configurations using IT.

- **Strategic imperatives of digital transformation:**

Many factors could have contributed to these impressive numbers, two key drivers behind such growth are the platform's high scalability and reinforcing network effects. Platforms can grow quickly and handle a growing number of users, including customers, suppliers, complementary service providers, because the costs of serving additional users are low and in the case of digital platforms sometimes negligible. Next, the platform model implies that a growth in the number of users on one side e.g., customers or suppliers, attracts users from the other side, as they receive higher utility from using the platform, due to increasing network effects that create virtuous loops. To illustrate the power of the platform-based business model, The financial performance statistics of a self-selected set of platform and non-platform firms. Platform firms realize much higher net income and equity per employee than non-platform firms.

To better understand how digital firms can grow using a platform business model, we rely on the Ansoff matrix, which identifies four growth strategies: market penetration, product development, market development and diversification. This shift implies moving away from focusing on the creation of new products towards the management of platform partners such as suppliers and customers, even if this results in lower sales on a per-product basis. The Ansoff matrix shows the opportunities for revenue growth through the development of new products, new markets or both. Beyond the differences in metrics across phases, we also discuss some general differences between traditional incumbents and new digital entrants. Specifically, we observe that many traditional incumbents stick to profitability as a financial

metric, while many digital firms focus on growth figures instead of profitability. For practitioners, it is necessary to bring together the insights from information systems, marketing, strategic management.

- **Digital Transformation and Challenges:**

The apparent lack of empirical research on the link between the different phases of digital transformation and performance leads to an important question: to what degree should firms transform digitally? And, what is the impact of the different phases of digital transformation on performance? In doing so, we need to gain a better understanding of the contextual influences and determine which internal firm and external market factors may moderate the impact of digital transformation on firm performance. Based on the above, we define digitization to describe the action to convert analog information into digital information. Examples concern the use of digital forms in ordering processes, the use of digital surveys, or the use digital applications for internal financial declarations. Digital Transformation inculcate to the innovation, and operations management in order to make sound organization-wide decisions about how to respond to digital technologies and implement digital organizational changes.

The primary challenges of the digital formation the many digital firms are to achieve growth in the sheer number of users of the digital ecosystem to create reinforcing network effects that enable further platform growth. While platforms' growth initially strongly hinges on the introduction of a successful product, over time the focus increasingly shifts away from a product-based mindset towards a platform-based mindset. A fast-growing customer base allows them to accumulate valuable data at scale, which can be leveraged both internally, and externally. As long as shareholders expect that the firm is able to capitalize on their growing user bases, they are willing to accept losses in return for growths. Typically, digitization mainly digitalizes internal and external documentation processes, but does not change value creation activities.

Conclusion

First, more research is required to understand how firms go through the *phases of digital transformation.* Based on prior literature, we assume that incumbent firms go through the same sequence of digitization, digitalization, and then to digital transformation. Is such a path always optimal? Perhaps incumbents should skip the phase of digitalization to realize digital transformation, as this phase may hinder or obstruct digital transformation. Future research can also try to measure and investigate how digital readiness of firms may help the transition through the phases of digital transformation. Another concept requiring scholarly attention is digital resilience of firms, focusing on whether incumbent firms are able to compete with (new) digital players and accommodate exogenous shocks from disruptive digital technologies. Finally, little is known about to which degree firms should transform digitally. Although digital transformation seems inevitable in many industries, still it should not be considered an end in itself, given the deep changes needed and high risks involved.

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Advancement in Digitalization and its advantage on E. Learning Circumstance

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Abstract

The online learning experience today is a fundamentally different environment than the traditional classroom. Online education takes advantage of innovative collaborate tools and their applications to create models of borderless online networks. With borderless online networks from innovative devices, hardware, and software, we can create dynamic online learning opportunities. Complex technologies allow more people to gain access to broader areas of information. All of the highlighted factors are outlined in detail within the attached models and come with examples of devices and systems that may play an important role in online learning. As miniaturization, resource management, and power consumption technologies improve, this factor will influence the success of adoption in almost every other area in mobile technology.

Keywords: Advancement, Digitalization, Advantages, Device, Mobile, E. Learning,

Introduction:

Integrated technologies might even be utilized to combat issues such as plagiarism and academic conduct. Students prone to cheating on an exam may be highlighted by subsystems that monitor human behaviour in a classroom setting. Increased heartbeat and rapid eye movement might be monitored by onboard devices, which in turn signal educators of potential academic dishonesty. In such a manner, a single educator could have much more control over a classroom setting. Integrated technologies need not only focus on monitoring the user; they may also act as extensions to interact with the environment. Finger sensors in development at MIT are a good example of such an approach. These devices focus on what objects the finger points at and then converts any relevant data into something meaningful for the user. In the future, such devices would be embedded systems providing information to the student and feedback to the instructor. For example, finger sensors might create a map of where a student plays keys on a piano. The instructor in turn can read this map and get an idea of what trouble the student is running into, all without ever seeing or hearing the student play a single note.

The key features of wearable computing, as a continuation of the core principles of ubiquitous computing, are permanence, extensibility, and multi-tasking. Permanence means that these devices will no longer have the distinction between "on" or "off." These devices will always be available and operational. Extensibility refers to wearable computers as an extension of ourselves, providing insight into the local environment that may not readily available to normal human perception. Multi-tasking represents our ability to operate and interact with such devices while simultaneously performing other tasks. Wearable computing will provide tremendous value to the mobile and online learning fields. Through a student's perspective, these devices provide constant and immediate feedback throughout their day regarding classroom updates, assignments, and learning material. Furthermore, these devices can provide location-based contextual information without the need for a physical educator

present. For example, students working in electronics may perform assignments on a simple breadboard or logic circuitry.

The next step from wearable computing is the direct fusion between technology and human users. This would involve direct interactions between digital components and biological or physiological processes. Advancements such as bioskins and micro-sensors can provide information on a user's physical self, but future technology will go far beyond simple sensors. Of particular interest in the field of education are the reactions and signals of brain wave patterns. We may soon be able to monitor these patterns with mobile devices to better understand cognitive development directly in a classroom setting. The process of electroencephalography (EEG) measures the electric activity present in the human scalp and maps it to develop patterns and ascertain the response to certain stimuli. EEG measures changes in voltage that result from shifts in current within the neurons of the brain. While these technologies are fairly limited today, future research will take this far and beyond what we can imagine. As our understanding of the human mind develops, so too will the devices that interact with the brain.

Empirical Discussion and Analysis

A more detailed understanding of neuroscience may lead to devices that can assist with students that suffer from a wide range of learning disabilities. If a device measures favorably with a certain teaching approach, further efforts could be made to pursue a particular course of action more readily than waiting a prolonged period of time to determine its effectiveness.

- **Immersive Technologies**

Immersive technology aims to simulate or extend a physical classroom presence into a single user's location. The key concept here is simulation, creating a digitized representation of what the student would normally experience in a typically academic facility. While integrated technologies aim to extend a user into their physical surroundings, immersive technologies aim to replace a user's physical surroundings with a computer-simulated alternative. Many of the far-off futuristic technologies are represented in this realm, concepts like virtual reality, holograms, telepresence, and haptic feedback. Some of these technologies are closer than one might imagine.

Virtual reality and simulation tools have been in use for years, especially in the military domain. As the technology becomes cheaper and more accessible, education and mobile devices will begin to integrate them into their core functionality. Head-mounted displays already exist in a number of forms and fashion. In the future, we may have the option to swap between augmented-reality vision and virtual-reality seamlessly. The trick will be in how we translate physical movements into this digital realm. One device, the Virtuix Omni, already achieves limited translation of physical movement into movement in a simulated environment. As the form factor requirements become more usable, the major hurdles that full virtual reality face will be overcome.

- **Adaptive Courses**

The future of online education will incorporate advances in artificial intelligence to the point that a course will be able to dynamically adjust teaching methods to best suit each individual student. Courses will develop a learning model based off various interactions with

student types, and then create a customized knowledge framework for student categories. For example, a basic knowledge framework might incorporate levels of interaction with the educator as well as levels of interaction with the classroom participants. This could then be subdivided to create four distinct subgroups such as the "Agent," "Nomad," "Keeper," and "Analyst".

The Agent prefers heavy interaction with the facilitator and low interaction with peers. The Analyst is the opposite, preferring communication at the peer level over those with educators. The adaptive course of the future will factor in a student's past academic history to derive an appropriate learning module out of the core content provided by the course developers. In this manner, certain assignments may be designated to the student types most adept at pursuing and engaging them. For example, students with an inclination towards self-analysis and critical thinking may be automatically assigned to writing research papers while students that benefit from group interactions may be assigned collaborative projects instead.

- **Language Processing**

A tremendous amount of content viewed on mobile devices is typically text based, especially in online classrooms. In addition, most users interact with their online classrooms in a traditional textual input mechanic, such as forum posts or emails. The use of voice as a control and learning mechanism can greatly increase the speed and effectiveness of online learning. Tools like Apple's Siri and Google Voice rely on a mechanism called Natural Language Processing (NLP) to translate speech to text and vice versa. It can help to make online learning smarter, by analysing the meaning of content and taking suitable actions for users. However, NLP is still in its infancy. Due to its complexity, NLP has not found widespread adoption in today's devices. Future research in NLP will open up the possibilities of this technology; enabling devices to not only interact in their own language, but any other language possible. Language and dialect barriers will recede as users are able to immediately translate their inputs and outputs from one language to another. This will greatly increase the ability for distance learning on mobile devices.

- **Malleable Computing**

As form factor technology advances, the capabilities of integrating processors and circuitry into any number of objects increases. Soon, mobile devices will represent a myriad of wide-ranging applications, from wearable visors and watches to biological sensors and holographic projectors. Traditionally, mobile devices have been rigid in form factor, but this will change as nanotechnology creates new methods of creating circuitry in flexible material. The bioskin sensors are a good example, but this technology can go much further. Imagine the possibility of individual sensors and circuitry embedded in a malleable substance, one that can be molded into various shapes and sizes. The ability to physically alter the shape of a digital object will allow a wide range of educational opportunities. Students in manufacturing and design can create rapid prototypes out of "digital clay" in the real physical world. These devices will have the added effect of providing haptic feedback to the user to better understand the physical dynamics of their product.

- **Challenges**

Challenges present in the Digital market include usability and privacy concerns. Usability refers to the intuitiveness and operability of mobile devices, specifically how easy

they are for users to learn and interact with. Privacy refers to the confidentiality and security of student information and data. The rate of device development has traditionally outpaced the research in Human-Computer Interaction (HCI) and security usage factors. As mobile learning incorporates a wider range of devices, usability and proper data handling will play a major part in determining the adoption rate and success of newer technologies such as augmented reality and wearable computing.

What can we imagine for online learning and beyond, moving virtual reality towards online learning? Is it so farfetched to think of a holodeck and immersive media in the online classroom? Imagine integrated devices providing simulated environments with seamless overlays; with only the touch of a floating screen we could interact with the next generation of online learning. Malleable devices and 3D printers could provide an untold level of interaction and dynamic matter creation and conversion. This vision is not so far beyond our grasp. Our recommendation is further study into these models for the online classroom of the future.

Conclusions

This paper contended that technology changes advanced online education. A review of the literature examined technology vicissitudes, online education systems, along with mobile device literature from 1950 to our present time in order to build a picture of past, current, and future trends for online learning and technology changes. The object of this descriptive study was to create several models to understand technology changes for mobile devices and how this understanding can be used for online learning. The application of this approach led to a better definition of mobile awareness and greater online visibility relative to the selection of the appropriate model criteria and requirements. Several models were created to show hardware and software advancements to design mobile awareness which highlighted borderless networks to benefit online teaching and learning groups. Technology is rapidly transforming the way education is delivered through online and mobile systems. Perhaps the most important factor of innovation is the forward march of hardware advancements. Student athletes may be able to receive guidance from a coach, located miles away, simply based on the feedback of these sensors.

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Impact of Digitalization on the Socio-Economic Pedagogy

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Abstract.

Due to the accelerated pace with which developments in digital technology are taking place, digital society, digital economy and digital pedagogy have become real and, in turn, are generating specific challenges. In this environment, digital skills and competencies are essential in order to achieve professional success and the personal development of any individual. Through this paper, we aim to bring to light the basic concepts in the field of digital technology and at the same time, the topical implications on the socio-economic educational processes. The main objective of the paper is to reflect the impact of digitalization on socio-economic pedagogy sector. The importance of the topic under consideration can be justified with many arguments, but we will mainly appeal to the need to meet the objectives proposed by the 2020 Strategy in the field of Socio-economic pedagogy. Considering the previous premises, in the paper, we will present information about the concepts of digitalization and the implications in the field of Socio-economic education. The realization of this paper is based on the study of the specialized literature, of the official documents published by the Government offices and of the statistics issued by the specialized bodies.

Keywords: Digitalization; Digital age; Pedagogy, Knowledge economy; Strategy; skills.

Introduction

The role of digital technologies and resources is to improve and add more value to the learning and teaching processes. To this end, teachers and students can access an increasing number of digital technologies and resources and use collaborative platforms to improve teaching and learning practices. However, despite the obvious benefits of incorporating technologies and digital resources into formal education, political challenges remain. In the member countries of the European Union, numerous national policy initiatives have been implemented to integrate digital technologies and resources into education. However, surveys and studies, for example, those conducted by the European Commission, O.C.D.E. and the World Economic Forum, stress that there is still a gap in the integration of digital technologies and resources in European education systems. Regarding the formulation of public policies in this area, there are several areas of action that governments should focus on in order to benefit from digitalization, collaborating with other stakeholders, especially with businesses and individuals who are pushing for change.

In order to accomplish easier their objectives, HEIs should always foresee the results and the path towards them. Considering the global level, the majority of prestigious HEIs, known as world-class universities are renowned for their impressive research programs and results published in international journals. There is ample evidence that this type of HEIs, like research universities, are engines of intellectual, technological and economic development. However, scenario foresee that the Golden Age of Information has yet to come and this explains the features of this period like the cheap or free knowledge transfers, the customers'

options to belong to virtual communities and increasing requests for customization. Consequently, the combination of these no-constraints activities and free resources generates "a fertile ground for unlimited innovation" that further generates economic, social, environmental and political types of value. We consider that as an extension of the presented phenomena, digitalization has become a popular trend characterized by opportunities and challenges that are increasingly present in business activities, in developed and developing countries and, therefore, in the Romanian economy too.

The phenomenon of digitalization in education in recent years, digitalization has changed and provoked the whole society, creating new working skills, modern cultural conditions, and innovative tools for communication and entrepreneurship. In a knowledge economy, where knowledge becomes a strategic resource, digitalization connects with intellectual capital, services and states, facilitating business processes, partnerships, interaction, leading to the creation of complex networks. Within this strategy, ambitious goals were set to produce impressive achievements in the field of education, with the main aim of integrating state-of-the-art digital solutions, resources, and methods into the activities of the educational institutions in the European Union. Given that the use of information and communication technology (ICT) has proven to have a remarkable impact on economic development, the so-called "digital divide" phenomenon has become a matter of great interest to researchers and policymakers.

Analysis and Discussion

The correct understanding of the two processes is necessary for the general public knowledge but especially for those who are going to be involved in such a transformation that involves the innovations in the digital domain. The implementation of the two processes captures different aspects in terms of resources, technologies and the nonlinear integrators of the organizational capital.

- **Framing the digitalization phenomenon in HEI**

The particular the phenomenon of digitalization as this is needed in more and more organizations as well as in HEIs. Adapting HEIs to mass digitalization is vital as the clients of these institutions are mostly from the younger generations, people who are complementary to digital technology, and more than that they are indivisible. Digital technology integrates into the lives of individuals from an early age and begins to accompany them permanently, which forces the educational system to adapt to these generation's needs. The existence of digitization is now a facility / an advantage offered by HEIs, but it is expected that in the future digitalization will be a criterion of existence or non-existence of these institutions. Today, more than ever, the efficient use of digital technologies and learning resources in education and training is considered a key factor in achieving the educational objectives of the Europe 2020 Strategy.

The question is how universities should prepare for global digitalization? Because at this point arises an issue of compatibility, of bridging the traditional system with the future system. Professional voices say that in order to adapt to the global technological advancement, universities should urgently rethink and upgrade their mission and strategy, and become intelligent organizations. HEIs must engage for the target of becoming competitive by embracing technology innovations and shifting as many of its activities to the digital work-

zone. Primarily, HEIs should support the implementing of digital-based processes for their own functional system and further to provide digital teaching and digital learning channels. The latest technological advancements that are impacting the economy can be linked directly or indirectly to HEIs either as sources which produce the innovations or as vectors of dissemination through research publications or through collaborations with the industry. Thus, even if HEIs move forward and embrace digitalization their core missions, of teaching and researching, continue but are upgrading their tools.

Nowadays, HEIs are at the heart of European agenda policies as they are considered main actors for the innovation systems and major stakeholders in generating and disseminating knowledge. Paradoxically, they are though increasingly questioned about their ability to address the challenge of fast business, technological development, and social change. For the scope of making these organizations more competitive and more sustainable over time, universities must elaborate a vision building process and introduce governance models of strategic governance of their internal affairs and external relations. It has become obvious that today, HEIs are allocated many tasks from the external environment coming from different categories of stakeholders. In this situation, HEIs must be selective and accurate in providing the necessary attention for connecting the adequate response reaction to each category of stakeholders, whether we speak about students and their families; private firms and public institutions; the State and all the national and local governments; and not least, the community. HEIs have to respond to many roles and further on to continuously diversifying challenges. The accelerated change is really inconvenient for large structures like the HEIs and requires the surpass of many barriers in the adaptation process.

- **Index and Indicators of the Digital Economy:**

According to the "Index of the Digital Economy and Society (DESI) 2017, which measures the progress of the EU states in terms of the evolution of the digital economy and society, there are five major elements that group more indicators that are presented in table 1. Of the five indicators, Romania ranks last for four of them. However, the only best-performing indicator for our country is "connectivity", for which 12.5% are registered, which places Romania registered by the member countries of the European Union. Changes in the economic, political, social and cultural fields lead, without mistake or delay, to changing priorities in the field of higher education. Organizations that really want to prepare for a successful future, leverage technology and data to transform processes and upgrade systems - in order to achieve, what is now called the digital transformation.

Table 1. DESI indicators

Sr. No.	Indicator	Indicator
1	Connectivity	Broadband, mobile broadband, broadband speed, and prices
2	Human capital	Basic skills and use of the Internet, advanced skills and development
3	Use of internet	Use of content, communication and online transactions by citizens
4	Integration of digital technology	Business digitalization & e-commerce

5	Digital public services	e-Govern

The second indicator that Romania occupies the last place is that of "human capital", which measures the basic competencies and use of the Internet, as well as the advanced and development skills in the digital field. Although the number of people identified with online activity is increasing, their level of digital literacy is low and so our country remains in the last place at this indicator. This is a worrying reality as it can generate, according to statistics, a crisis of skills, and even more a crisis in the field of labor. In this context, it is advisable for Romania to implement strategies to increase the level of digital skills from the basic to the advanced, especially since just over half of the Romanians are regular Internet users (56%), compared with 79% in the EU and 28% of Romanians are currently in higher levels of digital skills.

- **Strategic directions for implementing digitalization**

In order to implement a successful digital transformation, HEIs should develop a wide range of capabilities in their field of action, depending on the educational programs they offer, the projects they implement and the strategic vision they follow. In fact, digital technology is 'abusively' requesting a lot of attention throughout all means and thus easily accedes to the core of our activity. This is a strong motivation for organizations as HEIs to reconsider their position on the market, to revise their strategy and even to upgrade their vision and mission not to remain trapped in the past. Unlike business organizations for which digitalization drives the diminishing of entry-barriers and disrupts existing value-chains, industry structures, and business models, HEIs have the field advantage that cannot be easily overcome.

First of all, HEIs must become themselves digital organizations in order to provide digital teaching, digital learning, digital experiences, and finally, digital skills for their students. Becoming digital organizations requires digital endowments and specialized staff. It is important that the necessity of change is well understood, is approved and accordingly prepared by all parties involved. Organizational change, implemented in such large structures is likely to meet a certain resistance to change, which might be caused by a different type of factors. Passive factors refer to the individuals' habitude to their work style as well as a certain level of convenience with the daily work routine. On the other hand, there are active factors which include an offensive attitude towards new and alternatives methods or ways of developing tasks. At this point, HEIs should focus on understanding the main drivers of digitalization which are promising to lead to positive results and popularize them. Further, we present the main drivers that should motivate HEIs to pursue this goal actively.

- **Enhanced competitiveness:**

To achieve this goal, two types of action must be used. On the one hand, the decrease in the number of students must be compensated with better efficiency of institutional operations. On the other hand, attracting students (from a decreasing pool) can be done by increasing the attractiveness of the services offered and by aligning with the candidates' preferences regarding the digital experience.

- **Control of costs:**

The financial management of the institutions must-have in the foreground the reduction of costs. Moreover, more attention is needed to justify tuition fees so that the cost/benefit ratio is a positive one for both students and the university. An alternative to reducing costs is one that saves on staff time and simultaneously reduces the volume of materials needed for file storage, which is called the spiral administrative method of controlling costs. The emergence on the market of SaaS solutions greatly facilitates the access of HEIs managers to acquire and implement them without spending their time and money with specialized teams or with the IT department.

- **Improved user experience:**

Studies show that, on average, 4 out of ten students access at least two digital devices during a regular day at school. Students who have grown up using smartphones are often at odds with the outdated technology in their schools. Therefore, it has become a necessity for universities to resort to upgrading websites so that they become more friendly with students, and they can obtain the necessary information from any smart device and at any time. Offering a digital experience that meets the expectations of students is a good strategy to attract and keep them connected with the university.

Conclusions

In this context, universities should contribute more to the development of students' digital skills, especially in countries with emerging economies such as Romania and the lowest levels of DESI indicators. In a world of rapid and unpredictable change, leading to a turbulent business environment, HEIs must not only adapt to all these changes but become driving forces for change and leaders in building new contracts. Universities should develop strategies to increase their intellectual capital and become digital organizations. In the new economic and social landscape, universities should be able to become leaders of change and innovation. In conclusion, we consider it important to monitor the fundamental transformations induced by the advance of the digital age, especially on the educational process in the universities in Romania and worldwide. Acknowledgments: The present paper has been financially supported by the Academy of Romanian Scientists, Program No. 15/2019 "Strategies for Implementing Knowledge Economy in Romania". In this sense, the conclusion is that using the most up-to-date technology and updating the data in the virtual academic catalogue will produce a fast and successful digital transformation.

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Economic Digitalization: Transformation of Socio-Economy Education.

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Abstract.

The economic digitalization influences socio-economic transformational and organizational processes, especially organizational change and transformational leadership. This distinction between the two concepts is necessary because their usefulness and effects differ. Depending on what we aim to achieve, we will resort to the implementation of one of the two processes, either digitization or digitalization. The progress of the digital economy can be analysed especially in the context of the Digital Agenda for Europe, part of the Europe 2020 Strategy, one of the seven EU initiatives that distinctly approach digitalization, whose provisions are applied to Romania under the name of the Digital Agenda for Romania 2020. Although there is such a national strategy, there are various problems related to the development of the digital economy at the national level and the most important of these is the lack of a national strategy aimed at digitizing the business environment. Regarding these indicators, it is known that in the case of Romania compared to the rest of the EU member states, our country ranks 28th, that represents the last place according to the DESI indicators.

Keywords: Digitalization; Transformation, Socio-economy, Education, Digital literacy.

Introduction:

In this paper, we will analyse the impact that the digitalization phenomenon has on the field of education, especially in Romania, compared to the other Member States of the European Union. The problem analysed is important both from the point of view of achieving the objectives included in the Europe 2020 Strategy and from the perspective of positioning Romania in this picture of education at the European level. In this regard, we will present the current state of the phenomenon of digitalization in Europe, discuss the existing strategies to increase the degree of digitalization in the field of education and finally draw conclusions on the perspectives generated by the intensification of digitalization in this sector. This topic is intensely debated in the literature by both academics and experts from the European Commission and more by professionals in the labor market. What we have proposed is to present the most up-to-date points of view and arguments regarding the subject analysed so as to make a significant contribution to the field of research of the topic.

Like any latest trend, the issue of digitalization brings confusion and debate about its significance. In this case, the confusion arises between the terms of "digitalization" and "digitization" because they come from the same sphere but still have different interpretations. Thus, the expression of "digitization" is understood as the process of retrieving analog information and encoding it so that computers can recognize, process, store and then transmit it to users. In business, digitization is important both for the analogical approach of information and for streamlining "paper-based" processes - where "paper-based" is nothing more than a metaphor. It is important to remember, that „the information" is what we digitize, not the processes - this is where digitalization comes in. The expression "digitalization" or

"digital transformation" refers to "changes associated with the application of digital technology in all aspects of human society".

Digitalization is also accepted as the ability to transform existing products or services into digital variants, thus offering advantages over the tangible product. The digital division between states is still large and keeps it away from the average digital progress. Differences in the dissemination and implementation of ICT can lead to an increase in disparities in the European Union in terms of economic development. Thus, a large number of studies have focused on measuring and analysing the nature of the digital divide between states. The literature has emphasized the role of income, namely the Gross Domestic Product, in explaining the adoption of technologies such as the Internet and personal computers. However, some studies have also shown the relevance of other non-economic factors such as competition, telecommunications infrastructure and human capital. In the same vein, the various combinations of ICTs that model various digitalization models can be explained by a wide range of variables. These include revenues, as well as other non-economic institutions and factors that indicate a relationship between the digitalization models and the different levels of development.

Discussion and Results

The educational process does not sufficiently contribute to students' personal initiatives to learn something new, to set goals in connection with their knowledge and the real world, to use their imagination to seek creative answers to standard questions rather than using stereotype models. In this way, we also include the cultural inertia, which means the fear to act differently from the other members of the community.

- **Components Process of The Digitalization and Transformation**

The digitalization process in Socio-economic education is a strong trend in terms of reforming and modernizing the global educational environment. Digitalization in the educational process involves translating text, images, video, and audio into a digital format that can be played by the computer. Digitalization tools can be the computer, the internet, the smartphone, the scanner, the digital camera, the projector, the printer, etc. Means of digitalization can be the online admission process, the online exam, the sharing of online/web knowledge, digital support materials, social groups, digital publications, etc. When discussing the digitalization phenomenon, it should be noted that different analysts and forecasters, especially British, including Tim Berners-Lee - one of the inventors of the World Wide Web considers the transition of education in the digital scene as a turning point in the history of education. This initiative started from the 2020 Strategy, adopted in 2014, which focuses on intensifying the use of digital technologies.

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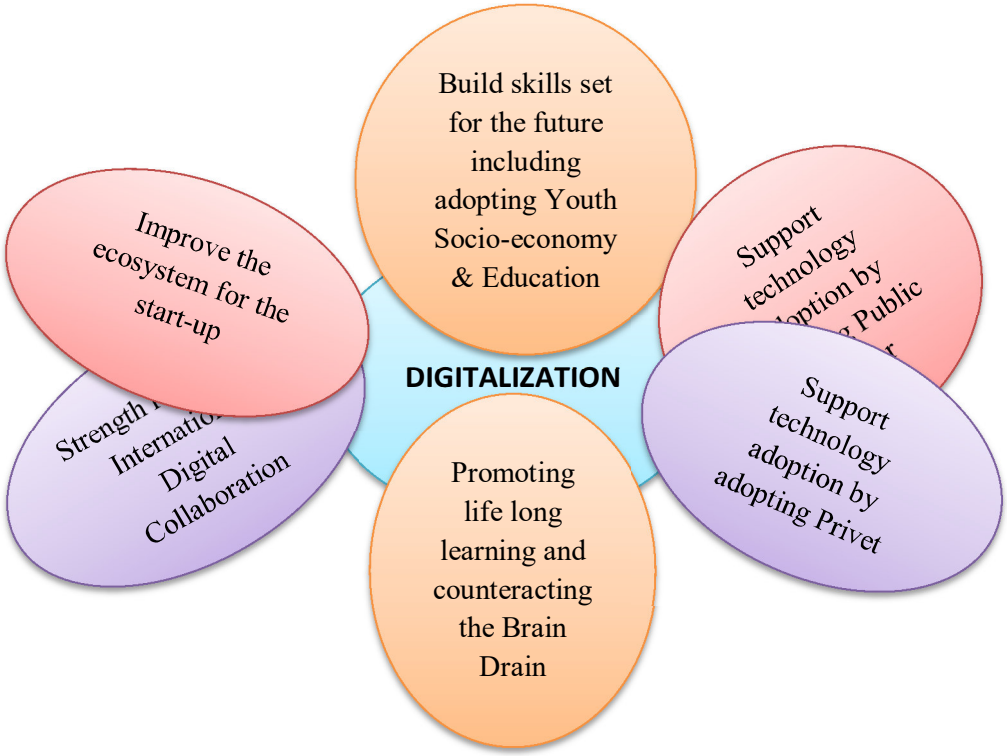
Figure 1. Applicable Components and Process for increasing the level of digitalization.



- **Approaches and Phenomena of the Digitalized Education and Socio-Economy:**

The declared approach to education will force us to reconsider the curriculum and integrate the conceptual and current innovations. The new curricula should stipulate not only the compulsory transfer of knowledge but also focus on achieving students' goals, stimulating creativity, imagination and teamwork, regardless of the location of the team members. Finally, it should be noted that today's global education has undergone major transformations, caused by the integration of new digital technologies into the academic activity and the search for efficient implementation models, which will compromise traditions and innovations, is active. The widespread adoption of digital technologies has created a new demand for digital skills, encompassing a wide range of skills and knowledge; ranging from accessing interfaces and basic manipulation of spreadsheets to advanced analysis and programming programs.

The phenomenon of digitalization has agitated and provoked the whole society, has generated new demands on working skills, modern cultural conditions, and innovative tools for communication and entrepreneurship. Within the knowledge economy, where knowledge becomes a strategic resource, digitalization becomes a dynamic interface for intellectual capital corporations, services and states, facilitating business processes, partnerships, and interaction, leading to the creation of complex networks. This results in the emergence of a new economy, in which individuals become "ambulatory data generators" not only from a social point of view but also from an organizational point of view. Broadly speaking, we distinguish between three types of digital skills, among which:

- Skills for practitioners: the skills needed for the development, design, installation, management, and marketing of ICT systems, most often required by workers employed in the ICT sector.
- User skills: capabilities that allow workers to use ICT as tools in their workplaces, most often outside the ICT sector, which may involve the use of generic software or specialized ICT tools.
- Leadership skills in the field of e-learning: encompassing both ICT technologies and managerial skills, allowing professionals to adapt businesses and organizations to adapt to ICT technologies, as well as finding new ways to conduct business or business, identify opportunities for innovation.

To reduce qualification mismatches, industry associations should work with governments and educational institutions to provide up-to-date and up-to-date information on employment opportunities, career prospects and evolving skills requirements in the industry.

- **Policy and strategies implementation for digital transformation:**

The process of digital transformation involves more than just software. It is about identifying the interests and needs of institutions in their decision-making process in order to adapt to the market. The use of technology is an agile and flexible way of facing the high-level demands of students, faculty, and staff. To achieve these objectives, it is essential to initiate multiparty partnerships. It could be said that the modern education system is facing a crisis of skills. World-class HEIs continuously search for new ways of improving their processes and mostly those evolving the students' journey during the educational path. In this context, continuous improvement of user experience is generated by the innovative use of technology in order to keep students, staff and faculty, productive and satisfied. In this sense, the educational process of the future must offer more than just the transfer of knowledge and invest in the students' thinking, creativity and innovation.

Implementing the four types of strategies, the results of the digital transformation will be visible in a relatively short time as future students will contact the institution, firstly online. Thus, the first impression of the potential students about our university is generated by the quality of the digital experience, when accessing its website. If there is a successful digital transformation, the effects will certainly be notable very quickly and in a positive way. Moreover, there are already studies on this subject, and these indicate that 80% of the candidates for higher education programs judge a university according to the website. The study shows that 70% of the information that interests them and that can subsequently influence them in the choice they make is in the online academic catalogue.

Conclusions

Digitalization is currently one of the most important trends that change society and business. There is no doubt that the digital economy is profoundly changing the methods of companies manufacturing and delivering goods and services worldwide. Thus, in the education sector, digitalization can be implemented at the levels: administrative, teaching-learning, evaluation, research, development and for the benefit of society. Although it brings many advantages such as time savings, transparency, overcoming geographical barriers, continuous flow 24x7, minimizing human error, mass digitalization also generates disadvantages such as high degree of dependence, risks of physical and mental nature, the use

without the responsibility of some processes, neglect of basic human skills and others. In the process of adaptation, HEIs must focus on improving largely on their traditional mission of teaching and learning. Today, the society is asking for much more from universities regarding their contribution. They must develop a third mission that concerns the provision of services to society and the more active involvement in the Higher Education Institutions-state-industry.

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Impact of Digital Education on the Health of High School Students

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Abstract:

Society is becoming increasingly dependent on technology. Although it offers numerous advantages, it also has dangers, particularly for young people. Excessive use of technology can have a harmful impact on a child's physical, mental, emotional, and social health. COVID-19 has a significant impact on society. when the country was imposed on lockdown, educational institutions all around country have been closed. The pandemic continues to cause problems on educators and students, and the situation has become a problem for everyone. The global spread of Covid-19 has turned the world's traditional educational system into online mode. Online learning can have a negative impact on a teen's mental health. In this paper we'll go through how online learning affects teen mental health and how parents can help their kids survive while they're learning from home.

Keyword: Digital education, health, student.

Introduction: (Physical Health and Fitness)

Digital education has long had a troubled relationship with the community of health professionals. Concerns ranging from eye strain and obesity to mood swings and depression have been widely noted in association with excessive screen time. With the recent and widespread shift to online schooling, where students may spend up to seven hours a day in front of a computer screen for class before likely turning to their phones and TVs in their free time, the health concerns are significantly magnified. Full-time cyber students can log up to 35 hours of screen time a week strictly for school. Yet studies show that sitting in one spot and staring at a screen can take a toll on both our physical and mental health.

Screen time studies have shown the negative effects of long durations in front of a screen for a substantial amount of time. It has even been connected to obesity and depression, as students sit in a stationary spot , usually inside, for such a long period of time. Increased screen time is also linked to headaches and anxiety. Even large technology brands, such as Apple and Google, have created settings to track and limit screen time due to complaints of screen time related issues. One of the most prominent concerns of online learning is eye strain. The more hours spent online, the more likely it is that intense eye strain will occur. This is partly due to blue light, which causes eye strain and increases the risk of macular degeneration. Taking breaks from screen time, where the eyes are focused on things like the outdoors, is often suggested in order to relieve the strain.

However, this is not an option for every student. After one 40-minute class, there is often another mandatory class following right after, leaving no time to give the eyes a break. Some children are even more disadvantaged, as eye check-ups may not be an option for them due to financial issues, and parents often don't recognize the signs of eye strain. As a solution, some experts are recommending wearing blue light glasses. These glasses are designed to

block the harmful blue lights on screens and are said to relieve the eyes of strain due to screens. Prior to the virus and remote learning, a study found that young people between the ages of 11 and 24 spent five hours on computers, three hours on phones, and two hours watching television. That already high amount of screen time didn't include online learning, so one could only imagine how high the hours would be currently.

Younger kids, such as kindergarteners, face even more issues with online learning. For five year olds, it is recommended to only have one hour of screen time. For those who have full online learning, the screen time is much higher than that. The continuous sitting that online learning often requires could also have an impact on the youth. Instead of walking from class to class, students now often end up sitting in one spot for every class. Essentially, the only movement occurring is minimal, such as going from the desk to the kitchen. For younger kids who normally would have recess, missing out on outside time during the school day can have negative health effects. Additionally, the loss of social interaction can be a cause of depression, as students are solitary in their learning.

Objectives :

1) To study about the current situation of the High School student.
2) To study about the Health impacts of digital education in High School student.

Methodology:

The purpose of this research is to learn about 80 students of High School Level health problems in home learning and management during COVID 19. Qualitative research studies allow researchers to look into a phenomenon from the perspective of an individual's personal experiences in various scenarios and conditions. This study was conducted using a descriptive qualitative methodology in order to obtain relevant responses and give knowledge on students' actual experiences. from young children to young people, teachers, and professors, is affected by online learning. Virtual classrooms may create major health issues for High School students. Others may experience new changes in health and mood as a result of the pandemic and online learning.

- **Major Find-out:**

➢ Social Isolation While school is primarily a place of learning, it is also the major focus of many students' social lives. Teenagers and young adults have the opportunity to connect with their classmates at school. It provides kids with an opportunity to socialize and express them. Without frequent social interaction, kids may feel lonely, unmotivated, or frustrated as schools and colleges move to virtual formats. Numerous researches have demonstrated that social isolation has a higher rate of harmful effects on people's mental and physical health. Face-to-face contacts have also been shown to help reduce depression and anxiety. Social anxieties and tensions may be complicated by the lack of social connection.

➢ Maximum 65% student's Increased Anxiety and Stress Along with the lack of social interaction, the online class structure can have a number of negative effects on Students

➢ They may face heightened feelings of anxiety of their difficulty to stay on top of their schoolwork.

➢ Maximum 70% student's may have trouble concentrating or keeping focused at home.

- Maximum 75% student's Being on webcam in front of others might cause anxiety in some children and teens.
- It may be challenging for students to acquire the additional educational support they needed to succeed.
- Fatigue from online education Both students and teachers can become fatigued after spending a large amount of time online.

- **Suggestion :**

- Body language is one of the most important aspects of communication When picking up on these signs is difficult or impossible, our brain has to work harder to interpret the information it receives. On its own, this can lead to mental exhaustion. When this is combined with the continual self-awareness that comes with being on camera and in front of people, stress levels can quickly rise.
- Treat an online course like a "real" course. When it comes to online education, you'll need the discipline to sit down and declare, "I'm going to work on this," as well as the commitment to really do so. You can decide when you want to finish your work during the week, but you can't put it off permanently.
- Make sure they have all of the materials they'll need to finish almost all their assignments. Provide everything they'll need to do their assignment, including a stable WiFi connection, log-in information for certain accounts, a PDF reader, note-taking apps, and reading strategies–whatever they'll need.
- Make a daily schedule. Creating a daily schedule is more than just a matter of time management. A daily plan examines the timetable, then finds to-do items for the day, and then combines the two to create a detailed plan for that day.
- Instead of teaching, help them in understanding. One of the most obvious remote learning ideas for parents is to help pupils realise. if possible seat with your child at the time of online classes. Otherwise, learn it beforehand and then review it with them. The bottom line is that helping your child understands the content.
- Ensure that all tasks are completed. Check that the youngster has finished all of his or her homework and schoolwork. If not, determine the source of the problem and resolve it on your own; otherwise, communicate with faculty.

- **Limitations of the Study :**

The present study limited to Impact of Digital Education on the Health of High School Students. **Topic:** Impact of Digital Education on the Health of High School Students. Hence, the purpose of this small-scale research study was to explore the student health problem while studying in online education and tips for parents.

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Impacts of Digital Technology on Education

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Abstract:

The modern society wants to know the information as it happens and when it happens, and the world is moving from an information society to a knowledge society. Thus education is given the highest priority and brainpower is becoming the most valuable asset of an organisation. Advances in digital technology have opened up many avenues of learning. Technology has made information accessible / transmittable from anywhere and by / to all groups of people. Education has reached most parts of the world. It has become an integral part of human life. This paper describes the process of generation, creation and acquisition of knowledge through the technology. The paper also describes how technology is used to access and apply such knowledge. The paper relates how these technologies have been used in education and its impact in general.

Keyword: Digital Technology, Impacts, Education.

Introduction:

Formal education was traditionally centred on schools and pirivenas at village level while non-formal education was centred in libraries at central places in the form of newspapers and books. Teachers delivered the formal education either following a textbook or notes prepared using books and their experiences. The learners enrolled and visited the places that offered formal education. The libraries offered supplementary reading material to enhance their learning as well as reference facilities. A teacher has to be well educated and knowledgeable to be able to educate others. Also, they have to acquire the skills of retaining student's attention and deliver content in an effective way. Thus, teaching is an important profession and people respected them as they guided and assisted the learners to be useful citizens of the country. Due to the respect earned by the society, teaching was one of the social service activities. Also, most activities people then used to do were centered at village level and teaching too was carried out at villages where small populations used to live. With emerge of industrial and commercial cities people have moved out of villages to these cities for various forms of employment.

When the population increased, the demand for learning also goes up and the traditional schools or pirivenas could not cope up with the demand. Thus, new schools had to be created and existing schools had to be expanded, and new teachers were required to deliver education. To meet the demand, inexperienced, under qualified and under trained personnel were used and thus the profession has changed from a social service to a commercial business. Business is governed by remuneration and when it is low, the capable people tend to seek other employment offering higher remunerations. As a result, governments used this sector as an employment creation section, thus contributing towards the deterioration of the sector.

- **Digital Education :**

Digital technology was very useful to convey instant urgent messages and well as to make people be aware of current local and international news. This has become an informal but effective form of education. The transformation of analogue signals to digital emerged a new technology that was capable of eliminating transmission errors and performing the same task efficiently. Digital technology has been around for over 50 years with the wide use of the technology for computers and other electronic equipment. Since early 1960s educators and computer scientist began using computers for teaching purposes. Initially it was used as reading and typing text to provide instructions of how to use the computer due to its low-level interaction with users and later to solve some time-consuming problems. However, with the invention of affordable microcomputers and the integration of text, graphics and colour there was a rapid spread of computers in business, educational institutes and homes.

Computers also evolved from manipulation of text and numbers to interaction via text, graphics, voice and pointing devices. The ability to network many computers to share information and resources was another step forward. With all these advances there has been a steady and dramatic decrease in cost of a computer. Along with these courseware and better integration of text, graphics and colour appeared making education material more effective. Graphical power and use of mouse on a par with keyboard made the most powerful impact with respect to attract people to use computers. The growth of the Internet from a small group of academics and government officials exchanging textual material into a world-wide resource, with millions of people using it for diverse activities such as shopping, banking, researching, forums, exchanging and sharing information, access to digital libraries and of course e-learning have already made an impact to the society. This has and will transform everything we do.

- **Text :**

Text is one of the most effective components of representing knowledge. The words embodied as text, convey a powerful message and this has been widely used in handwritten and print media. Most data and information is represented through this medium. It is impossible to convey an unambiguous message without text. To convey a message effectively the message should be specific, definite, concrete and precise. Selection of suitable fonts and size is important for legibility and aesthetic effects. As much as learning is concerned, summarised text is used to identify the important points and detailed descriptions are for explanations and subsequent supplementary reading.

- **Internet**

Internet provides a cost-effective global network backbone. It connects users from anywhere, as long as they have access to the web. This has allowed users to host information on their computers and make them available for others. Such computers need to be dedicated for that purpose as users will be searching for information at different times. These sites are called web sites and they are connected to the web on 7x24. This technology intends to provide unrestricted access to information. An educational institute will publish all information relevant to the public through their web sites. This technology has made information accessible as it happens and people access them at any time they want to do so.

- **Classroom Level :**

Use of technology at classroom level was not possible until the teacher's delivery mechanisms were aided with technology. Originally delivery mechanism was through verbal communication and then through the introduction of written media such as blackboards. Later through overhead projectors teachers were able to do the writing in advance and project them directly. Use of overhead transparencies allowed them to reuse written material but without improving them. With the invention of projection through a computer, a teacher can easily update his material as well.

The same material can also be printed and the students are able to obtain it without having to copy them. This technology has now evolved not only to project text and figures, but also animations, video clips etc. Thus, the teachers are now equipped with tools to teach effectively. Verbal explanations, dictations, listen and copy writing during class, Blackboard /whiteboard & Chalk / Pen, copy notes, pre-written transparencies, Overhead Projector, Pre-prepared Slides, Multimedia projector & computer printed material, e-learning, provide learning material. Learn through participation.

- **Objectives:**
  - To study about the current situation of digital education.
  - To study about the impacts of digital technology on education.
- **Methodology:**

The purpose of this research is to learn more about students' perspective of an individual's personal experiences in various scenarios and conditions. This study was conducted using a descriptive qualitative methodology in order to obtain relevant responses and give knowledge on students' actual experiences. from young children to young people, teachers, and professors, everyone is affected by online learning.

- **Teacher's Role**

In the modern global learning environment, teacher's role shifts from "dispenser of information" to "facilitator of learning" as he has only to guide the active students who are involved in using the e-learning material. Classrooms have been fully equipped with permanent multimedia projectors and computers and the facilitator needs to access the e-learning system through the Intranet. Teachers should not control the learning process as well as they should allow students to perform collaborative work and make some decisions on their own.

- **Student's Role**

Some classrooms are equipped with computer access to all students. In such cases students interactively participate in the learning process. Now the student's focus is totally on the learning process than on copying notes as the learning material can be accessed at a future time. Teachers should ensure that knowledge and skills are not presented to students directly, but are constructed by them in response to information and learning tasks. Teachers need to consider how these learning experiences could be encouraging to students who are performing this type of mental work. Thus, student who used to learn facts and skills by absorbing the content presented by teachers and media resources should move towards creating personal knowledge by acting on content provided by teachers, media resources, and personal experiences.

Major Findings:

Over the last five years computers have been introduced to most educational institutes although its ratio to a student is very high. By making the educators aware of the available technology and some taking initiatives to implement them, some forms of reforms may take place. With respect to technology requirements, the world will be flooded with information and some people will use them effectively. They would be the people who have developed their skills to the level of finding problem-relevant information and interpreting and applying them in solving of problems.

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An effect of Digitalization on students: The learning experience

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Abstract:

Digital technology has had an increasing impact on higher education and shifted the way of teaching and learning in a fundamental way. The outbreak of Covid-19 urges higher education to shift from traditional learning to digital learning and this made a big change in the education system and the way education is being delivered to students worldwide. Universities and higher education institutes had to use various digital platforms with numerous capabilities and approaches to facilitate learning. In their shift towards digitalized online platforms, higher education institutions ignored important aspects of digitalization in perspective with student's learning experience. Therefore, this research is going to implement an exploratory aim to define the features and comprehend how higher education can expand student's learning experience via digitalization by implementing and maintaining dynamic essential technologies in their system in future to expand student's learning experience. The finding shows that digitalization does have an impact on the learning experiences of students.

Introduction

Digital technology has had a progressively major effect on almost all areas of activities and shifted society today. Because of digitalization, teaching and learning at universities are changing in a radical way. Information transfer, student evaluation, students' assistance, and the administration process are being digitalized, and digitalization intends to deliver superior opportunities for productive learning. Using digital devices in the class we can create a particular level of ease and comfort but also knowing student experiences of using digital tools, it also makes it difficult in teaching and learning. Smartboards and projectors connect wirelessly to computers or laptops, lectures can record, and students have access to the lectures anytime, students take notes on a laptop rather than handwriting notes and they tend to use computers in the classroom and this is a massive shift in education. Educational institutions had to use different digital platforms with different capabilities and strategies to facilitate learning which made digital technology a primary medium of education in the Covid-19 outbreak for students and universities.

Moving to online learning by higher education during the pandemic affected learners, lecturers, and learning performance. Distance learning, face-to-face learning, and Hybrid learning are three formats that higher education delivers the program. The use of technology in higher education has some benefits such as allowing students to watch recorded lectures before and after a class as per their ease and engage in more interactive activities or students can better collaborate with each other and rely on the instructor as a facilitator and higher education was not ready for this situation. Higher education institutions are following the same principle and trying to collaborate both through digital platforms after the rise of the pandemic. Digitalization changed everything in education and this impacts on the teaching

and learning styles. Lecturers and students already adapted themselves to the new way of teaching and learning. Even universities which had a traditional teaching style, urge to apply digital technologies in their system due to social distancing. Universities have practiced a large-scale evolution to online learning and speedily higher education around the world have had to alter resources and methods.

The new system presented extraordinary challenges for students who need technical assistance and at the same time for the lecturers which we will explain further in our literature. While the development of digital transformation in higher education started years ago but Covid-19 has accelerated it and this impacts students' experience. Higher education believed that the learning experience during remote learning would fluctuate, and teachers normally consider the difference in students' skills profiles when preparing the lectures to reduce the effect of poor self-regulation skills and learning strategies. Learning, Media & Technology can and should make a more direct contribution to knowledge and practice during the pandemic whereas a result of the mass closure of schools, colleges & universities, there has been a switch to online and digital education formats and the rise of 'remote' forms of teaching & learning.

Empirical Findings and Analysis

Digitalization is going to make a great shift in the economy and society of any environment it is applied to and will affect all areas of individual activities in both developed and developing countries. Digitalization can simply be explained as the transformation of the skills needed by the world's working population and the young in order to successfully engage in a globalized modern economy.

- **Digitalization in the context of education**

In a learning environment, it is changing the way students learn and also the ways by which institutions deliver education. In recent times the need of digitalization has shown a steady high in national, regional and Higher Educational Institutions (HEIs) all over the world. These HEIs across the globe are undergoing constant transformation so that they can meet the needs and requirements of the society and their respective markets. In this modern era, in order to stay in competition and to stay relevant, universities and HEIs need to develop the capabilities that help them in order to match the needs of the digital age.

As an outcome of the covid-19 pandemic, universities, HEIs, governments, businesses and other institutions have started to rapidly shift their focus towards the acquisition of digital services and hence in doing so, have accelerated a number of previously existing trends. This has led to moving student support, teaching and research into online formats requiring different methods, processes, and skill sets. With the case of covid-19 pandemic, the education system in many countries faced problems as they needed to lead the lectures through digital technologies. For instance, universities have encountered extreme difficulties in the administration and management of the business process since the rise of the pandemic. The new restrictions by the pandemic did not allow staff and personnel to attend the university physically so all their coordination and management moved to an online setting.

- **Learning:**

Before we discuss further on digitalization of universities, we must look into the concept of learning and what is in it. Looking at past literature, learning is simply described as

changes in the behaviour of an organism that result from regularities in the environment of the organism. Hence, it is a process which is said to be different for different individuals as their capabilities to gain experiences from their surroundings are different. It must also be noted that not all individuals are expected to perform the same provided a specific environment. This difference in experiences may be due to several personal individual factors. Some according to their own psychological patterns may excel in an environment whereas some individuals might find it very hard to cope in the same environment. Hence, it can be easily said that the learning experience for all individuals may differ in the same environment. We believe that this has had a major effect on the experiences of individuals which has changed their behaviours which ultimately leads to a change in their learning experience. Experiential learning theory describe learning as "the process whereby knowledge is created through the transformation of experience".

- **Digitalization for Students'**

Learning In this section we look at digitalization from the human perspective and our review of past literature shows that whenever digitalization or digital transformation is discussed, two different kinds of reactions are observed from the public: one group is excited and satisfied and the other is interested and worried. We can say that this works in a similar mechanism for companies regardless of their size. Higher education is one of those industries that should feel the need to assign infrastructure and provide digital technologies for education. Digital transformation alters the experience of the universities and universities need to understand the necessity of developing new situations. Nowadays, especially during and after the pandemic, people use digital technologies for study, work, and for their leisure time and nobody can imagine their life without digital technologies. Similarly, the education system is rapidly changing towards distance learning and cloud computing tools are examples of significant technologies responsible for online lecturing.

Today distance learning, tutoring and mentoring sessions can be supervised remotely and promotion and recruiting students digitally is not an exception. This means that as opposed to the standard process where students need to be physically present in a university, students can now attend classes remotely without being present physically. Along with that the services of a university can now be marketed effectively using digital channels of marketing which enables them to reach a higher pool of customers. Universities and schools are also a part of this digital competition. In their pursuit to maximize their pool of students, we often find universities utilizing extensive funds to attain the latest technologies available in the current market. It can be easily said that with the help of sufficient digital technologies being utilized, the quality of graduates produced increases overall.

A common occurrence is for leading institutions to decline or fail when technologies change. This means that when universities fail to keep up with the change in technology, they are less likely to attract many students which will ultimately lead to their decline. Digitalization in this regard comes into play, and it should be the focus of major institutions to direct their attention towards it. In their research, Crittenden and his fellow writers (2018) point out that as many business practices are being meaningfully digitalized, channel interactions have become easier which leads to creating new ways of interacting between businesses and customers, in many cases disrupting normal marketing practices. In our

instance, the techniques used to expand and deliver an online course need precise planning. Teachers are expected to establish how to combine the learning from the classroom with the Internet. The urge of using technology in higher education for the purpose of learning is extended outside the classroom.

- **Distance Learning**

Before we further dive into digitalization effects on student learning experiences, we must first look into what distance learning is. Previous literature shows that distance education or learning has had a history that spans over two centuries and mainly points out the important changes on how learning is communicated and practised. The social communication methods have been changing over time since the inception of postal services to the availability of sending mail over the internet through the touch of a button, society has embraced new forms of communication through the years. Traditionally, face-to-face learning has been a mechanism which universities and higher education institutions have been working upon throughout. They aim to produce outstanding environments that will facilitate students when they come to the university and attend classes physically. Face-to-face can simply be explained as the process where individuals come to the university or higher education institution physically in the form of students and attend classes where they have to physically be present and communicate with their peers and lecturers.

It is the aim of universities to create learning environments that facilitate students and make learning easy for them but the inception of such environments depends on the learning objectives, target audience, access (physical, virtual and/or both), and type of content. With the advancement in learning technologies and evolution of associated fields, distance learning and distance education is born. If we look at the past literature, distance learning can simply be explained as the efforts of providing access to learning for those who are geographically distant. This means that distance learning occurs when the resources are provided to students who may not be geographically or physically present at a university or institution. In our look for past literature, it was observed that researchers have used inconsistent definitions of distance learning and distance education. Lastly, comes hybrid learning which is a result of both, face-to-face learning and distance learning hence the name, hybrid learning (HL). If we look at the bigger picture, the disruption in digitalization ultimately leads to changes in the students' mind-sets and along with the learning goals of higher education change. This means that there is a need to adjust and modify learning processes. Digital natives "have little patience for lectures, step-by-step logic, and "tell-test" instruction.

- **Benefits of Digitalization for students**

There are a number of applications of digitalization upon which higher education institutions should maximize on which can lead to a boost in the learning processes for students. The first and foremost, benefit of various digitalized communication channels is that contents and knowledge becomes accessible and independent of time or place restrictions. With the help of advanced internet search engines, students gain access to knowledge anywhere and at any time. With the help of IOT, cloud computing has been made possible which connects learning managing systems enabling them to share, distribute and retain information on a mass scale. With the help of such analytics, student behaviours could be monitored closely that would facilitate student learning by recommending them with

personalized learning tips, media, etc. on a more individual basis. Furthermore, the attention spans of students belonging to the Generation Y/Z are short attention spans which is countered by Micro-learning elements that offer knowledge and information in small bits and pieces making it easier for them to digest information. Repetition of information is made easier on digital platforms which makes it easier for students to memorize facts and vital information. Further technological applications and digitalized methods enable new possibilities for assessments and examinations.

- **Digitalization and Instructors**

As we discussed earlier, as a result of disruptive digitalization many aspects of a university such as incoming students, methods and processes are changed. This simply means this group of individuals learn how to deal with digital media and technologies at a later date as compared to the Generation Y/Z which are known as "digital natives". An interesting point here is that although commonly instructors are "digital immigrants", they are supposed to enable students interact with various digital medias. It is their duty to enable students to provide them with the skills and knowledge required to deal with these new technologies such that they can maximize output from them in the form of learning. Instructors as digital immigrants shall provide learning skills to digital natives which support new intended learning outcomes in the form of future skills.

Teachers' positions in higher education have gone through enormous shifts in recent years and still, the question will remain if technology could change the role of teachers and replace teachers completely. Researchers mentioned that some teachers are very passionate and quick to learn new technologies and are open to developing their digital skills. Some lecturers see technology as a tool for teaching and learning and they are eager to learn the new technologies and add to their competencies. However, after the rise of the pandemic, a study pointed out more than 93% of lecturers felt pressure due to the workload produced by distance education and distance teaching has led to academic overwork and boosted the degree of anxiety and nervousness. Educational technologies enable lecturers to teach from a distance and not essentially within the university. Studies showed that the negative side of digitalization in distance education is the challenge of managing the process of remote studies and lecturers and students in some cases are not satisfied with distance learning.

Digitalization and communication have impacted interaction between clients and businesses and at the same time impact consumer attitude. Replacing physical purchasing with digital channels hence increased the flexibility and productivity of communication and allowed the organization to reach more customers. So is the case with universities and higher educational institutions. Digitalization boosted the accessibility of information for both consumers and providers which makes consumers study more about the services or products and choose the best choice. Hence, we can easily say that by the adoption of relevant digital technologies by universities & HEIs, their communication with their consumers can become more effective. They can further market the acquired technologies by the university or HEI which will build interest in the eyes of their customers leading them to recruit a larger number of students. Previous research also points out that the educational area broadens ahead of the ICT infrastructure and each student and lecturers have their own personal devices for

communication and information sharing making it easier for them to access information with the use of digitalized technologies.

Conclusion

Digitalization on students' socializing, social health and personal development Previous studies show that students feel isolated due to the lack of communication, particularly with teachers, because they spend more time at home in front of a computer. The pandemic has forced social distancing which in result has changed the needs and wants of students present globally. Therefore, the adaptation of the teaching method to students' needs is essential. Considering the personal development of students at the universities is one of the factors that teachers and mentors need to consider when they think about digitalization since studying at the university is a significant stage in young people's lives. Students at this stage may not be present at the university so often as compared to pre-pandemic conditions when it was mandatory for them to attend classes and be present physically. Digitalization demands a more accurate model that aims to enlarge social contact as allowed by social distancing regulations while tactically using new and developing technology. It is undeniable that higher education cannot return to traditional education in the form it was before the pandemic due to the introduction of new digitalized technologies which enables students and teachers to communicate over distant learning platforms. Hence, it is very significant that students and lecturers be ready for personal development, self-management, and self-accomplishment in professional development.

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Digital Education in India: Mental Health at Stake

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Abstract:

Humans are social animals, and the most introverted ones also need to see faces and have human interactions once in a while. The children have grown to lose interest in their classes. Most of them switch off the camera and go about their other activities. With so many different ways to define e-learning and the educational approaches that can be taken in these learning environments, many colleges and extra-curricular activity classes have started making use of the technology. A multi-pronged strategy is necessary to manage the crisis and build a resilient Indian education system in the long term. Immediate measures are essential to ensure continuity of learning in government schools and universities. Having a physical space separately can help children avoid distractions. Make this space as comfortable as possible by having comfortable furniture, good lighting and all the resources required in an organized way. It will not just help work without distractions, but also provide them with a comfortable and safe space designed by you with love.

Keywords: Education, Digitalization, E-Learning,

Introduction:

Due to the outbreak of the pandemic, the Work from Home (WFH) culture is booming in India. As social distancing is prescribed as the best way to curb the spread of COVID 19, companies are faced with an unprecedented challenge of ensuring it is business as usual even if everyone is working remotely. Therefore, not only businessmen or start-ups in India have opted for an online platform like Zoom App to stay connected with their employees who are working from their homes but also the educational institutions have opted for different digital platforms to facilitate learning for their students. However, only educational institutions in urban areas can provide those facilities. Again, the questions are raised for the learners in rural areas, the educational systems in rural areas and their growth.

The courses on Indian traditional knowledge systems in the fields of yoga, Indian medicines, architecture, hydraulics, ethnobotany, metallurgy and agriculture should be integrated with a present-day mainstream university education to serve the larger cause of humanity. In this time of crisis, a well-rounded and effective educational practice is what is needed for the capacity-building of young minds. It will develop skills that will drive their employability, productivity, health, and well-being in the decades to come, and ensure the overall progress of India.

- **Exploring the E-Learning Platforms:**

With so many different ways to define e-learning and the educational approaches that can be taken in these learning environments, many colleges and extra-curricular activity classes have started making use of the technology. Through applications such as Zoom, various colleges especially engineering and designing colleges of Pune have undertaken the

task of educating students through video conferencing. Undeterred by the security concerns which such video conferencing applications may pose, these applications are widely used and have proved to be beneficial and with a lot of advantages. There is picture, sound clarity which makes imparting of knowledge and learning effective for both the instructor and the student.

- **The Covid Effect over Learning:**

Learning, as they say, is a continuous and ever-evolving process. The educational institutions in India, from schools to universities, can use this present adversity as a blessing in disguise and make digital education a major part of the learning process for all learners in the future. According to the reports, while higher education institutions might adapt sooner or later to the e-learning practices, it might take a relatively longer time to come to terms with the drastic changes in the student mobility for higher education. "It is no longer a mystery that global travel is a key factor in the spread of communicable disease. The repercussions of the COVID-19 pandemic will continue to produce pronounced changes in teaching and learning practices for all levels of education. "This had led to debates and deliberations on student mobility in times to come. Various findings have come out highlighting the challenges the higher education community is likely to face in the international context. While the magnitude of change will be exponential for international student mobility, there is likely to be some impact on Indian students' inter-state mobility as well. More than 4.2 million cases of COVID-19 have been recorded worldwide, including at least 289,000 deaths. The deadly virus has brought several countries to a standstill with many of them imposing international travel restrictions.

- **The Role of Parents:**

Over involvement of parents also has added to the pre-existing anxiety and stress. Parents are confined to the walls of their houses and have taken it upon themselves to get extensively involved with their children and their online classes. Increased screen time has increased the strain on the eyes, resulting in major headaches. This was applicable not only to the students but also to teachers. The classroom ethics have been compromised to great lengths. The posture, regularity, lack of routine, attentiveness has all resulted in health hazards. Constant sitting has caused weight concerns as well. No physical activity has made the students restless and frustrated. This too took a toll on the eating habits, thus resulting in damages to the physical health.

Discussion & Analysis:

A multi-pronged strategy is necessary to manage the crisis and build a resilient Indian education system in the long term. Immediate measures are essential to ensure continuity of learning in government schools and universities. Open-source digital learning solutions and Learning Management Software is adopted so teachers can conduct teaching online. Inclusive learning solutions, especially for the most vulnerable and marginalized, need to be developed.

- **Challenges to Mental Health:**

There's a very strong correlation between physical and mental health. With the shift to online mode, children are facing a lot of concerns like disruption in routine, no physical exercise, problem in body posture etc. Not getting any physical exercise also has a grave impact on the mental health of children, as they are facing social isolation and seeing so much

trauma around. The new excitement of not rushing to schools, lying in pyjamas and attending classes was soon replaced with boredom of attending classes online. It has led to mental fatigue and burnout, because of sitting in front of a screen for long.

With a rapid increase of mobile internet users in India, which is expected to reach 85% households by 2024, technology is enabling ubiquitous access and personalization of education even in the remotest parts of the country. This can change the schooling system and increase the effectiveness of learning and teaching, giving students and teachers multiple options to choose from. Many aspirational districts have initiated innovative, mobile-based learning models for effective delivery of education, which can be adopted by others. Strategies are required to prepare the higher education sector for the evolving demand=supply trends across the globe-particularly those related to the global mobility of students and faculty and improving the quality of and demand for higher studies in India. Further, immediate measures are required to mitigate the effects of the pandemic on job offers, internship programs, and research projects. It is also important to reconsider the current delivery and pedagogical methods in school and higher education by seamlessly integrating classroom learning with e-learning modes to build a unified learning system.

The major challenge in ED-Tech reforms at the national level is the seamless integration of technology in the present Indian education system, which is the most diverse and largest in the world with more than 15 lakh schools and 50,000 higher education institutions. Further, it is also important to establish quality assurance mechanisms and quality benchmark for online learning developed and offered by India HEIs as well as e-learning platforms (growing rapidly). Many e-learning players offer multiple courses on the same subjects with different levels of certifications, methodology and assessment parameters. So, the quality of courses may differ across different e-learning platforms. The Indian traditional knowledge is well known across the globe for its scientific innovations, values, and benefits to develop sustainable technologies and medicines.

- **The Lethal Effects of Online Learning:**

Humans are social animals, and the most introverted ones also need to see faces and have human interactions once in a while. The children have grown to lose interest in their classes. Most of them switch off the camera and go about their other activities. The lethargy has inculcated the loss of interest in not only the studies but everything overall. The pressure of after-school homework and assignments has triggered a great toll on the mental health and mood. The concentration levels of students dropped in online learning as the eye meanders elsewhere on the screen. This in response made it difficult for most students to keep up with the teachings. The pressure to concentrate and produce the required results has resulted in a great amount of stress and anxiety. Tasks, assignments, and homework slacked. Most children were seen lagging behind and succumbing to the pressure. The mental state of the children was fragile and tampered with. Zoom fatigue refers to the exhaustion after having attended zoom classes, or video conferences. With the screen time increasing drastically, the mind is overwhelmed with information and the brain finds it rather difficult to register all the information.

- **The Significance of Peer Learning:**

Social learning is a very important part of education and children learn a lot through the same. Collaborative learning, learning through doing and peer learning play a very important role in not just helping children learn new skills but also building their self-esteem and image. In the absence of such close friendships and not being able to find safety in such relationships, children are now facing self-esteem issues. These are just some of the challenges children are facing as a result of online teaching.

Conclusion:

Humans are a resilient species and learn to adapt and evolve. When we as a nation have been through such a tough time and found a way out of it, we can definitely learn to make online learning fun. Even though going out and following their previous lifestyle is compromised, children can seek stability by maintaining a routine. Having a fixed time of waking up and going back to sleep, and getting ready for online classes just like they would for school, and taking breaks in between can help break the monotony. Having a physical space separately can help children avoid distractions. Make this space as comfortable as possible by having comfortable furniture, good lighting and all the resources required in an organized way. It will not just help work without distractions, but also provide them with a comfortable and safe space designed by you with love. It's easier said than done in today's era to have a healthy diet when we have so many options of fast food available, which also act as our "comfort food". Instant gratification is what we all seek which makes us feel good in the moment but has a terrible effect on our health in the long term. So, try to make your children have a balanced diet, and help them exercise and sleep well.

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Foreseeing the after Trail of Post Digital Scenario: Buzzing the Alarm

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Abstract:

Current crisis is going to revolutionize the education sector, with teachers becoming accustomed to conducting online sessions and students on their toes to make the most of it. However, few also question the learning effectiveness of the same. Many people feel that listeners are less active during online sessions and are more distracted with their surroundings. Enough has already been discussed on various online platforms regarding the benefits and drawbacks of online teaching being conducted across the globe. Most academicians also believe that this could be a temporary fix and that we will have to go back to traditional classroom settings sooner than later. A lot has been discussed in and around higher education institutions in the past few weeks on how to proceed with the academic calendar. Already the classes have been conducted through the various platforms, and some of the institutions have even explored the option of conducting online examination so that to remain on track. However, there are specific concerns, and of course, a lot can be done to enhance the overall learning experience and certain measures that HEIs can take during this period to have a lasting impact in the long haul even after the present scenario is over.

Keywords: Online Education, Scenario

Introduction:

The educational institutions all over the globe are shut, and students are stranded at home, with extremely limited contact with friends and virtually no physical activity, thanks to the Covid-19 pandemic raging across the world. IB, A Levels, ICSE, CBSE all known and recognized boards have postponed or cancelled examinations. Likewise, top colleges like MIT, Harvard, Princeton have closed. Closer home, institutions like IITs and IIMs have all closed their campuses and moved classes online. Even standardized tests like GMAT, GRE, SATs, ACT remain suspended and the future of many students hangs in balance! Clearly, there is panic all around and educators and students alike are confused as to next steps and continuity with respect to educational objectives. The government has been pressing on E-Learning has imposed various tools and platforms for the same, months before E-Learning remains enigmatic for most part of the nation.

- **The Status of E-Learning in India:**

India will experience a digital revolution as soon; 500 million new users will be added to the 370 million internet users in India. Also, the outreach of the internet is not limited to the urban landscape alone nowadays, but it has reached rural areas, too. These factors create a huge market for the e-Learning sector in India. Interestingly, e-Learning opens a wide variety of options for working professionals. The options offer a range of learning facilities that they enjoy regardless of their status and location-something they did not have access to a few years ago. As per a statistical report submitted by KPMG, private universities offering different

undergraduate and postgraduate e-Learning courses are on a rise. This piece of the report clearly signifies that higher education through the online medium in India, though being at an early development stage, is witnessing wide acceptance and steady growth. Post-graduation courses like the Master of Computer Application and Master of Business Administration lead the race when it comes to the demand for online higher education.

- **Adoption of Digital Platform: Need of Time or For Time Being:**

The lockdown has accelerated adoption of digital technology. Business houses, educational institutes, analytics, computer, data management methods and online education solutions have been forced to work in tandem and improve in quality and delivery time to handle such situations. This is an ideal time to experiment and deploy new tools to make education delivery meaningful to students who can't go to campuses. It's a chance to be more efficient and productive while developing new and improved professional skills/knowledge through online learning and assessment. It is also a fact that use of technology in education is resulting in different concepts in the system, for instance the move from teacher-centric education to student-centric education. The digital education is an important link between course content, educationists, technology and course-takers. Democratization of technology is now an important issue, comprising internet connectivity, telecom infrastructure, affordability of online system, availability of laptop/desktop, software, educational tools, online assessment tools, etc. But it is a fact that technology-based education is more transparent and does not make difference in front vs. back benchers or girls vs. boys.

- **Mushrooming Online Courses:**

With high internet penetration in rural areas slowly and steadily rising, there will be a massive spurt in the number of online courses and online students. Technavio's market research analyst predicts that the Indian online education market will grow at a CAGR of about 20% by 2020, worth about 18 billion U.S. dollars. According to the KPMG report, by 2021, the online education industry in India will witness a growth of about 6 times. It is astonishingly true that the number of users enrolling in online education may touch 9.6 million users by 2021, from 1.6 million users in 2016. The revenue associated with it may be worth $1.96 billion. Estimates point out that the eLearning market worldwide will grow massively to the tune of more than 243 billion U.S. dollars by 2022. These forecasts clearly point that eLearning is all set to become a global trend, and sooner or later, more and more people may opt for it over traditional classrooms.

Discussion & Analysis:

The Indian government is strongly keen to bring certain digital reforms that may be a big push for the growth of the eLearning industry. The Ministry of Electronics and Information Technology website points out that eLearning has been identified as one of the key tools for imparting education. In fact, in regard to the same, the government has been aiding R&D projects financially for different educational institutes in the area of eLearning. The financial support to the programs by the government covers the areas of content development, human resource development projects, R&D/technology development projects, and faculty training.

- **Post Digital Scenario**

Looking at this challenge of colleges and schools being shut, government of India, as well as state governments and private players have regularly been publishing information on various initiatives undertaken by ministries like MHRD, Department of Technical Education, NCERT and others to support and benefit youth/students. A few of the initiatives are SWAYAM online courses for teachers, UG/PG MOOCs for non-technology courses, e-PG Pathshala or e-content containing modules on social science, arts, fine arts, natural and mathematical science, CEC-UGC YouTube channel, Vidwan – a database of experts who provide information to peers and prospective collaborators, NEAT – an initiative by AICTE based on the PPP model to enhance the employability skill among students, in collaboration with Education Technology Companies and National Digital Library (NDL), a repository of learning resources with single window facility. Many noteworthy initiatives have been taken up like Spoken Tutorial, Free and Open-Source Software for Education (FOSSEE), e-Yantra, Google Classroom, Zoom meet and so on.

Interestingly, UGC regulations on minimum standards in teaching and learning also allow universities to adopt term papers, projects, field work, seminars, etc., as methods of assessment, leaving this to universities' boards of studies and academic councils. Wherever possible and suitable, online examinations could also be conducted using proctoring tools. Recently, the issue of lack of bandwidth for online learning has been a matter of debate. We need to think of ways to improve access to the internet by zero rating of data for educational platforms and by providing support to both students and teachers to have access to computers and the internet for teaching and learning. The pandemic has been working as a catalyst for the educational institutions to grow and opt for platforms and techniques, they haven't used before. The times are changing, and the theories have always pointed out towards the survival of the fittest. Surviving these crises with a different approach and digitalizing the sector are the two elements which will get the industry through the storm and wash away the blues of the pandemic.

- **Buzzing the Alarm in Educational Institutions:**

The 100 top universities in the country have been automatically given permission to start online courses from May 30. This will be a huge boost to higher learning, given the cut-throat competition for a college admission at present. M.P. Poonia, vice chairperson of the all India Council for Technical Education, had earlier told 'The Week' that under the proposed new education policy, the target is a 50 per cent higher gross enrolment rate than the present. Given the available hard infrastructure of classrooms, the target is pretty difficult to achieve quickly in the traditional manner. However, with online and distance education, the goal is within reach.

The government has moved slowly in encouraging virtual classrooms, perhaps because the older generation is still not totally versed with the new medium. Last year, the University Grants Commission had announced that universities who wanted could start registering their online courses with the umbrella body-that oversees curriculum as well as funding. Only around seven universities actually registered. Minister of Finance and Corporate Affairs Smt. Nirmala Sitharaman's announcement could therefore leapfrog virtual education. She had mentioned online courses in her budget speech, too. However, had it not been for the lockdown, the progress might not have been that quick.

- **Foreseeing the Trail of Digitalization in Education:**

The new courses-could also accelerate some decision making at college and university levels, where officials have not yet been able to announce dates for this year's examinations. Delhi University has said that final year exams might go online from July 1, and that first and second year might follow suit. However, there is still resistance from several fronts, mainly the Delhi University Teachers' Association. The main argument is that many students might get dropped off because of no access or poor access to internet. The argument is no doubt valid, as are the other arguments such as that the paper has to be made cheating proof and several glitches need to be ironed out before adopting the new exam method. However, unless the first step is made, this journey cannot ever start. Sitharaman has given that push for the first step.

Direct to Home platforms, community radio and radio to take education to the farthest reaches of the country, too, is a delayed measure. It could have happened a long time ago. In fact, in the good old days when there was only Doordarshan, with its limited hours of programming, there was more education content on television than there is now, with hundreds of channels. The minister said that private providers such as Airtel and Tata Sky have been approached for this purpose. The government will roll out 12 new channels for education, with one channel for every school standard. Under the One India outlook, this is being dubbed as the One Class, One Channel initiative. She said special e-content is also being developed for visually and hearing-impaired students. Another positive move is '*Manodarpan*', an online initiative to provide psychological counselling to students and families who have been overwhelmed with the developments around them that the pandemic and lockdown has triggered. Adding another 200 hundred books to the e-repository Diksha is another initiative.

- **Understanding the Reality:**

Of course, a lot depends on the quality of the programming on the channels, and podcasts for the minister's vision to be a successful alternative to classroom learning. A lot also depends on regular access to internet and television channels. However, these are issues that can be worked upon as the system takes off. Also, these changes should not just be seen as stop gap arrangements for the present, but as larger policy changes This is the right time to strengthen online education to be prepared for any future pandemic situations. The entire education system has to undergo change with the active involvement of faculty. Institute should now go global and be part of the international or global education system. The strength of this system lies in the faculty that an institute nurtures. Faculty need to change their mundane teaching methods and adapt to evolving technology-centred teaching. The faculty should establish themselves as competent individuals who can deliver what the students expect. To establish faulty should be active in research and research publications and gain experience or skills in online teaching. In a way, the learning institutes become virtual institutes. Every student's home becomes his institute.

Conclusion:

To ensure continuity of learning whilst schools are closed, the delivery of education is radically changing today through distance education: digital, blended or hybrid learning have become part of the new learning reality which all Governments, teachers and learners will

have to adjust to. While major efforts are needed to mitigate the learning loss of those children who return to school in the post COVID-19 recovery phase, we must also remember that many children were not learning before the crisis and several million were not even in schools. The reports therefore also explore opportunities to build back better and to re-imagine education; to shift from fact-based didactic methodologies to competency-based approaches, which are more flexible, better respond to the holistic needs and aspirations of all children, and provide opportunities for life-long learning as per the Sustainable Development Goals (SDG) agenda.

While the suite of reports provided within the Regional Situation Analysis are particularly relevant to the Asia Pacific region, contexts of course vary considerably across our huge region. At the same time, the reports may also provide insights that are relevant to other regions around the world. Hopefully the findings, including the country case studies, and regional budget needs analysis will help governments resume and accelerate progress towards SDG 4. The way education is conceptualized and delivered is changing fast, and the transformation journey will be steep and full of challenges. Governments, donors, all partners and the private sector will need to work together, not only to get the strategies and levels of investment right, but to build more resilient, effective and inclusive systems, able to deliver on the promise of education as a fundamental human right for all children, whether schools are open or closed.

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Digital Education for the Have Nots: Focusing the Tribals

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Abstract:

The era of digitalization has been instrumental in a paradigm shift in the field of Teaching Learning and Research. However, where on one hand we enjoy the fruits of the said revolution, it is also important to take into consideration as to how the same has been received by all the stakeholders of the pedagogy and what future it beholds for the academic fraternity. The 21st century is the age of digitalization. The growing impact of digitalization can be seen in almost all the spheres of life. The education field in India might be hesitant to embrace the digital interventions, but is now slowly accommodating digitalization in the field of Teaching Learning and Research. The New Education Policy stresses the inclusion of children from the remotest part of the world in the mainstream education through digitalization. However, every kind of progress comes with a new set of challenges. Even if the government promotes digital play in the field of education and research, the question remains if the prevalent system of education and research is conducive to these changes.

Keywords: Digital Education, Tribals, Government & NGO Intervention.

Introduction:

Digital India program is a program to transform India into a digitally empowered society and knowledge economy. This dream project of India government was launched on 1st July 2015 by prime minister Narendra Modi. The project "preparing North-East for Digital India" is approved by Department of Electronics and Information Technology (DeitY) to support the Digital India initiative. In North East as well as in Tripura local venders are using online apps for payment through e-wallet, Paytm etc. implementation of cashless transaction in petrol pump, medical stores, departmental stores etc are increasing day by day. Let's hope India will again be called a Golden sparrow and it will attain the top position around the globe.

The tribal youth of the state are very enthusiastic about the Digital India program. Each and every day they are learning and teaching the different dimensions of this program among their society and beyond. But their society are suffering with some burning problems in the field of implementation of digitization such as lingual problem, financial problem, lack of proper guidance, communication problem, society inertia, non-uniform reservation facility distribution among them etc. It is urgent to take some remedial steps in government policy to overcome those problems. Some of the remedial steps may be- setting up of more number of government managed English medium school in each tribal locality, also to encourage the private enterprises for setting up of more number of English medium school in rural areas, to arrange awareness program among rural illiterate parents to encourage education of their children, making strict policy and program to eradicate the belief on superstition and unscientific treatment etc.

This dream project of the Government of India will only be successful by the collaborative effort from central government as well as state government initiative. This project will create a greater number of employments in the country as well as in state Tripura. The Youths of the state are very enthusiastic about this digitization but they need proper guidance & help in that regard. But it is very important to give digital literacy to each tribal adult of the state especially in rural areas. Let us all keep our hands together & look forward for the successful implementation for this project for the brighter and prosperous India.

- **Covid Impact on Education:**

The coronavirus pandemic has forced us to choose an alternate way of living. A radical change is evident in education, trade, health and such. This coupled with the advancement of technology has accelerated the growth and popularity of digital education. Across the domains, right from the elementary classes to postgraduate degrees and more, the proliferation of digital education has grown by leaps and bounds. Media such as smartphones, televisions, PCs, etc. are used for this purpose. The one alarming concern, however, is the accessibility to these mediums, particularly for the less privileged and marginalized strata of society. The Scheduled castes and Scheduled tribes of Kerala in India are no exception to this. This research has primarily relied on the indices of illiteracy, dropout rates and dilapidated conditions of these not-so-privileged communities. Quite intriguingly, despite the claims made by the authorities, there has been no proper study or research carried out pertaining to this acute issue. In light of this, we have collected data from students belonging to the tribal communities.

- **The Tribals Lagging:**

As education turned digital, students belonging to these tribal communities were left outside of the educational spectrum. They were denied of their right to education enshrined under Article 21A of the Constitution of India. Without access to education, many of the children were forced into child labour under hazardous circumstances, making them vulnerable and unprotected. On top of the existing economic disparities, caste-based discriminations continue to be a major reason for the societal divide. Several studies in support of the above argument have been carried out and all beyond reasonable nexus indicates that despite the various government programs designed for this purpose, caste still stands to be the single major factor for the low educational mobility of Scheduled Tribes. Historically, the Scheduled Tribes have lived in the most remote parts of the country, inside the forests and grasslands, where there is an abundance of natural resources which can be used as a means to sustain their livelihood.

The 21st century is the age of digitalization. The growing impact of digitalization can be seen in almost all the spheres of life. The education field in India might be hesitant to embrace the digital interventions, but is now slowly accommodating digitalization in the field of Teaching Learning and Research. The New Education Policy stresses the inclusion of children from the remotest part of the world in the mainstream education through digitalization. However, every kind of progress comes with a new set of challenges. Even if the government promotes digital play in the field of education and research, the question remains if the prevalent system of education and research is conducive to these changes. Where on one hand the digitalization is vociferously proposed, there are many provocations

that need urgent address. Similarly, it would be sagacious to analyze and interpret these provocations and challenges, with suitable responses, so that the after effects can be effectively dealt with.

Aim and Objective

The present paper aims to discuss the impact, progress, to reveal the problems and also to suggest some remedial measures of Digital India program on tribal society in north-east India and specially in India.

Method of the Study

The method is descriptive survey and data is used from primary as well as secondary sources. Findings of the study reveal not only the present problems and challenges in the state, but also attempts to find out possible solution in order to overcome those maladies.

Discussion & Analysis:

The era of digitalization has been instrumental in a paradigm shift in the field of Teaching Learning and Research. Integration of tribal youth in their culture is imperative. Development in tribal societies should focus on educational programs that motivate keeping tribal youth integrated in their own culture. Working with the tribal leaders is a key to ensure their active participation and cooperation in sensitization programs on the importance of education.

- **Government Interventions in Tribal Education:**

The Central and state governments, since India's Independence, have initiated several schemes and programs to educate the country's tribal population. These include the establishment of Ashram Schools, Ekalavya Model Residential Schools, Kasturba Gandhi Balika Vidyalaya, pre-matric scholarships and vocational training centers. Policy analyst and educationists have been meaning to recognize tribal culture, language, cognitive strength, curriculum and inherent learning ability of the tribal children. They believe this could revamp the tribal education system in the country. Some teachers assume that tribal students are slow-learners.

Overcoming the language barrier requires concerted efforts. The Odisha Government and civil society organizations have made some promising efforts to educate the Gonds, Bhils, Santals and other tribal groups in their mother-tongue. Tribal children are responding well to such innovative programs, according to educationists. The coronavirus pandemic has forced us to choose an alternate way of living. A radical change is evident in education, trade, health and such. This coupled with the advancement of technology has accelerated the growth and popularity of digital education. Across the domains, right from the elementary classes to postgraduate degrees and more, the proliferation of digital education has grown by leaps and bounds. Media such as smartphones, televisions, PCs, etc. are used for this purpose. Ultimately, this study points to the fact that the pandemic has caused irreparable damage to the education sector in Kerala, causing a prodigious digital divide by fracturing the universal rule of accessible education.

- **Stakeholder's Collaboration:**

There is a pressing need for collaboration and strategic discourse between government, policy-makers, civil society organizations and international development institutions to collectively put efforts to address the chronic problems and allocate adequate funds from central and state budget for tribal education. Policy framers need to focus on a long-term

strategy to enhance educational status of tribal children. Equal access and opportunities should be given to tribal children to empower them, development practitioner who works with the Union Ministry of Minority Affairs. Tribal communities will have to be elevated economically and educationally for promotion of a socio-economically integrated healthy society in the remote pockets. However, where on one hand we enjoy the fruits of the said revolution, it is also important to take into consideration as to how the same has been received by all the stakeholders of the pedagogy and what future it beholds for the academic fraternity.

The one alarming concern, however, is the accessibility to these mediums, particularly for the less privileged and marginalized strata of society. The Scheduled castes and Scheduled tribes of Kerala in India are no exception to this. This research has primarily relied on the indices of illiteracy, dropout rates and dilapidated conditions of these not-so-privileged communities. Quite intriguingly, despite the claims made by the authorities, there has been no proper study or research carried out pertaining to this acute issue. In light of this, we have collected data from students belonging to the tribal communities of Wayanad in Kerala. Ultimately, this study points to the fact that the pandemic has caused irreparable damage to the education sector in Kerala, causing a prodigious digital divide by fracturing the universal rule of accessible education.

Conclusion:

Tribal students need the benefits of digital inclusion. The tribal clusters need dedicated focus on digital skills and literacy. There is an urgent need for digital means to reach out to the communities with connectivity and access. Digital solutions will facilitate market of tribal products and services. It is certainly important to note that tribal inclusion must go along with digital inclusion, considering connectivity and access as essentials to generate demand and services. This exclusive focus can help to achieve development equity. The country's effort towards a developed knowledge society and economy cannot exclude India's millions of tribal citizens. There is a need to promote intensive participatory community mobilization and sensitization programs for the community leaders and key stakeholders. Moreover, such awareness generation programs should be organized through experienced and credible institutions working in the domain of tribal education.

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Expostulating E-Pollution at the Backdrop of Mounting E-Resources Currency

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Abstract:

An ecosystem is a geographic area where plants, animals, and other organisms, as well as weather and landscape, work together to form a bubble of life. The E-resource is distribution of information in any electronic form such as CD- ROM, Floppy Disk or Magnetic tape or across a computer network like e-journals, E-Books, ETD etc. The staggering amount of energy needed to power the infrastructure and use of the Internet leads to more "digital pollution". Electromagnetic pollution is the excessive presence of radiation from any electromagnetic spectrum. Electromagnetic pollution occurs when any living organism spends a long period of time in contact, both directly and indirectly, with any source of radiation capable of producing an electromagnetic field. The internet eases of communication to the researchers; because it serves as a guidance and original source of information. It is very easy to access and at the same time saves time thereby allowing an individual to manager his/her resources better and effectively. Additionally, the internet is very convenient because an individual can easily carry out a research work at home with much comfort and convenience. The dangers of the Internet are real, and they are all around us. Every day, new scams pop up on our social media feeds, hackers steal from innocent victims, and identity theft is at an all-time high The assessment of outcomes is as important for Internet-based instruction as for any other instruction. The method of assessment should reflect the intended goals of the instruction.

Keywords: E-Resources, Mounting, E-Pollution

Introduction:

An ecosystem is a geographic area where plants, animals, and other organisms, as well as weather and landscape, work together to form a bubble of life. Every factor in an ecosystem depends on every other factor, either directly or indirectly. A change in the temperature of an ecosystem will often affect what plants will grow there, for instance. Animals that depend on plants for food and shelter will have to adapt to the changes, move to another ecosystem, or perish. Ecosystems contain biotic or living, parts, as well as abiotic factors, or nonliving part. Biotic factors include plants, animals, and other organisms. Abiotic factors include rocks, temperature, and humidity.

- **What is an Ecosystem?**

Ecosystems can be very large or very small. Tide pools, the ponds left by the ocean as the tide goes out, are complete, tiny ecosystems. Tide pools contain seaweed, a kind of algae, which uses photosynthesis to create food. Herbivores such as abalone eat the seaweed. Carnivores such as sea stars eat other animals in the tide pool, such as clams or mussels. Tide pools depend on the changing level of ocean water. Some organisms, such as seaweed,

thrive in an aquatic environment, when the tide is in and the pool is full. Other organisms, such as hermit crabs, cannot live underwater and depend on the shallow pools left by low tides. In this way, the biotic parts of the ecosystem depend on abiotic factors.

- **Understanding the e-resources?**:

The E - resource is distribution of information in any electronic form such as CD-ROM, Floppy Disk or Magnetic tape or across a computer network like e-journals, E-Books, ETD etc. An electronic resource is defined as a resource which require computer access or any electronic product that delivers a collection of data, be it text referring to full text bases, electronic journals, image collections, other multimedia products and numerical, graphical or time based, as a commercially available title that has been published with an aim to being marketed. These may be delivered on CD ROM, on tape, via internet and so on. According to AACR2, 2005 Update, an electronic resource is: "Material (data and/or program(s)) encoded for manipulation by a computerized device. This material may require the use of a peripheral directly connected to a computerized device or a connection to a computer network (e.g., the Internet)." This definition does not include electronic resources that do not require the use of a computer, for example, music compact discs and videodiscs. According to Library and Information Technology Glossary "Term used to describe all of the information products that a library provides through a computer net..."

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Discussion & Analysis:

The dangers of the Internet are real, and they are all around us. Every day, new scams pop up on our social media feeds, hackers steal from innocent victims, and identity theft is at an all-time high! Monitoring the dark web is impossible, which is why this is not going to be an option for a lot of people. We must talk about these dangers so that you can protect yourself against them. Below are the most common dangers that people can face while using the Internet.

- **Knowing the E-Pollution?:**

The staggering amount of energy needed to power the infrastructure and use of the Internet leads to more "digital pollution". The entire ecosystem that revolves around the Web, including the devices used to navigate it, causes 3.7% of our planet's total greenhouse gas emissions. This is greater than the number of gas emissions generated by the airline industry. Although a single email consumes very little, this small sum must be multiplied by the more than 300 billion emails that are sent and received every day all over the world. The same is true for the 3.5 billion daily Google searches, and in general for all the more trivial activities carried out by 4.1 billion Internet users, which in the developed world are each responsible for producing around 80 kilos of greenhouse gases per year. The most active email users can create 1.6 kilograms of CO2 every day, just by using email. The situation is more or less the

same for other instant communication tools: a single tweet generates 0.2 grams of greenhouse emissions, while messages sent via WhatsApp or Messenger have a slightly higher impact than emails, although their frequency is much higher. Obviously, the number of attachments, photos and even emojis sent also plays an important role.

- **Relation between Technology & Pollution:**

Over time, the relationship between technology and pollution has only become worse. By 2025, digital emissions will double, reaching 7%. It is estimated that around 2040 they will reach 14% of global emissions, slightly less than the energy consumed by all of the US. If we want to prevent our use of the Internet from further contributing to the climate crisis, the way forward must be digital sobriety. Companies that use the Internet, especially the Web must play their own role in reducing cyber pollution. Auto-run option for videos must be removed. For music, MP3 must be preferred to MP4. Only low-definition versions of films and TV series must be allowed to be downloaded.

On an individual level, we must refrain from sharing unnecessary audio and videos. We should keep chatting and commenting on social media concise and precise. Binge use of social media should be shaken off. We should bank upon apps that run offline. For instance, instead of looking up word meanings in Google, an offline dictionary once downloaded can do what is needed. We should download videos if we want to multi-watch them instead of watching them online again and again. If left unmonitored, this digital pollution would endanger the future of the digital world of which we are so proud now, in the same manner as environmental pollution has threatened our healthy existence on this earthly abode. The day is not too distant when we would be talking about digital smog. It's high time that parents, teachers and media had started inseminating digital sobriety among all the internet users, especially our youth.

- **Causes of E-Pollution:**

Electromagnetic pollution is the **excessive presence of radiation from any electromagnetic spectrum**. Electromagnetic pollution occurs when any living organism spends a long period of time in contact, both directly and indirectly, with any source of radiation capable of producing an electromagnetic field. There is no consensus about the existence of electromagnetic pollution, but there are theories that state that electromagnetic fields can affect the well-being and reproduction of living beings. According to these hypotheses, electromagnetic fields do manage to produce these **imbalance** effects **in living beings.** It is not so crazy if we think that both electricity and magnetism can affect living beings and that, in fact, there are in our own body. However, it is a type of contamination that is still under study, since it has been known for a relatively short time. There are several sources that are capable of generating this type of contamination. Most of these sources come from human activity and, above all, the greater the **technological advancement of society**, so it is a fairly modern pollution.

- **Types of E-Pollution:**

E-waste can be classified on the basis of its composition and components. Ferrous and nonferrous metals, glass, plastics, pollutants, and other are the six categories of materials reported for e-waste composition. Iron and steel constitute the major fraction in waste electrical and electronic equipment (WEEE) materials, with plastics being the second largest.

Nonferrous materials, including metals such as copper and aluminum, and precious metals such as silver, gold, and platinum are third in abundance and have significant commercial value. Toxic materials include lead and cadmium in circuit boards, lead oxide and cadmium in cathode ray tubes, mercury in switches and flat-screen monitors, brominated flame retardants on printed circuit boards, and plastic and insulated cables; when these exceed the threshold quantities, they are regarded as pollutants and can damage the environment if disposed of improperly. One of the most widely accepted classifications is based on the directives that divide e-waste into the 10 following categories:

- ✓ **Large household appliances:** refrigerators, freezers, washing machines, clothes dryers, dishwashers, electric cooking stoves and hot plates, microwaves, electric fans, and air conditioners.
- ✓ **Small household appliances:** vacuum cleaners, toasters, grinders, coffee machines, appliances for haircutting and drying, toothbrushing, and shaving.
- ✓ **Information technology (IT) and telecommunications equipment:** mainframes, minicomputers, personal computers, laptops, notebooks, printers, telephones, and cell phones.
- ✓ **Consumer equipment:** radios, televisions, video cameras, video recorders, stereo recorders, audio amplifiers, and musical instruments.
- ✓ **Lighting equipment:** straight and compact fluorescent lamps and high-intensity discharge lamps.
- ✓ **Electrical and electronic tools:** drills, saws, sewing machines, soldering irons, equipment for turning, milling, grinding, drilling, making holes, folding, bending, or similar processing of wood and metal.
- ✓ **Toys, leisure equipment, and sporting goods:** electric trains or racing car sets, video games, and sports equipment with electric elements.
- ✓ **Medical devices:** radiotherapy equipment, cardiology, dialysis, pulmonary ventilators, nuclear medicines, and analyzers.
- ✓ **Monitoring and control instruments:** smoke detectors, heating regulators, and thermostats.
- ✓ **Automatic dispensers:** for hot drinks, hot or cold bottles, solid products, money, and all appliances that automatically deliver various products.

- **Using Internet in Research:**

The internet is a very powerful worldwide instrument, which serves as a good source for research work and learning. It generates current information, facts-finding, and is the most outstanding invention in the area of communication in the history of human race. The internet has been very useful to mankind in the aspect of learning and research development. The internet eases of communication to the researchers; because it serves as a guidance and original source of information. It is very easy to access and at the same time saves time thereby allowing an individual to manager his/her resources better and effectively. Additionally, the internet is very convenient because an individual can easily carry out a research work at home with much comfort and convenience. The internet is a valuable search tool and has been informative for academic research, as it helps significantly to improve research skills, and makes learning visual and easy to follow.

The term Cyberbullying refers to when someone sends hurtful messages or posts on social media. Cyberbullies can be anonymous, which can make it really hard for victims of cyberbullying because they cannot stop being bullied, even if they want the struggle to end! Cyberbullying has the capacity to ruin people's reputations which is why this kind of activity can never be tolerated. Similarly, identity theft happens when criminals steal your identity to commit crimes. They steal your credit card information and then use it to make purchases. They can also steal your social security number to open up bank accounts or get a loan with you as the borrower, which would result in you being responsible for paying back that money! Identity theft is a serious crime, and people who have been victims of identity theft often have to spend a lot of time and money to fix it.

- **Pitfalls of the Use of Internet in Research:**

Spamming happens when people send out unwanted messages to other users. These messages are often sent by automated systems and can be harmful to your computer because they contain viruses or spyware. Spamming can also be annoying because it can fill your inbox with unwanted messages that you may have to spend time deleting. Cybervandals is a form of hacking that involves the deliberate destruction or alteration of data, often as simple as changing words on an informational web page. It can be difficult to find out who did it and why they targeted you specifically. However, the impacts can be very devastating. A person or organization's reputation and credibility can be damaged because of cybervandals.

If any email address has been hacked, then someone may have used it without permission to send out malware or to send spam messages. This can be a serious problem because email is one of the primary ways you communicate with people, and if it's hacked, it can't be used as effectively anymore. Aside from your email address, hackers can also get your credit card information or access passwords for various accounts. Spoofing happens when someone creates an imitation site to collect data from users without them knowing. This is very dangerous because a hacker could use this information to log into your account and steal all the data you entered. In addition to this, spoofing has the capacity to trick the user into entering personal information, such as credit card numbers. When looking through a website or an app from your phone, there are usually little popups telling you to share it with others to unlock something. If someone clicks on this link and shares it, they'll end up getting redirected to other websites that will try to get them to download malware on their phones or computers called as Scams.

Conclusion:

The assessment of outcomes is as important for Internet-based instruction as for any other instruction. The method of assessment should reflect the intended goals of the instruction. If the goal is dissemination of minimal information, Science and Engineering Ethics, enough to simply know that the users/students have accessed the relevant Web page(s) or reported that they have done so. However, if it is necessary to also assess whether the basic information has been learned, this can be accomplished through automated delivery of multiple-choice questions. Still better, if time permits, the assessment could be further formalized by feedback from the course instructor on each of the submitted assignments. A well-designed system of information delivery, assessment, and tracking of completion can run independently without the ongoing need for an instructor. Such systems can certainly work,

and are widely used, but they are associated with a number of shortcomings. Some kinds of information may not easily be covered with multiple choice questions; such an assessment would not be ideal for changes in decision-making skills or attitudes; and if this is the only method of teaching research ethics, it is likely to support the view that the topic is of little significance. On the other hand, if the goal is to change skills or attitude, then as a minimum it may be enough to simply ensure that the process of active learning takes place. In other words, the assessment would simply be the verification that students had completed the requirement to discuss assigned material with other students and prepared written summaries of their deliberations.

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Role of Academic Stakeholders at the Backdrop of the Digital Ethics and Student Development

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Abstract:

Digital ethics can come across as a very unscientific investigation of sometimes very scientific subject matter. The transferring of consciousness to computers, a world run by robots, and technologically enabled immortality all sound like Asimov-inspired dreaming, yet they look increasingly like plausible future outcomes. Educational institutions have a duty of care to students to take reasonable steps to ensure digital learning is conducted in a safe and responsible manner. Parents and/or carers have an important role in helping their children use digital technologies safely and responsibly. While school and home environments may not be exactly alike, schools can still promote general safety strategies and ease parental concerns. To this end, schools might find their student engagement and bullying prevention policies and acceptable use agreements useful starting places for discussion.

Keywords: Academic Stakeholders, Digital Ethics, Student Development.

Introduction:

Digital ethics is the field of study concerned with the way technology is shaping and will shape our political, social, and moral existence. The digital ethics or information ethics in a broader sense deal with the impact of digital Information and Communication Technologies (ICT) on our societies and the environment at large. Investigating moral and political philosophy is difficult at the best of times; consensus is hard to find and even basic premises are disputed. With digital ethics comes the added variable of assessing the ethical implications of things which may not yet exist, or things which may have impacts we cannot predict.

The sociologist Ulrich Beck's concept of *risk society* addresses the growing nature of uncontrollable risks and the increase of uncertainty in the way we construct our understanding of society and questions pertaining to it. This theme seems pertinent in the study of digital ethics as we seek to estimate what impacts different technologies will have on human existence, without ever really knowing for sure. In this sense, digital ethics can come across as a very unscientific investigation of sometimes very scientific subject matter. The transferring of consciousness to computers, a world run by robots, and technologically enabled immortality all sound like Asimov-inspired dreaming, yet they look increasingly like plausible future outcomes. However, not all digital ethics falls in the scope of imagining what the world will look like in 50 years time. We already live in a digital society and we're already seeing the effects of these new networked technologies on our political, social, and moral spheres. The proliferation of digital data and internet-based research technologies is transforming the research landscape, and researchers and research ethics communities are struggling to respond to the ethical issues being raised.

These discussions identified five key sets of issues and informed the development of guidelines orientated to meet the needs of researchers and ethics committee members. We argue that establishing common approaches to assessing ethical risks of research involving digital data will promote consistency in the ethical standards for research, enable the smooth functioning of ethics committees, and sustain public confidence in research. We conclude with recommendations for the development of educational resources for ethics committees, data management guidelines and further public education.

Discussion and Results

Educational institutions have a duty of care to students to take reasonable steps to ensure digital learning is conducted in a safe and responsible manner. They must ensure students are aware of expectations relating to the safe, responsible and ethical use of digital technologies. The department has developed acceptable use agreement templates, to support schools with this requirement. Online safety should be included in curriculum planning.

- **Role of Educational Institutions:**

Online incidents of concern must be managed in accordance with the department's policy on Reporting and Managing School Incidents, as well as any other department or local school policy relevant to the type of incident. Educational institutions must ensure that digital learning is conducted in a safe and responsible manner by staff and students and the use of online environments is for educational purpose, is appropriate and balanced. They also have a responsibility to educate young people about responsible online behaviour. To manage risk and support the safe and responsible use of digital technologies, the following areas need to be considered when planning for digital learning.

- **Supervision While Using Digital Technology in the Classroom:**

Consistent with their duty of care to students, teachers are required to adequately supervise students when using digital technology in the classroom. Schools should have measures in place to ensure students are appropriately supervised when engaged in online learning. Such measures might include:

- ✓ Moving around the room to regularly monitor screens
- ✓ Installing remote access software that enables teacher access to individual students' 1 to 1 learning device used in class
- ✓ Actively reinforcing learning and behavioural expectations during the activity.

Schools must ensure students are aware of behavioural expectations when engaging in digital learning activities. The department has provided Acceptable Use Agreement (AUA) templates to assist schools to develop agreements around the acceptable use of internet, other online and digital technologies. Whilst not legal documents, they play an important part in describing how the school educates and supports its students as well as the expectations on students themselves to be safe, responsible and ethical users of digital technologies. These agreements are templates. Schools can add and/or delete information where necessary to make them relevant to their school environment. It is recommended that teachers work through and discuss the behaviours described in the agreement with their students. Inclusion of student voice in the AUA can assist with addressing relevant issues and share knowledge of current technologies and social media sites. The AUA must be accurate, communicated across the

community and reviewed regularly. Sending a copy of the AUA home or publishing it on the school website will assist parents to support their child's appropriate internet use at home.

- **Student Online Behaviour Expectations:**

Schools may also wish to recommend that parents discuss, develop and implement a similar 'family agreement' at home. This will assist students to understand what is and isn't appropriate behaviour and that appropriate behaviour is expected everywhere and anytime they are online. The schools must:

- ✓ ensure the safe and responsible use of digital technologies is the paramount consideration
- ✓ ensure that their AUA is consistent with their school student engagement policy
- ✓ add information about programs, online and digital technologies including social media tools specific to their school
- ✓ describe strategies designed to teach students to be safe, responsible and ethical users of digital technologies when they are not at school
- ✓ provide information to parents and/or carers about the AUA, the school's programs and considerations for at-home use of online and digital technologies
- ✓ retain a copy of the completed and signed AUA on file at the school

Schools are reminded that students' signing of these agreements is aimed to raise awareness and support student learning. They are not legally binding on those students. There are however some online activities which are illegal and schools are required to report these to appropriate authorities.

- **Privacy in Online Environments:**

All school and corporate staff must take reasonable steps to ensure that personal and health information they create, handle or have responsibility for are kept secure at all times, and only collect, use and disclose it in appropriate ways. Online services and applications, including cloud technologies, often handle student or parent information. These services usually require personal details to create an account or 'login' and often also provide an opportunity for personal information to be created or stored within the software by a teacher and/or student.

- **Privacy Impact Assessments:**

When schools are considering using an online service or application that handles personal information they must:

- ➢ Obtain agreement to do so from the school principal or leadership team. This can be done via email or a meeting.
- ➢ Conduct an assessment to identify any privacy and security risks, and document what actions are required to mitigate these.
- ➢ Consider whether consent for use of the service is required, and if so, whether opt-in or opt-out consent is most appropriate for the specific situation.
- ➢ Ensure parents are adequately informed about the use of the online service.

When schools start new initiatives or plan to use new or updated systems that handle personal, sensitive or health information, a privacy impact assessment (PIA) is required.

- **Digital Copyrighting:**

Digital material on the internet is protected by copyright in the same way as other copyright works. The material that comprises a website may be owned by different people. When including photographs of students in online platforms and applications, it is important to consider risk and consent. Refer to: Photographing, Filming and Recording Students. Online safety education should be included within the school's curriculum planning and taught explicitly.

- Bully Stoppers - supports students, parents, teachers and principals in working together to make sure schools are safe and supportive places
- Classroom resources - links to downloadable classroom activities, videos, interactive learning modules and quiz, advice sheets and other useful resources to use in the classroom
- E.Smart - assists schools to develop a culture that promotes the safe, smart and responsible use of technology
- The eSafety Commissioner - the office provides a range of up-to-date information and resources, coupled with a complaints system to assist children who experience serious cyberbullying and image-based abuse

- **Responding to Online Incidents:**

Schools must respond to any online incident in accordance with the department's policy on Reporting and Managing School Incidents, as well as any other department or local school policy relevant to the type of incident, such as the school's student engagement and bullying prevention policies, or the department's Privacy and Information Sharing policy and associated guidance. For online incidents, the department has also developed a step-by-step guide, which provides practical steps and actions to respond to an online incident of concern. From Term 1, 2020, students who choose to bring mobile phones to school must have them switched off and securely stored during school hours unless an exception has been granted.

Conclusion:

Parents and/or carers have an important role in helping their children use digital technologies safely and responsibly. Schools can assist parents to support their children in the digital world by providing them with useful information about existing and emerging technologies, engaging them in the development and review of policies and inviting them to information sessions or distributing handouts on school expectations of acceptable use. Schools also have a responsibility to inform parents and/or carers of any learning spaces that they make available to students as well as the expected behaviours and protocols surrounding their use. Parent information sessions should focus on the safety and wellbeing implications of online environments in addition to any technical details parents might need to know to support their child at home. Information evenings can raise parent awareness about the safe and responsible use of digital technologies and provide parents with ideas about measures that could be taken at home. While school and home environments may not be exactly alike, schools can still promote general safety strategies and ease parental concerns. To this end, schools might find their student engagement and bullying prevention policies and acceptable use agreements useful starting places for discussion.

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Digital Education: Pondering Over Both the Sides of the Coin

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Abstract:

Digital education is largely a result of the past few years, though it has already existed slightly earlier in various ways. It is obvious; however, that modern equipment and means of transmitting information are important for its growth. Thus, without the rapid development of computers and the Internet, this form of education would not be feasible. It can be inferred that they were primarily concerning digital education and somehow forced its advent because the proliferation of computers and broadband Internet gave a very strong impetus to use them in educational activities as well. Perhaps most importantly, systems that blend computer-aided and face-to-face instruction are notoriously difficult to implement well. In recent studies of the popular *Cognitive Tutor* math programs, teachers reported trouble implementing the program's instructional practices that revolve around collaborative work, making strong connections between computer-based activities and classroom instruction, and maintaining the expected learning pace with many students who lacked prior math and reading skills. Finally, even with the best implementation, digital learning is likely to benefit students differently depending on their personal circumstances and those of their school.

Keywords: Cognitive Tutor, Implementation, Digital Learning

Introduction:

Digital education is largely a result of the past few years, though it has already existed slightly earlier in various ways. It is obvious; however, that modern equipment and means of transmitting information are important for its growth. Thus, without the rapid development of computers and the Internet, this form of education would not be feasible. It can be inferred that they were primarily concerning digital education and somehow forced its advent because the proliferation of computers and broadband Internet gave a very strong impetus to use them in educational activities. Consequently, interactive classes, modern e-learning courses, educational games, electronic assessments, educational resource portals, digital school registers, and learning process management systems have entered into daily existence today. Three related items in education are made possible by digital technologies: teaching without physical contact, immersive practice, and contact on-site.

Clickers were an early device to improve interaction in class, but now the pervasiveness of smartphones enables students to use these devices as an alternative medium of contact with teachers and between students. The provision of electronic or digital educational facilities is known as e-learning. This involves materials for studying, preparation, knowledge transfer, etc. The successful implementation of e-learning is achieved with the aid of technology, modern pedagogies, degree of instructor and facilitator participation, quality of the programs, and other demographic factors. Tools will continuously play an essential part in motivating institutions of higher education. It can be inferred that they were primarily concerning digital education and somehow forced its advent because the proliferation of

computers and broadband Internet gave a very strong impetus to use them in educational activities as well.

To this end, educational practitioners, acuity, staff and administrators must counter academic integrity, human rights, and intellectual property concerns that have become a major concern in the educational environment. It is unquestionable that, as we experience a rapid technology transition and reach a new millennium, new technologies have given instruments for reconstructing education. In particular, interactive technologies such as CD-ROMs, the Internet, and the Web create countless new tools and materials for educational expansion. The information and communication technology (ICT) that has emerged nowadays plays a major role in globalization, where national boundaries are blurred by instant communications, communication and even sharing of information. Consequently, interactive classes, modern e-learning courses, educational games, electronic assessments, educational resource portals, digital school registers, and learning process management systems have entered into daily existence today.

Discussion and Results

Digital education is largely a result of the past few years, though it has already existed slightly earlier in various ways. It is obvious; however, that modern equipment and means of transmitting information are important for its growth. Thus, without the rapid development of computers and the Internet, this form of education would not be feasible.

- **Digital Educational Facilities:**

Three related items in education are made possible by digital technologies: teaching without physical contact, immersive practice, and contact on-site. Clickers were an early device to improve interaction in class, but now the pervasiveness of smartphones enables students to use these devices as an alternative medium of contact with teachers and between students. The provision of electronic or digital educational facilities is known as e-learning. This involves materials for studying, preparation, knowledge transfer, etc. The successful implementation of e-learning is achieved with the aid of technology, modern pedagogies, degree of instructor and facilitator participation, quality of the programs, and other demographic factors. Tools will continuously play an essential part in motivating institutions of higher education. To this end, educational practitioners, faculty, staff and administrators must counter academic integrity, human rights, and intellectual property concerns that have become a major concern in the educational environment.

- **Technology Transition:**

It is unquestionable that, as we experience a rapid technology transition and reach a new millennium, new technologies have given instruments for reconstructing education. In particular, interactive technologies such as CD-ROMs, the Internet, and the Web create countless new tools and materials for educational expansion. The information and communication technology (ICT) that has emerged nowadays plays a major role in globalization, where national boundaries are blurred by instant communications, communication and even sharing of information. First, increasing speed and availability of internet access can reduce many of the geographic constraints that disadvantage poor students. Schools serving higher-resourced families are often able to recruit better teachers and administrators-perhaps the most important school resources-even without additional funding.

Unlike teachers, however, technologies have no preferences for the schools in which they work.

The resources available on the internet, for example, are equally available to all schools with the same internet access and internet access costs the same for all schools in the same area, regardless of the student population served. Students can now access online videos that provide instruction on a wide variety of topics at various skill levels, and participate in real-time video conferences with teachers or tutors located a state (or even a continent) away. Second, the evolution of touch-screen technology has enabled very young children to engage in technology-aided instruction. Prior to tablets, it was difficult for pre-school, kindergarten and even early primary grade students to work with educational software because it required use of a mouse or keyboard. Now there are a hundred of applications that can effectively expose children to early literacy and numeracy skills.

Third, advances in artificial intelligence technology now allow teachers to differentiate instruction, providing extra support and developmentally-appropriate material to students whose knowledge and skill is far below or above grade level norms. The latest "intelligent" tutoring systems are able to not only assess a student's current weaknesses, but also diagnose *why* students are making specific errors. These technologies could enable teachers to better reach students who are further from the average within their classroom, potentially benefiting students with weaker academic preparation. And these technologies scale easily so that innovations (or even good curriculum) can reach more students. Much like a well-written textbook, a well-designed educational software application or online lesson can reach students not just in a single classroom or school, but across the state or country.

While technologies such as virtual instruction and intelligent tutoring offer great promise, unless the challenges that are associated with implementing them are fully understood and addressed their failure is almost surely guaranteed. To date, there is little evidence that digital learning can be implemented at scale in a way that improves outcomes for disadvantaged students. Hundreds of thousands of students attend full-time online schools, but a study released last year found that students of online charter schools had significantly weaker academic performance in math and reading, compared with demographically similar students in conventional public schools. Computer-aided instruction has been studied extensively over the past twenty-five years and the findings have not been encouraging. Consistently, programs that are implemented widely and evaluated with rigorous methods have yielded little to no benefit for students on average.

- **Student Motivation:**

Let's start with student motivation. If technologies can draw in otherwise disenfranchised students through the personalization of material to a student's interest or through gaming technology, they could benefit disengaged, poorly performing students. However, these technologies often reduce oversight of students, which could be particularly detrimental for children who are less motivated or who receive less structured educational supports at home. It is also possible that these technologies will be less able to engage reluctant learners in the way a dynamic and charismatic teacher can.

Increasing speed and availability of internet access can reduce many of the geographic constraints that disadvantage poor students. Schools serving higher-resourced families are

often able to recruit better teachers and administrators-perhaps the most important school resources—even without additional funding. Unlike teachers, however, technologies have no preferences for the schools in which they work. The resources available on the internet, for example, are equally available to all schools with the same internet access and internet access costs the same for all schools in the same area, regardless of the student population served. Students can now access online videos that provide instruction on a wide variety of topics at various skill levels, and participate in real-time video conferences with teachers or tutors located a state (or even a continent) away.

The evolution of touch-screen technology has enabled very young children to engage in technology-aided instruction. Prior to tablets, it was difficult for pre-school, kindergarten and even early primary grade students to work with educational software because it required use of a mouse or keyboard. Now there are a hundreds of applications that can effectively expose children to early literacy and numeracy skills. Similarly, advances in artificial intelligence technology now allow teachers to differentiate instruction, providing extra support and developmentally-appropriate material to students whose knowledge and skill is far below or above grade level norms. The latest "intelligent" tutoring systems are able to not only assess a student's current weaknesses, but also diagnose *why* students are making specific errors. These technologies could enable teachers to better reach students who are further from the average within their classroom, potentially benefiting students with weaker academic preparation. They scale easily so that innovations (or even good curriculum) can reach more students. Much like a well-written textbook, a well-designed educational software application or online lesson can reach students not just in a single classroom or school, but across the state or country.

While technologies such as virtual instruction and intelligent tutoring offer great promise, unless the challenges that are associated with implementing them are fully understood and addressed their failure is almost surely guaranteed. To date, there is little evidence that digital learning can be implemented at scale in a way that improves outcomes for disadvantaged students. Hundreds of thousands of students attend full-time online schools, but a study released last year found that students of online charter schools had significantly weaker academic performance in math and reading, compared with demographically similar students in conventional public schools. Computer-aided instruction has been studied extensively over the past twenty-five years and the findings have not been encouraging. Consistently, programs that are implemented widely and evaluated with rigorous methods have yielded little to no benefit for students on average.

- **The Key Challenges:**

As far as the key challenges are concerned, if technologies can draw in otherwise disenfranchised students through the personalization of material to a student's interest or through gaming technology, they could benefit disengaged, poorly performing students. However, these technologies often reduce oversight of students, which could be particularly detrimental for children who are less motivated or who receive less structured educational supports at home. It is also possible that these technologies will be less able to engage reluctant learners in the way a dynamic and charismatic teacher can.

Moreover, approaches that forgo direct interpersonal interaction completely are unlikely to be able to teach certain skills. Learning is an inherently social activity. While an intelligent tutor might be able to help a student master specific math concept, it may not be able to teach students to critically analyze a work of literature or debate the ethics of new legislation. The experience of Rocketship, a well-known charter school network, illustrates this concern. Developed in the Bay Area of California in 2006, Rocketship's instructional model revolves around a blended learning approach in which students spend a considerable amount of each day engaged with computer-aided learning technologies. The network received early praise for its innovative approach to learning and, most importantly, for the high achievement scores posted by its mostly poor, non-white student population. In 2012, however, researchers and educators raised concerns about graduates from Rocketship elementary schools, noting that they had good basic skills but were struggling with the critical analysis required in middle school.

More broadly, it is important to realize that technologies can be either substitutes for or complements to resources already in the school. To the extent that they are substitutes, they are inherently equalizing forces. For example, well-designed and structured online content might provide critical support to a novice teacher who is too overwhelmed to produce the same coherent and engaging materials that some more experienced teachers can create. However, in many cases it may be more appropriate to think of technologies as complements- e.g., when they require skilled teachers or students with strong prior skills to be implemented well. In these cases, technologies must be accompanied with additional resources in order for them to benefit traditionally underserved populations.

Indeed, some recent research finds exactly this type of heterogeneity. A large IES-funded evaluation of computer-aided instruction (CAI) released in 2007 found that students randomly assigned to teachers using the leading CAI products fared no better than students in control classrooms. Several years later, then graduate student Eric Taylor, decided to reanalyze the data from the study, focusing on whether the impacts of these technologies varied across classrooms. His analysis suggests that the introduction of computer-aided instruction had a positive impact on students in classrooms with less effective teachers and a *negative* impact on students in classrooms with more effective teachers.

Conclusion:

Perhaps most importantly, systems that blend computer-aided and face-to-face instruction are notoriously difficult to implement well. In recent studies of the popular *Cognitive Tutor* math programs, teachers reported trouble implementing the program's instructional practices that revolve around collaborative work, making strong connections between computer-based activities and classroom instruction, and maintaining the expected learning pace with many students who lacked prior math and reading skills. Finally, even with the best implementation, digital learning is likely to benefit students differently depending on their personal circumstances and those of their school. For instance, non-native English speakers might benefit from online instruction that allows them to pause and look up unfamiliar words.

Likewise, we might expect an online course to be more advantageous for students attending a brick-and-mortar school with very low-quality teachers. In recent years, the

worlds of online learning and computer-aided instruction have converged to some extent, morphing into what is often referred to as blended- or personalized-learning models. There are a number of interesting projects underway across the country, including pilots supported by the Gates Foundation's Next Generation Learning Challenge, and the emergence of charter networks with a goal to provide truly personalized learning for every student, such as Summit Public Schools in California and Washington. In order for these new endeavors to be successful, they must overcome the challenges to yield a better result.

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Teaching-Learning Pitfalls of Online Education at the Backdrop of Evolving Digital Revolution

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Abstract:

The most significant challenge today for any online educator is that of the low student engagement. Most of the online sessions suffer from ineffective discussions and lack of discipline. There is a noticeable decline in one-to-one communication between the teacher and students, making the sessions not only uninteresting but uninspiring to even the brightest students otherwise. Here the faculty members have to realize that these sessions could only be practical if they start focusing more on content delivery rather than information delivery. The use of technology, such as simulation, is necessary to make the sessions interactive. Digital education has now become main stream, unlike previous year when it was just a one-time event. We have already seen working professionals accepting the paradigm shift and switching gears to the online model. It brings the flexibility of doing the program without having to quit the job.

Keywords: Student Engagement, Communication, Technology Usage, Paradigm Shift

Introduction:

The most significant challenge today for any online educator is that of the low student engagement. Most of the online sessions suffer from ineffective discussions and lack of discipline. There is a noticeable decline in one-to-one communication between the teacher and students, making the sessions not only uninteresting but uninspiring to even the brightest students otherwise. Here the faculty members have to realize that these sessions could only be practical if they start focusing more on content delivery rather than information delivery. The use of technology, such as simulation, is necessary to make the sessions interactive. The first and foremost concern is to finalize the length of various courses and programs to be conducted through online platforms.

This crisis has provided institutions with a unique opportunity. They can sit back on their drawing table and redesign their curriculum from scratch which is teacher-student friendly. They have an option now; more and more students are accustomed to online learning. Organizations can adopt an agile approach to education now. They can identify courses (or part of courses) that requires very less classroom discussion or personalization. These courses may be recorded and stored in an institutional repository and can be made available to students. Another significant role that an educator has to take up is to mentor his students. Virtual learning not only increases the physical distance between the teacher-student dynamics, but it also impacts the psychological distance between the two. Understanding individual needs become all the more critical now as these individuals would not even have the luxury of peer support, as they would have in a traditional classroom.

An educator needs to have more empathy towards students, mentor them, encourage them to perform better, and, most importantly, help them with their personal/social struggles.

Besides the designated online sessions, teachers will have to work extra hard to find a medium to connect with their students to know them at a personal level. Students also have an added responsibility in these circumstances. The first thing they need to remind themselves is to focus on developing competencies. These sessions cannot be just a tool to score some marks in exams. Information is readily available on the internet for free. It is important to develop skills and competencies. Whether one wants to become an entrepreneur or to seek a job in corporate, skills and competencies is what is going to make it happen.

The key here is to participate in the sessions, asking relevant questions actively, and applying the learning in the real world. Self-discipline is the key to success should be the current mantra for every online participant. Equity Variety of providers with the state as guarantor of equity. Since no one institutional type can possibly meet the educational needs of all students and all segments of society and the economy, it seems clear that a diverse set of institutional types is more suited to addressing those different needs. Thus, the principles of equity and inclusion serves as the basic foundation for a diversified higher education system to meet

1) The wide-ranging needs of a pluralistic democratic society.
2) The demands of an ever-changing economy.
3) Different individual preferences.

If done right, the new hybrid of in person and online learning could allow more students to enroll at universities because of the convenience of place, time, and learning pace shift. While we could potentially see fewer students who are physically on campus, we could also witness higher graduation rates, because students learning virtually will have the ability to listen, relisten, and slow down an online learning module until comprehended.

New uses for digital platforms and communications channels, Changes to work flow and learning cadence, pace, and time frames, new individual and systemic approaches to resilience and preparedness Imperatives around human connection and innovation around achieving this Support services (advising, counseling, mental health, financial, etc. It's need to allow for our universities to not only address the crisis at hand, but also to plan for a long-term vision to evolve the higher education environment while looking to a future state of a more blended learning experience. If we take the best practices, we have learned from institutions that have successfully implemented blended learning programs, harness the knowledge base within our university system, and amplify the impact for our future generations of workers, this would be a true paradigm shift in higher education that would transform its trajectory for generations to come.

Discussion and Results

While for professionals across industries it has been an easier transition as many of them work on their laptops and smart devices even in office. They can simply plug in at homes now. Of course, what is missing is face to face, personal communication which will get restored as and when things are back to normal. But students have had to make far bigger adjustments as learning has always been in classrooms which they cannot go to now. Besides many of them may not be that well equipped with technology tools to avail of remote learning. Here the Digital India vision of the government is emerging as a vital instrument.

- **A New Era of Technology in Teaching, Learning and Evaluation:**

Going forward, the use of technology in teaching learning and evaluation will lead to a new era wherein the best of faculty will be available from across the globe to students. Education quality will be gauged not just by the quality of faculty but will also have quality of institutions infrastructure and familiarization of the faculty with digital teaching technologies as important parameters. The physical infrastructure of academic institutions will have less impact on the quality of education and thus directly on the cost of education. Review meetings, parent-teacher meetings, subject conferences will be location agnostic. The real vision of the new education policy for liberal education will get executed. It is possible that in times to come, a student may be allowed to carry out courses from any College/ University based on quality of teacher and fees for the course irrespective of his location and finally will get degree from the home university where they got registered or from the university where he has taken maximum courses, resulting in a balance of economics of good education. For all this to be a reality, a drastic change in thought process is required in the mind- set of policy makers, authorities, students and specially educationists.

Faculty selection should gradually be linked to technology friendliness and keenness for technology adoption. Similarly, accreditation parameters, criteria need reconsideration. All these steps will help strengthen the country's digital learning infrastructure in the long run. Covid-19 has only accelerated adoption of technologies to deliver education. Online learning has one major disadvantage which is of impact-based learning. In a typical classroom, teachers pose questions or pair students into groups. Students discuss amongst their peers and arrive at answers. This is not the case in a virtual class, where students may Google out answers with little to no thinking. Virtual classrooms rob the thinking capabilities of a student. Many suggest that we can play with the time factor, but that just negates as every student has varying learning pace. As human beings, we need to 'see,' 'hear,' 'feel,' live discussions that happen only in a classroom. Many can argue that there are universities that are promoting artificial intelligence-aided teaching with the robotic instructor and proactive digital intervention that analyses classroom engagement. So, teachers must ensure student identity affirmation, locking virtual lecture post collecting attendance and interactive Q/A sessions. Hence, it is necessary that students have access to virtual hand-raises and every doubt is cleared in the session.

- **Digital Platform and its Tools:**

The current scenario has highlighted the gaps in an education system that is heavily dependent on the presence of students and teachers in the same place at the same time. The system is based on the concept of face to face, direct instruction, where contact time between student and teacher plays a significant role in what is recognized as learning. The University Grants Commission (UGC), which is India's higher education regulatory body, has framed regulations for minimum standards for quality teaching. Some of these provisions are 180 days of teaching in a year, 30 hours of teaching in a week, 75% attendance in theory and practical classes and specific credit value for courses that are offered over 15 weeks in a semester, excluding admission, examination and time for other co-curricular activities.

These regulations have certainly been breached and questioned during COVID-19. For this reason, the UGC appointed a committee to investigate the issues of examinations and the academic calendar in light of the pandemic. The committee has submitted its report and the

UGC regulations will reportedly be amended to make provision for the unprecedented situation we are facing. The committee believes that some universities lack the technology infrastructure needed for online teaching and online examinations. Indeed, recommending a one-size-fits-all approach and expecting every teacher to teach online is incongruous if we consider issues of equity and inclusion. Based on advice from different quarters, many institutions have started using synchronous online tools for teaching and are using the tools intuitively. Despite their lack of training, several teachers have tried using Facebook Live, Google classroom, Zoom, Webex, Microsoft Team. You Tube, videos etc., to teach and to learn.

Now time has created an atmosphere for technology-enabled learning in higher education in India. It is time that policy-makers and educators took advantage of the current situation to reform Indian higher education and create a resilient system that supports equity, excellence and expansion. The UGC committee falls short of thinking beyond the current crisis and recommends that, moving forward, just 25% of the syllabus should be taught online. We have to rethink what kind of higher education we need in India. The Ministry of Human Resource Development is in the process of formulating a national policy on education. It is therefore timely that we discuss the nature of teaching and learning in the 21st century in India.

- **Blended Teaching and Learning in India**

Indian educators are not alone in the current crisis. While there is no need to emulate the practices adopted in high-income countries, there are lessons we can learn and improvise. India is better prepared than most other countries to integrate Information and Communications Technology (ICT) more effectively and adopt blended learning. Already huge amounts of digital educational resources, such as the Consortium for Educational Communication's undergraduate e-courses, INFLIBNET's e-PG-Pathshala, SWAYAM MOOCs and NPTEL courses, are available to be used by teachers and students. With the UGC's focus on integrating ICT in teaching and learning by 2022 as part of its quality mandate, Indian higher education could take the next leap and consider 'blended learning' as a policy to deliver teaching and learning.

Blended Teaching and learning is an approach to systematically mix face-to-face teaching with online learning, where the online component can be delivered through both synchronous modes and asynchronous modes, where people learn in different locations at different times. Blending can also happen at three levels – at an institutional level, at a programme level and at a course level. Ideally, some of the courses (those with practical and skills components) can only be taught face-to-face, while others can be delivered either in blended or completely online mode. A blended course experience will not have the 90 hours of contact time expected in a six-credit course over 15 weeks. The overall student experience can be divided into several activities carried out face-to-face or online.

Assuming that a blended course will have 50% direct contact, the balance of hours can comprise videos, discussion forums (contributing to meaning-making and knowledge construction in a social environment), online quizzes, assignments and online reading resources as per requirement of the course. Adopting blended learning as a policy in Indian higher education institutions could also help to reduce the unreasonable focus on

examinations, paving the way for continuous formative assessment and use of alternative assessment methods recommended by the UGC committee report. Technology is turning education from teacher-centric education to both teacher and student-centric education. Virtual classrooms and various online tools today allow us to make the engagement between the teacher and students as close to a real, in-classroom like experience, as possible. Technology-based education makes the education system more transparent and equal. Digital education needs a balanced coordination between course content, educationists, technology and course-takers and it can only be successfully implemented with the availability of basic amenities like internet connectivity, availability and affordability of online systems, PCs, laptops, software, etc. Nonetheless, we can't deny the fact that here in such extreme situations.

- **The Microsystem for the E-Learning**

COVID-19 has only accelerated the adoption of technology to make quality education accessible to everyone. The importance of keeping parents informed about classroom practices is essential, and parents regard prioritizing their opinions as to the single most important issue when it comes to their concerns. Parents in this study expressed their discontent with the lack of communication in regards to their children's use of digital technology in the classroom, with some admitting to their minimal communication between themselves and their child's teacher. Teachers, in contrast, seemed to assume that parents were well informed and mentioned handing out digital technology guides, some parents contradicted the teachers about whether or not they received them, therefore causing a disconnect. It knows if they were feeling uncomfortable with either a high volume or a low volume of technology use, just like to want it to feel comfortable contacting me about any concern that they have. However, parents seemed to have a difficult time expressing their views to the teachers due to feeling that they have no voice.

The *microsystem* is the child's immediate environment, such as the child's family, school, and peers, including roles and interpersonal relationships. The *mesosystem* consists of the relationships (sometimes referred to as *networks*) between these microsystems (family, home, school, etc.). This is the most fundamental aspect of the theory regarding parent involvement, which is conveyed through the connections between the adults in a child's microsystem, through their involvement in their children's school, and through values, behaviors, and attitudes about education at home. According to Bronfenbrenner, this family–school relationship, whether as policy or professional practice, represents "a formalization of one of these supportive relationships within the mesosystem.

Conclusion:

Digital education has now become main stream, unlike previous year when it was just a one-time event. We have already seen working professionals accepting the paradigm shift and switching gears to the online model. Firstly, it brings the flexibility of doing the program without having to quit the job. This indeed has a higher uptake among working professionals, especially amid the chief wage earners. Secondly, affordability; online degrees can be offered at 1/10th the cost of the same offline degree, with much more domain-specific and detailed knowledge, along with industry-relevant skill sets that will help any professional to transition in their career. Thirdly, the coronavirus pandemic has proved the robustness of the online model, while offline has come to a standstill. The limitation of this method is that lecture

timings usually last to merely an hour and the teacher may have back-to-back classes. This makes it difficult to answer every question of students. The remedy for this lies in collecting feedback after every session of content delivery, say a Google forms, in which a column can be put forth to add student doubts. The choice here becomes pretty much clear.

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Unveiling the Parent Perspectives on Digital Technology: A Study

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Abstract:

A number of recent studies reported that, while parents may be concerned about their children's well-being regarding technology use, they believe that technology can increase their children's technological awareness and have a positive influence on their educational development. Parents also consider technology to be an essential component of a high-quality education. Furthermore, parents did not view their children at risk when technology was regulated with appropriate levels of supervision. Parents, too, can play a significant role in the environment of virtual learning. It is important for both parents and students to undergo a change in mind set face the primary problems and create opportunities. Parents must encourage the children to take the online sessions seriously, and there should be a proper schedule of activities. Previous studies have shown that establishing caring and trusting in school success. Teacher and school staff engagement with parents in a caring and engaging way can help validate the importance of parents as partners in a child's education. parents had strong views on their perspectives yet were unable to clearly define their roles as stakeholders. This led me to believe that there needs to be more transparency on where parents' roles lie in regards to the public. The disconnect in the communication between parents and teachers was apparent and seemed to be the underlying aspect of the complexity of the relationship, which contradicts former research indicating that communication with parents is easier than.

Keywords: Parents, Educators, Educational Institutions

Introduction:

Neglecting stakeholders' perceptions and values can create inefficiencies and frustration in K-12 schools that can impact K-12 technology decisions. To combat the issue, schools may employ technology coordinators and technology integration specialists to help bridge the gap between stakeholders who include superintendents, principals, teachers, students, and parents. Parents are not always willing and may feel anxious allowing their young children to use technology for fear of overexposure while at the same time in monitoring their children's media use. Evidence points to parents preferring a balance between technology and outdoor activities, as well as concerns about threats to their children's well-being, both social and physical. Risks such as bullying, antisocial behavior, and exposure to unsuitable content may be some of the reasons why parents are reluctant to allow their young children to use technology. Their beliefs and decisions are often a result of childhood experiences.

- **Parent's Perspective:**

A number of recent that, while parents may be concerned about their children's well-being regarding technology use, they believe that technology can increase their children's technological awareness and have a positive influence on their educational development. Parents also consider technology to be an essential component of a high-quality

education. Furthermore, parents did not view their children at risk when technology was regulated with appropriate levels of supervision. Parent involvement is a known predictor of students' academic achievement, including better study habits and fewer discipline problems. Researchers have stressed that parental involvement entails actively participating in school-related decision-making and have called for stakeholders to participate in shared leadership. Researchers have also explored teacher and parent perceptions of digital technology use and found that many parents a lack of confidence in technology use as family and cultural experiences normally dictate role definitions, which may neglect a wide variety of norms that exist in the school community.

- **Educators Say:**

In response to combat coronavirus pandemic, we witnessed a desperate rush by colleges and universities trying to complete the last academic year through an online route. Not only teachers but students were suddenly put to a new environment to continue the teaching-learning process. There was unavoidable haste in implementing virtual learning module for completing the syllabus and in rare cases, internal examinations too. No one was comfortable with the idea of hurried implementation of virtual classes as there was no adequate time for training in times of crisis. The sudden shift of all lectures, laboratories and examinations to a virtual module resulted in a potentially unsatisfying experience both for the teacher and the learner. Thus, there is a need to critically understand the various challenges faced during the initial phase of virtual shifts to find solutions to the problem at hand. Though the current situation gave a slim opportunity for rigorous virtual teaching when the crisis finally recedes it shall be irresponsible of us to not learn newer realms of online content delivery.

Digital friendly classrooms will be the first requirement for teachers in universities and colleges for conducting lectures. For a typical virtual class, everyone needs fast, seamless internet access, uninterrupted electricity and a desktop or smartphone. For teachers, there is a sudden urge to innovate ways to incorporate different styles of learning and examining students. The use of live lectures, educational videos, animations, quizzes and project-based learning is called blended learning; the need of the hour. Teachers equipped with basic internet connectivity can record their lectures and upload them on secure online platforms preferably on their institutional website. These recorded lectures can be viewed offline by the students. Speaking of showcasing videos should not replace actual lecture content; otherwise, the sole purpose of blended learning is a failure attempt.

- **The Role of Educational Institutions:**

There has been a long debate that which platforms should be used for online teaching, with virtually every available platform showing certain limitations. The very first step for any institution today is to bring in standardization as far as an online platform for teaching is concerned. This is extremely important and challenging to impart confidence among its students as well as educators. The move becomes exceptionally essential for courses in performing arts, engineering, biomedical sciences, etc. The possibility of setting up digital labs for teaching courses like science and engineering is of utmost importance.

One of the most underrated challenges that we face today is the readiness of faculty members to conduct online sessions. Just because someone is an excellent classroom teacher

does not automatically make him/her an excellent online educator. The tools we can use inside a classroom are not available to us online. The quality of interaction a teacher can facilitate in physical space is not feasible in virtual classrooms. Whether they ask for it or not, it the responsibility of the institution to ensure their educators is equipped with the necessary skills to conduct online sessions effectively. Learning platforms, knowledge repository, cloud services, etc. would account for more expenditure than physical space and infrastructure. Of course, the fee structure will demand a significant change as well. Finding the right balance would be a significant challenge for a few years.

- **Paradigm Shift in Teacher's Role:**

Teachers are no longer considered the sole providers of knowledge and instruction and continuously rely on parental support, which may in turn impact student achievement. Teachers, however, yet teachers tend to be the decision-makers, along with administrators, on how parents should be involved in their children's learning experiences. For effective school-home partnerships, teachers should consider and broaden their own knowledge and beliefs about parents, including families' diverse child-rearing practices that exist in schools. Parental support for technology can also impact teachers' perceptions and beliefs about their own technology use, as well as social support for teachers, thus impacting teachers' own decisions on integrating technology. Current research revolves around technical and pedagogical factors, while disregarding "institutional realities that teachers face when integrating technology," especially within the broader culture. Wilder (2014) suggested conducting more qualitative studies based on parents' and teachers' beliefs and experiences.

The most crucial task that faculty member engaged in online learning would have to do is to find ways to encourage peer learning. Peer learning is a vital aspect of traditional classrooms. The feeling of competition and a sense of collaboration among students teach them some of the most valuable lessons professionally and personally. Virtual learning deprives them of this experience. The teachers will have to design some activities and assignments that promote learning among the participants.

- **Parent's Responsibility:**

Parents, too, can play a significant role in the environment of virtual learning. It is important for both parents and students to undergo a change in mind set face the primary problems and create opportunities. Parents must encourage the children to take the online sessions seriously, and there should be a proper schedule of activities. There would be several challenges in the journey for both the learners and educators, but if done right, the current challenges will lead to better opportunities to shift smoothly.

The parenting practices in general shifted according to child development experts, pediatricians, and dominant cultural conditions. Parents' beliefs and perceptions about how children develop and what they should do for them to succeed help shape parental perceptions, decisions, and role construction. These beliefs and perceptions are influenced by parents' experiences, such as their upbringing and schooling; moreover, they are socially constructed and can change. Regardless of the definition of parental involvement, its described in the literature, is relatively the same. It is essential to include all stakeholders, such as teachers, parents, students, and the community, in decision-making processes,

especially considering that parental support affects the use of technology in education. The term *parent* refers to "those who act in a primary caregiver or parent role whether they are the biological parent, relative, adoptive parent, foster parent, or nonrelated caregiver". In a study about teachers' perceptions of barriers to using technology in the classroom, the results indicated one of the largest barriers was a lack of support and a lack of administrative and parental support was cited more so at the elementary than the secondary level. There is a need for more qualitative, in-depth information from parents to help provide diverse perspectives, useful insights, and a voice for stakeholders to understand the complexity of parents' beliefs regarding the use of technology in schools.

Previous studies have shown that establishing caring and trusting in school success. Teacher and school staff engagement with parents in a caring and engaging way can help validate the importance of parents as partners in a child's education. In a study by Epstein (1986), a teacher's instructional and interpersonal skills were not rated by parents as high as a teacher that involved them in their children's education. There is also evidence of an overlap between family, students, and teaching practice that influences educators' instruction. Because teachers interact the most with children, after parents, preparing teachers to involve and engage parents is crucial and requires the development of a sociocultural consciousness.

- **Degree of Parental Involvement:**

Parents, guardians, and families have historically been involved in children's education. Until the early 19th century, education was mainly the parents' responsibility, evolving from apprenticeship to a more universal schooling system during the Industrial Revolution. Subsequently, education shifted from a family's duty to the state's duty, with strong political and socioeconomic influences. There have been parents' roles, including role construction and influence. These roles affect how digital technology is being used by children and how the elements of technology use are affected by parents and educators' technology use beliefs. Moreover, the importance of in their children's acquisition of digital technology skills in early childhood education. Increasing parents' and schools' capacities in the involvement process can invite increased parental involvement. While elements of the setting derived from Bronfenbrenner were used in Edwards et al. (2017), the results only indicated how activity, time, place, and role influenced technology use in the home. While much research is available on parents' perceptions or technology use or integration in schools, there is a lack of studies on their roles and their views of being stakeholders. Parents' perspectives in this parent participation. Parents knew that they had a voice, and while at times they were unsure of how their concerns would be received, they did not hesitate to relay how they felt. In turn, their ability to influence any decision-making in their children's classroom requires more authentic participation that is situated in the parental involvement/ engagement literature.

Discussion & Analysis:

The degree of parental involvement can be reflected in parents' networks, individual beliefs, and past experiences. The extent to which parents are involved or engaged at school can be predicted by the size and scope of parents', as well as both their social contexts and individual beliefs. This was represented in the individual responses where parents described

speaking to other parents within their networks about the digital technology used in their child(ren)'s classrooms. While not directly referencing any frameworks or theories, parents' responses fit in with the different roles and systems of the ecological systems theory. The ecological systems theory is more about embedded influences on relationships whereas Epstein's six types of involvement are more separate influences on roles. Our interest in parental involvement is twofold: First, research indicates that increased parental involvement may promote increased student achievement; and second, it reflects in the democratic underlying the organization of the school system.

The results cast a new light on the importance of involving parents in a district and/or school's digital. Bronfenbrenner has stated that "in ecological research, the properties of the person and of the environment, the structure of the environmental settings, and the processes taking place within and between them must be viewed as interdependent and analyzed in systems terms". This ecological approach acknowledges that a child's learning is inseparable from their environment, of which people and technological resources are components. While both Rachel and Tim both stated that they had not experienced parental resistance to digital technology use in their classroom, yet many parents expressed their desire for their children to participate in other activities such as outside play.

Conclusion:

In my analysis of parents' perspectives, it was discovered that parents had strong views on their perspectives yet were unable to clearly define their roles as stakeholders. This led me to believe that there needs to be more transparency on where parents' roles lie in regards to the public. The disconnect in the communication between parents and teachers was apparent and seemed to be the underlying aspect of the complexity of the relationship, which contradicts former research indicating that communication with parents is easier than. This digital technology in a study within the same district from only two years prior. While parents encouraged what they deemed as appropriate uses of digital technology (research, coding, etc.), they were hesitant to support specific district-approved programs, such as Exact Path, in their child's education. It is hoped that these results can allow parents to make more informed decisions in regards to their child's education, specifically digital technology.

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Impact of Digital Education on Students Health

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Abstract:

This study list out the problems faced by Students/ Learners while attending online classes. While e-learning emerged as the biggest savior in the wake of the closure of educational institutions, it has come with its own set of challenges. All stakeholders, including students, teachers and institutions are forced to overcome challenges that have come with these sudden and often hastily executed online learning programmes. We are humans and interacting with others is one of our basic needs. Without interaction, we tend to feel miserable and bored. This is exactly how students feel in an online education environment; they faced many problems regarding their physical health and mental health.

Introduction:

Technology has been making its impact known in every sector over the years and the impact of digital education on educational institutions is not left behind. Technological advancement have led to development in the educational field at a steady pace that seems to go unnoticed most times. However the sharp shift in social dynamics has necessitated a more noticeable change in an educational institution in recent times. A new pandemic caused by a novel corona virus, has almost all sectors, including education. As a result, higher education and its students will be the most affected by the outbreak in 2020. The majority of students were pleased with the university's actions throughout the lockdown. In reaction to the rising corona virus outbreak, colleges have been obliged to close their doors and, where the IT infrastructure allowed, transfer classes to online learning to keep learners' engagement and opportunity to learning. Schools and teachers did not always have the necessary abilities to switch from face-to-face to online teaching with ease, which could mean that the educational process did not expect the same level of quality. The immediate closure and transition from physical to online sessions have created numerous challenges in the learning and teaching.

Online learning allows for virtual communication and involvement while learning. As a result, for the new academic year, the university's management must take effective and efficient efforts to eliminate, as much as possible, these negative difficulties and improve the performance of the online educational process. To reap the greatest benefits from online education, one must be ready and prepared for this emergency phase. Students are worried about their education and are unable to communicate with their professors and peers in person. They had issues with slow internet connections and the gadgets most of which were required for active participation in the online class. Furthermore, economically underprivileged students are more likely to have outdated or limited computing gear, as well as less reliable home internet access, placing them at a disadvantage compared to their more affluent counterparts. Social isolation can lead to stress-related emotions and a decrease in overall happiness.

Students were put under pressure by sudden demands for a wide range of talents, as well as contests with more resources. So, while online courses make it easier for students and teachers to get an education, they may become more sedentary and develop health problems as a result. Students typically spend a significant amount of time on the internet as part of their online education. This will naturally move their interests away from physical activities like walking, outdoor games, and exercises and toward sedentary entertainment like watching movies and playing video games. Students' attitudes about instructional technology had a direct impact on their learning process, and a negative attitude harmed their academic achievement. Numerous studies have discovered detrimental health effects in these settings. The study presents a variety of challenges for online education on the health of students.

Discussion and Results

The normal flow of learning and teaching has been disrupted. To maintain social distance, more limits and uncertainties have been placed, leading to a shift in learning and education toward digital learning with technical equipment and related abilities. Technology can be a useful tool, but it will never be able to replace face-to-face communication.

- **Sleep Disorder:**

Due to a rise in screen time, irregular schedules, strict rules on submission of assignments, stress, minimum physical activities students expertise a amendment in their sleeping patterns. Because of delayed sleep, students won't be ready to maintain their mind and body tuned. Due to shy sleep at the hours of darkness, students feel sleepy-eyed throughout day time. Hence, they'll not be ready to concentrate abundant on on-line categories. Inadequate sleep, irregular sleeping schedule, consumption of intoxicants, in depth use of energy drinks, and excess use of technology light-weight from devices like computers, sensible phones, tablets, etc. area unit the most reasons for the sleeping disorder. This may damage the educational performance of the scholars. Students got to be educated on the importance of adequate sleep. Following a healthy mode can change students to beat sleep disorders.

- **Stress and Anxiety:**

Stress may be a state within which someone won't be ready to deal with physical and mental pressure. Endless on-line activities additionally cause shortness of temper. It's found that in on-line learning, as a result of the mental pressure students feel angry, anxious, afraid, aggressive, irritated, and pissed off. As a result, they will slowly withdraw from their cherished ones, Demanding deadlines, uncertainty of examinations, etc. square measure a number of the explanations for stress throughout on-line learning. Stress causes physical health problems like headache, body pain, sweating, respiration drawback, etc. Anxiety is however the brain reacts to worry. It'll differ from person to person. Pre-existing mental state problems, heredity, etc. can lead to anxiety. It's quite traditional that students feel stressed and anxious throughout examinations. Stress and anxiety square measure tough by all kith and kin at completely different stages. If students feel stressed and anxious daily then it's a disorder. Following a healthy diet, active restful techniques, regular physical activity will scale back stress and anxiety to a good extent.

- **Memory Loss:**

Students typically expertise cognitive state throughout on-line learning. Strict deadlines, drawn-out categories, uncertainty associated with examinations, concern of examinations, social conflicts might cause an excessive amount of stress among the scholars. Stress, depression, and anxiety have a large impact on brain and memory. There's a large quantity of on-line content within the style of sites, blogs, videos, and social media posts square measure offered to be used. This may increase the psychological feature load. Once the brain starts process large data offered it leads to excess stress. Additionally finding the correct data becomes a herculean task. Once folk's square measure given several choices, there's an opening that they will opt for a foul one. Moving from one variety of content to alternative, scrolling through the digital content creates pressure on the brain and students might feel mentally exhausted. Once learning isn't systematic, they're going to not be ready to retain it. If they follow the methodology of learning by selecting the simplest appropriate variety of content supported their psychological feature ability, they're going to be ready to hold the knowledge for a extended amount.

- **Lack of Concentration:**

During on-line categories, students might get simply be distracted by the copiously accessible on-line content. The need of learning additional things will lead the scholars to browse additional and additional. This will increase their on-line activities. There's an opportunity that with raised screen time, they will tend to lose their focus. In typical lecture rooms once students depart of focus, there'll be a lecturer to bring them back however throughout on-line learning, there'll not be anyone to warn them. Learning from home needs a lot of contributive atmosphere reception and also the surroundings. External distractions like smells, sounds, sights, people, medical emergencies like taking care of their sick folks or siblings, lack of sleep, long digital content on the training material provided, irritation in eyes, headache, caused by raised on-line activities will contribute additional to their lack of concentration. Self-discipline, self-motivation, following a healthy diet, regular sleep patterns, and physical activities will facilitate them overcome an absence of concentration.

- **Social Isolation:**

Schools area unit thought to be places of socialization. Students act with peers, collaborate with different students to unravel issues, specific their feelings with their friends and act with their academics. In typical lecture rooms, there's additional scope for interaction and cooperative activities. Students will voice their opinions. Most corporations rent individuals with smart social and communication skills. Such skills cannot be no inheritable throughout on-line learning as there's restricted scope for interaction. Students typically feel lonely, isolated, uninterested, and dispirited owing to their restricted social interaction. Typically, students feel isolated even they're enclosed by their members of the family because the interaction among their peers is lacking. Social isolation will increase negativity and, in turn, will cause different physical and psychological state problems. Restricted interaction with peers will increase preceding depression, anxiety, and pressure. As results of raised isolation students might begin worrying additional regarding their members of the family and changes in their friendships. Social isolation cannot be neglected because it becomes the most reason for different health problems like depression, emotional uptake, physical inactivity, etc. it should produce a sense of lack of shallowness among students. Making a friendly and

positive surroundings reception and interacting with peers victimization technology will scale back social isolation to an oversized extent.

- **Depression and self-destructive Syndrome:**

Depression could be a psychological state disorder that's in the main associated with the mood of a personal. a personal United Nations agency suffers from it experiences completely different emotions like extreme unhappiness, worthlessness, lack of interest in several gratifying activities. Studies show that this disorder conjointly affects sleeping patterns and appetence. The things like stress related to on-line categories, deadlines on assignments, death of pricey ones, loss of socio-economic balance because of the price hamper measures, problems within the family, cancel or postponement of examinations, etc. contribute additional to depression. Social isolation practiced because of the sudden closure of faculties} and colleges contains a bigger impact on the psychological state of scholars. Utmost depression can also cause self-destructive thoughts or perhaps self-destructive tries. The overwhelming surge of emotions like helplessness makes one try suicide. Feelings of social isolation and extreme depression begin bombarding the scholars and as a result, they start to develop hate regarding them and want attempting/committing suicide. Lecture friends, being concerned in some activities, regular substance by specialists will facilitate students overcome depression and self-destructive thoughts.

- **Addiction:**

Once student's area unit unable to address the strain and anxiety throughout on-line learning, they will get captivated with intoxicants. It offers temporary relief from their physical pain and mental stress however affects the educational performance of the scholars. As results of addiction, students lose focus in their studies. Addiction conjointly makes the scholars expertise mood swings. If any means that the boldness level of scholars is boosted, the likelihood of addiction are often reduced. They to be physically, morally, spiritually, showing emotion, and psychologically reinforced to beat addiction.

- **Blubber:**

Obesity could be a gradual method developed as a result of following poor and unhealthy diet patterns. It's conjointly referred to as a life-style disorder. Folks that tend to be corpulent consume additional food than the desired amount. It happens as a result of consumption an outsized amount of food, high-calorie food, overwhelming sweet drinks, and a lonely upset. This can cause a rise in their weight. If the body mass index (BMI) of a personal is quite thirty, the person is taken into account corpulent. Blubber can make to different serious health problems like kind a pair of polygenic disease, vessel disorders, cardiovascular disease, more than sterol, metabolic process issues, problem in doing regular work, breakdown of bones, pain in joints and different components of the body, sleep disorders, and lots of additional. The inactive nature of on-line learning catalyzes the consumption habits of scholars. Physical inactivity boosts weight and as a result, they have a tendency to be corpulent. Following a diet, active regular physical activities will avoid issues related to blubber.

- **Back Pain:**

It's not a lot of a secret that in on-line learning students are needed to take a seat ahead of their desktop, laptop, or use their Smartphone for an extended amount. Attending on-line

categories on their beds, sofas and different article of furniture usually results in back pain of varied intensities. Sitting within the wrong posture for an extended amount causes a bend within the spine and unerect backbone, stiffness within the back which can eventually cause back pain. Adjusting the body to best posture, consciousness regarding the posture, self-correction of posture, dynamic the posture often, use of technology article of furniture, some fast upper-body stretching, etc. will facilitate students to beat back pain to an oversized extent. Sitting on a snug chair at a 90-degree angle with shoulders relaxed with adequate support to the rear and arms, feet during a flat position on the ground will avoid back pain to an excellent degree.

- **Deficiency of Vitamin D and Calcium:**

Additionally to lack of adequate quantity of physical activity, sitting within the house throughout internment causes stripped-down exposure to daylight. As a result, students face the deficiency of Vitamin D. Deficiency of Vitamin D can cause pain in muscles, fatigue, and typically depression. The abundance of Vitamin D is most essential because it helps the body to utilize Ca. So, people that suffer from deficiency of Vitamin D even have problems associated with low-calcium contents. Ca deficiency will cause cataracts, teeth issues, and bone-related problems. Adequate exposure to daylight, intense nutriment D-rich food like fish, egg, milk, yogurt, cheese, etc. will facilitate to extend Vitamin D. Physicians recommend students perform some out of doors physical activities in order that they get adequate exposure to daylight to avoid health problems associated with deficiency of Vitamin D.

- **Eye Problems:**

Because the students don't seem to be acquainted with victimization the screen for a extended time, they feel strain in their eyes whereas learning on-line. Students conjointly face deterioration of their visual modality. Poor adjustment of the screen, improper viewing angle, inadequate light weighting within the lecture room are some reasons for eye strain. The matter within the eyes caused because of the prolonged use of digital devices is stated as digital eye syndrome (DES). Minor problems associated with DES are commonest in students UN agency is learning in on-line mode. The explanations for this embrace inadequate lighting, glare on the screen, dangerous seating posture, etc. and therefore the symptoms are strain in eyes, blurred vision, diplopic, watering of eyes, dry eyes, and lots of a lot of. Typically it should cause pain within the shoulders and neck. Luckily, the symptoms of DES are temporary. They'll be declined once the screen-time is reduced. Throughout on-line learning it's impracticable to cut back the screen time rather than this, consultants recommend that the scholars should take a brief break of few seconds each half-hour.

- **Headache:**

There's a powerful association between headaches and on-line learning. raised screen time throughout on-line categories has conjointly resulted during a headache. Headache is additionally caused because of excess stress throughout on-line learning, following incorrect sleeping patterns, improper diet. Additionally to the current glare on the screen, inadequate light, fluorescent-colored lights, harmful radiation emitted by the display devices and improper posture become different causes for headaches. Studies reveal that in on-line learning, students blink but the specified times. This leads to dry eye and ultimately causes headache. As results of a headache, students feel it tough to consider their on-line learning

activities. Headache conjointly causes nausea and fatigue. Taking the printouts of digital learning material, use of devices that have larger show areas, adjusting the brightness of the show adequately, drinking enough water, and taking a brief break each half-hour will cut back headaches to an excellent extent.

- **Physical Fatigue:**

It's a replacement development that's ascertained thanks to the surplus of on-line activities. Sitting pasted to the pc for a protracted time makes students feel worn out. On-line learning puts additional pressure on them thanks to that they feel exhausted early. Eyes, shoulders, neck, finger, and arms square measure used extensively throughout on-line learning. They become dominant regions of fatigue. This fatigue isn't simply physical strain instead it causes anxiety and stress also. Strained, sore, or burning eyes, feeling restless, headache, the decline in concentration, increased sensitivity to lightweight and sound, exhibiting snappy behavior, paining neck and shoulders that square measure practiced by students throughout on-line learning square measure mentioned as 'digital fatigue. Taking short breaks throughout on-line categories, following a healthy diet, mistreatment technology article of furniture once attending on-line categories, obtaining quite six hours of sleep per day, and involving in physical activities rather than sitting pasted to the screen when on-line categories will facilitate the scholar to beat digital fatigue to an outsized extent.

CONCLUSION:

Students who take online lessons from home do not have to be as professional as their peers in the classroom. As a result, several areas of their physical health are worsening. One of the most prominent explanations for the current upsurge in backaches is poor ergonomics, such as attending online classes on beds and sofas. Obesity is on the rise in youngsters, either as a result of a lack of outdoor physical activity or as a result of binge eating and easy access to junk food at home. Youngsters are also losing muscle mass and gaining fat, which will hinder their growth. The fact is that the more physically active a youngster is during his or her growing years, the better their physical and mental health will be for the next three to four decades. Due to the current health crisis, this is completely absent. A lack of physical exercise, lack of adequate exposure to sunlight, and an imbalanced diet are all factors that contribute to calcium and vitamin D deficiencies. Muscle cramps, twinges, and strains/tears are typical in children with severe impairments owing to minor traumas or bad posture. Moreover, students are finding it difficult to cope with remote education options which are indirectly increasing stress on them. Every youngster wishes to be outdoor, and their fitness has deteriorated as a result of the confinement. Students who were isolated at home struggled with depression. In this study, the researchers shed light on the health difficulties that students are experiencing as a result of their engagement in technology-assisted online education.

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Need of digital transformation in education sector

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Abstract

Digital technology within the present isn't solely a tool, however conjointly a living surroundings that parades new opportunities: learning at any convenient time, continued education, etc. this text aims to explain the specificity of digital education, this state of its implementation, the expected results and considerations during this respect. Having shown the core of the digital education and also the state of its implementation in trendy society, this sort of education should be critically analysed in terms of benefits and risks with relation to modern students and also the effectiveness of the teaching – learning method, within which they participate. within the study professionals and cons of digital learning are unconcealed.

Key words : Digital, transformation, education

Introduction

Within the twenty first century called the digital age, with globalisation, structures in nearly each space is influenced chop-chop by developing and dynamic info and communication technologies. it's not possible for education to stay insensitive to those developments and changes. Due to the chop-chop developing info and communication technologies, digital tools employed in academic settings also are increasing and dynamic during this direction (Parlak, 2017). it's inevitable that there's a digital transformation in education as a result of the utilization of skyrocketing technology in everyday life (Taşkıran, 2017). It is necessary to develop this transformation, the digital era and also the ability to grasp and adapt, to style our education system, that is still dominated by classical understanding, in accordance with today's conditions (Parlak, 2017). It ought to be emphasised however the modification and transformation ought to take place in this context and it is acceptable to draw the general framework for our instructional system in line with the wants of the dynamic learning profile.

In the last twenty years in our country, varied technological enhancements are created to integrate the utilization of technology in education and coaching, to facilitate learning for academics and students, and to enhance technology attainment (Arık, Arslan, Çakır & Kavak, 2016). The Fatih project, that is presently being enforced in faculties related to to the Ministry of National Education (MoNE) since 2011, is one in every of these studies. digitalisation is one in every of the necessary components of the age we have a tendency to square measure in. Developing countries appear to fall behind in these problems once ideas like the web, large data, coding, and good factories square measure evaluated by digitalisation and objects known as the fourth historic period (Industry four.0) (Parlak, 2017). Bates (2015) business four.0 for the new skills and learning processes of the digitizing world emphasizes education that's acceptable to the requirements of the economic order and also the market that square measure formed through

digital technologies outlined as " during this context, it's seen that our education system isn't operating in line with these ideas, the schoolroom environments square measure constant as those within the past years, today's learning desires square measure unnoted and that they square measure partly removed from digital technologies. during this direction, the matter of finding out however the digital transformation in education will be realised in the context of management and education schemes constitutes the matter.

Digital transformation in education is all concerning creating changes to the approach we tend to educate our students. this might mean something from incorporating new technology into the room, to dynamical the approach we tend to assess and track student progress. no matter changes square measure created, they ought to aim to enhance overall student outcomes.

There are four main areas of digital transformation, each presenting its own challenges and opportunities.

- Process Transformation. When it comes to business process transformation, there is no one size fits all approach. ...
- Business Model Transformation. ...
- Domain Transformation. ...
- Cultural Transformation.

Digital transformation challenges in the Education Industry

- Lack of clear strategy. A lack of strategy with adopting new technology can be a challenge. ...
- Technology Infrastructure. ...
- Management and thinking. ...
- Skills in utilizing technology. ...
- Inequality in education.

What is the need of digital transformation in education?

- Digital transformation in the education industry **helps improve the learning experience for both students and teachers, as well as other people involved in the process**. Such changes focus on improving engagement and accessibility through interactive and customizable learning. How digital technology can help the education sector? Digital technology can also help some students to behave better in class, making it easier for students with special needs to take part in mainstream lessons. Tablets, voice recognition software and text-to-speech apps have made a big difference to dyslexic and dyspraxia students.

The Benefits of Digital Transformation

- ✓ Increases Customer Satisfaction. ...
- ✓ Drives Data-Based Insights. ...
- ✓ Enables Software Monetization. ...
- ✓ Enables High-Quality User Experience. ...
- ✓ Encourages Collaboration & Improves Communication. ...
- ✓ Increases Agility. ...
- ✓ Limits Human Error. ...

- ✓ Encourages an Environment of Employee Excellence.
- ✓ How technology will change the future of education?
  - **It will not only make learning effective for students but help teachers to perform their duties efficiently**.

Artificial intelligence such as Professor Einstein (a robot) is already making waves in the educational sector. The robot helps science students by lecturing and helping them to understand science subjects

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Health Impact of Digital Education

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Abstract

Online learning for students and for teachers is one of the fastest growing trends in educational uses of technology. Online education has drastically changed the way we study but the year and half of attending online classes from home have led to string of mental and physical health issues for both students and teachers. Stress and anxiety the concentration levels of students dropped I online earning as the eye meanders elsewhere on the screen. This is response made it difficult for most students to keep up with the teachings. The pressure to concentrate and produce the required results has resulted in a great amount of stress and anxiety. Tasks, assignment and homework slacked. Most children were seen lagging behind and succumbing to the pressure. The mental state of the children was fragile and tampered.

Key Words: *Students, Digital education, Mental and Physical Health*

Introduction

Human are social animal, and the most introverted ones also need to see faces and have human interactions once in a while. In the last 20 years, the Internet has grown from being nearly non-existent into the largest, most accessible database of information ever created. It has change the way people communicate shop, socialize, do business and think about knowledge and learning. Much more than just a new twist on distance learning, outline schooling is changing the face of traditional classrooms and making education more accessible than ever before. Covid-19 has caused destruction and devastation worldwide in ways nobody could anticipate. The world in one way or another came to a standstill. Life as we knew it changed. And this change became the new constant.

Educational institutions took to online teaching. The start of this change felt rather very enticing for the students with not having to rush and get ready to reach the institutions, and being in the comfort of their homes. However, this peace didn't last as long. Online education has taken a huge toll on the mental and physical health of students as well as their teachers. The children have grown to lose interest in their classes. Most of them switch off the camera and go about their other activities. The lethargy has inculcated the loss of interest in not only the studies but everything overall the pressure of after- school homework and assignments has triggered a great toll on the mental health and mood.

Education is no exception, students from privileged backgrounds supported by their parents and eager and able to learn, could find their way past closed school doors to alternative learning opportunities. Those from disadvantaged backgrounds often remains shutdown. This crisis has exposed the many inadequacies ad inequities in our education system – from access to the broadband and computers needed for online education and the supportive environments needed to focus on learning up to the mis a disordered between resources and needs. The lockdowns is response to COVID-19 have interrupted conventional schooling with nationwide school closures in most OECD and partner countries, the majority lasting at least 10 weeks. While the educational community.

Analysis and Discussion

- **Online education affected mental health**

The current period in time is known as the digital age for a very good reason. Technology and automation have made their way into nearly every aspect of life, and many parameters indicate that it has been beneficial as well as it affects the mental health for us.

1. Lack of interest

Humans are social animals, and the most self- examining ones also got to see faces and have human interactions once during a whereas the youngsters have fully grown to lose interest in their classes. Most of them throw the camera and approach their different activities. The lethargy has inculcated the loss of interest in not solely the studies however everything overall. The pressure of outside prep and assignments has triggered an excellent toll on the mental health and mood.

2. Stress and anxiety

The concentration levels of scholars dropped in online learning as the eye meanders elsewhere on the screen. This in response created it troublesome for many students to stay up with the teachings. The pressure to concentrate and turn out the desired results has resulted in a great amount of stress and anxiety. Tasks, assignments, and prep slacked. Most youngsters were seen insulant behind and succumbing to the pressure. The status of the youngsters was fragile and tampered.

3. Zoom fatigue

Zoom fatigue refers to the exhaustion when having attended zoom classes, or video conferences. With the screen time increasing drastically, the mind is flooded with info and also the brain finds it rather troublesome to register all the data. Over involvement of parents additionally has intercalary to the pre-existing anxiety and stress. Oldsters area unit confined to the walls of their homes and have taken it upon themselves to urge extensively involved with their kids and their on-line categories.

- **Effects of online classes on physical health**

1. Visual sense issues

Increased screen time has increased the strain on the eyes, leading to major headaches. This was applicable not solely to the scholars however additionally to academics.

2. Lack of schoolroom ethics

The schoolroom ethics have been compromised to nice lengths. The posture, regularity, lack of routine, attentiveness has all resulted in health hazards. Constant sitting has caused weight issues likewise. No physical activity has created the scholars restless and annoyed. This too took a toll on the consumption habits, therefore leading to damages to the physical health.

3. Dangerous bioengineering

Human factors and bioengineering is that the application of psychological and physiological principles to the engineering and style of merchandise, processes, and systems. Studying on-line has resulted in poor/bad bioengineering, therefore leading in a tons of issues as regards back pain and fibromyalgia pains.

4. Lack of physical activities

The lack of physical activities has caused kids to become weighty because of binge consumption and observation, it's solely gotten worse. Muscle spasms, muscle rigidity, and lack of calcium, etc area unit all supported lack of physical activity.

5. Lack of Vitamin D

Online Education amazingly has resulted in a lack of Vitamin D. Lack of sunlight, poor diet, and exercise have resulted in additional issues than one may could anticipate.

6. Calcium deficiency

As weird because it sounds, the shotage of physical activity and calcium has resulted in trivial injuries, so leading to intensive injuries any.

- **Impact of digital education on student**

The implementation of digital learning, on-line learning, or e-learning is a difficulty that has been mentioned extensively by education boards and committees around the world. Over the past decade, we have got seen many countries adopt various technological tools to help in their learning programs and add a splash of data technology into their education systems. Largely, the application of digitalization in the field of education has been rather steady and unrushed. However, because of the COVID-19 pandemic, this method has been fast-tracked on the face of it long, and it's left both teachers and students feeling bittersweet regarding the precipitous amendment. Some are convinced and excited by the convenience of remote learning, and a few are foiled by the whole virtual expertise of education and electronic communication. Regardless, there are many edges and downsides to the swift adoption of digitalization in education.

- **Benefits of digitalizing education**

The current amount in time is thought because the digital age for a really sensible reason. Technology and automation have created their approach into nearly each side of life and plenty of parameters indicate that it's been helpful for us with regards to education; there are several edges related to medical aid. Students will access all their study material on-line, as well as pre-recorded lessons on video. They even have the choice to attend on-line classes rather than being physically present at an institution, that brings in a to grasp of convenience and flexibility. Younger students in middle school and high school are able to grasp a useful understanding of various styles of software quickly whereas attending on-line classes, or taking examinations on-line. It is evident that the long run is digital, and a useful understanding of computers will encourage be a good boon for students in terms of employability down the road. Conversion of standard text into charming graphics and visuals has been proven to evidence to boost the retention of data. The choice to use digitisation into day-after-day lessons delivered via digital education has greatly redoubled the will in students to attend school and simplified learning regarding-complicated ideas or concepts.

Conclusion-

On-line education at first started as a good advantage however took a forceful flip and didn't work most within the same spirit with the redoubled screen time, sight problems, headaches, and strain have redoubled a good deal. Not solely that, kids have additionally been exposed to worry associated anxiety from an early age and oldsters solely increase the pressure. Physical well-being has gone for a whole loss. It is vital role for us to stay in mind of these aspects to stop any future hurt which may become long issues.

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Online Teaching During a Pandemic: Investigation of Technology Efficacy and College Student Responses

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Abstract

As the novel coronavirus (COVID-19) spread rapidly across the globe, most educational institutions tried to address major challenges of engaging students in a productive way and disseminating knowledge through online learning. Given this consideration, the present study qualitatively explores the observations and experiences of a private university and giant strides taken by the institution in adapting and delivering value to all the stakeholders through educational transformation during the pandemic. The data was collected using observations and in-depth interviews. The findings of the study revealed that the university went through certain structural changes and modified teaching pedagogy for virtual delivery like providing support and training to the faculty before shifting completely to online mode and delivering the sessions online in both synchronous and asynchronous mode. The results of the study are likely to help transform and address the major challenges of engaging students in a productive way and disseminating knowledge through online learning during a pandemic.

Keywords: Educational Transformation, Online Education, Pandemic, Pedagogy.

Introduction:

In recent years, some research has been conducted on digitalization in the education industry but much research focuses on students' learning experience from digitalization. As the novel Coronavirus (COVID-19) spread rapidly across the globe, the countries and their economies were left with no other choice but to lockdown all the sectors. Suffering has been in equal measure for both the developed and developing countries. Amongst all this alarming muddle of economics, finance, sustenance and survival paranoia, people all across the world suffered colossally. Countless people lost their jobs and had no choice but to depend on social handouts and government aid to get basic necessities each day. There were some heartbreaking visuals of people marching on foot in India, for a never-ending journey to reach their homes in faraway states. Many flew out of the countries where they were working and headed back home, only to find themselves in a dire strait.

The present disruption in education system at global level due to the pandemic has been considered as the largest in history. It has affected nearly 1.6 billion students in over 190 countries all around the globe. The report further notices that nearly 94% of the students' population has been affected due to schools and other educational centers' closure in the last six months. Educators must ensure that such policies are created to encourage students to enhance their imagination, creativity, self-awareness and ability of analysis. The study discusses one such transformative journey of a private university in North India, which emerged as an example to other educational institutions. Prior literature mentioned that in universities in order to enhance the learning experience, teachers must combine in-person

learning together with digital learning and integrate the technology in a way that students engage during the online classes. Hence, as compared to previous years, learning processes have become more effective as they are supported by various digitalized technologies Furthermore, education has also become more accessible to more people.

The barriers to participation that students may experience are particularly evident in student presentations and assessments. A few personal issues and barriers may be of hindrance such as anxiety; being out of comfort zone and difficulty in peer interaction. Despite the best intentions to provide beneficial learning experiences, faculty may feel apprehensive as they themselves may be still learning to use some of the platforms. This can leave learners with varying levels of proficiency of IT usage and particularly due to the instant feeling that they are on their own when it comes to the online learning environment through Learning Management Systems. Emergency Remote Learning versus Online Learning Well-planned online learning structure offers a completely different learning experience than one designed in response to a crisis. The framework provides significant guidelines for the necessary course of action to be taken by educational institutions during a contingency citing some of the best practices in online teaching related to course design, delivery and assessment with the help of Learning Management System. The benefit of various digitalized communication channels is that contents and knowledge become accessible and independent of time or place restrictions.

- **Objectives :**
  - ✓ To study about Online Teaching During a Pandemic: Investigation of Technology Efficacy and College Student Response.
  - ✓ To study about the current situation of digital education.
- **Methodology :**

The purpose of this research is to learn more about students' perspective of an individual's personal experiences in various scenarios and conditions. This study was conducted using a descriptive qualitative methodology in order to obtain relevant responses and give knowledge on students' actual experiences. from young children to young people, teachers, and professors, is affected by online learning. Virtual classrooms may create major issues for many students.

ANALYSIS AND MAJOT FINDINGS

Online Teaching Practices and their impact on student learning is clearly at the center. The framework provides significant view of the necessary course of action in online teaching related to course design, delivery and assessment with the help of technology. The help of advanced internet search engines, students gain access to knowledge anywhere and at any time.

- **Benefits of Digitalization for students:**

There are a number of applications of digitalization upon which higher education institutions should maximize on which can lead to a boost in the learning processes for students. The first and foremost, benefit of various digitalized communication channels is that contents and knowledge becomes accessible and independent of time or place. With the help of advanced internet search engines, students gain access to knowledge anywhere and at any time. With the help of IOT, cloud computing has been made possible which connects learning

managing systems enabling them to share, distribute and retain information on a mass scale. Hence, as compared to previous years, learning processes have become more effective as they are supported by various digitalized technologies Furthermore, education has also become more accessible to more people. The cloud computing has been made possible which connects learning managing systems enabling them to share, distribute and retain information on a mass scale.

- **Text Search Queries:**

Text search queries aim at search for words or phrases in the data. It includes exploration of the usage of words while the researcher derives the context and meaning out of it. There are several associations which can be easily drawn out of this query such as 'prior training provided to the faculty', 'faculty engaged students actively', 'the faculty successfully devised the detailed instructions for students', 'monitoring of student learning by the faculty', 'the faculty prepared and sent a revised course plan to the students. The individual learning needs of the students are the crucial factor in online learning', in synchronous sessions, 'the students were actively engaged', 'the students mainly benefitting from web-based applications', 'health and well-being of the students being monitored', 'challenging to engage students with varying levels of proficiency', challenges of unreliable internet connection', 'establishing interactive relationships with the students.

While it is significant to focus on the learning process and outcomes, one absolutely cannot ignore the challenges that come along the way at both ends as a student and a faculty. While many good institutions are using both synchronous and asynchronous methods of teaching, uploading lectures on you tube, live sessions on platforms like Google Teams, Microsoft Teams, Zoom Classrooms or using online resources of MOOC such as 'Swayam' etc., still at times, the system might roll out. Although online teaching delivers course content, the students can often be misinterpreted as passive participants. The faculty engaged students actively during live online sessions.

- **Digitalization on Students' Socializing, Social Health and Personal Development:**

Previous studies show that students feel isolated due to the lack of communication, particularly with teachers, because they spend more time at home in front of a computer. The pandemic has forced social distancing which in result has changed the needs and wants of students present globally. Therefore, the adaptation of the teaching method to students' needs is essential. Considering the personal development of students at the universities is one of the factors that teachers and mentors need to consider when they think about digitalization since studying at the university is a significant stage in young people's lives. Students at this stage may not be present at the university so often as compared to pre-pandemic conditions when it was mandatory for them to attend classes and be present physically.

Digitalization demands a more accurate model that aims to enlarge social contact as allowed by social distancing regulations while tactically using new and developing technology. Additionally, researchers mentioned that one should not neglect that digitalization has a threat to social health as face-to-face interaction is replaced by online communication, internet addiction, risk of devastating information, and psychological problems. Their study shows that students are now divided in two groups: quick learners who are readily adaptive to their environment and aim towards learning whereas those who are not ready for shifting from

traditional learning to modern learning and they don't wish to develop their knowledge. It is undeniable that higher education cannot return to traditional education in the form it was before the pandemic due to the introduction of new digitalized technologies which enables students and teachers to communicate over distant learning platforms. Hence, it is very significant that students and lecturers be ready for personal development, self-management, and self-accomplishment in professional development.

Conclusion

The research highlights the giant strides taken by the institution in adapting and delivering value to all the stakeholders. The prime aim was to continue uninterrupted education delivery by adopting online learning and successfully delivering knowledge and value to the students. The Online Education Landscape. The online education providers play a pivotal role in the higher education system. However, in creating individually tailored differentiated instructions for each learner within and across each delivery, additional workload pressures are definitely expected in responding reactively to the individual learning needs of students. The creativity and engagement methods can particularly be highlighted in group tasks. The challenges are posed due to generalized pedagogical assumptions in the online environment.

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A Review of Health Impact on Students Online Learning Health

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Abstract

Online learning for students and for teachers is one of the fastest growing trends in educational uses of technology. Online education has drastically changed the way we study but the year and half of attending online classes from home have led to string of mental and physical health issues for both students and teachers. Stress and anxiety the concentration levels of students dropped I online earning as the eye meanders elsewhere on the screen. This is response made it difficult for most students to keep up with the teachings. The pressure to concentrate and produce the required results has resulted in a great amount of stress and anxiety. Tasks, assignment and homework slacked. Most children were seen lagging behind and succumbing to the pressure. The mental state of the children was fragile and tampered.

Key Words: Students, Digital education, Mental and Physical Health

Introduction

The education system has changed drastically, with idiosyncratic upsurge of online learning, and remote learning. Nowadays, teaching is undertaken remotely and on digital platforms by the use of laptops and mobile phones to prevent the loss of academic sessions. In today's life, mobile phones and laptops are playing a major role in modern education. The extensive use of online classes provides easy attainability to course material. Many researches have shown that the excessive or prolonged use of screen time can impact mental health, leading to stress, depression, sleep disorders, etc., as well as have impact on physical health, causing eye strain, postural pain, hand disabilities, and musculoskeletal disorders. Increased screen time is directly associated to depression. Online learning during COVID-19 and academic stress in university students has led to sudden change in the mode of teaching from a traditional mode to virtual framework system which might cause stress in students. The impact of online learning and technology on students' physical, mental, emotional, and social health stated that it causes impact on student self-esteem, personal perceived value, and causes undue stress. The intensity or frequent use of mobile phones could be a influencing factor for many mental health problems in community of university students.

A significant positive correlation has been found between the duration of mobile phone use and neck pain severity including increase in the severity of musculoskeletal disorders which places a huge burden on the health-care system. In the last 20 years, the Internet has grown from being nearly non-existent into the largest, most accessible database of information ever created. It has changed the way people communicate shop, socialize, do business and think about knowledge and learning. Much more than just a new twist on distance learning, outline schooling is changing the face of traditional classrooms and making education more accessible than ever before. Covid-19 has caused destruction and devastation worldwide in ways nobody could anticipate. The world in one way or another came to a standstill. Life as we knew it changed. And this change became the new constant.

Educational institutions took to online teaching. The start of this change felt rather very enticing for the students with not having to rush and get ready to reach the institutions, and being in the comfort of their homes. However, this peace didn't last as long. Online education has taken a huge toll on the mental and physical health of students as well as their teachers. The children have grown to lose interest in their classes. Most of them switch off the camera and go about their other activities. The lethargy has inculcated the loss of interest in not only the studies but everything overall the pressure of after- school homework and assignments has triggered a great toll on the mental health and mood.

Education is no exception, students from privileged backgrounds supported by their parents and eager and able to learn, could find their way past closed school doors to alternative learning opportunities. Those from disadvantaged backgrounds often remains shutdown. This crisis has exposed the many inadequacies ad inequities in our education system – from access to the broadband and computers needed for online education and the supportive environments needed to focus on learning up to the mis a disordered between resources and needs. The lockdowns is response to COVID-19 have interrupted conventional schooling with nationwide school closures in most OECD and partner countries, the majority lasting at least 10 weeks. While the educational community.

Aims and Objective:

The aim and objective of this study is to analyse the effect of online classes on the mental and physical well-being of students due to the COVID-19 pandemic.

Design and Methods:

The survey was conducted on an online mode through Google forms. All gender college-going students within the age group of 18–25 years undergoing online classes for a minimum of 1 month were included in the study. The assessment of mental health was done using the Perceived Mental Stress Test and the Patient Health Questionnaire, whereas for the assessment of the physical health, the Neck disability index, and the Oswestry low back pain disability index was used. Statistical Analysis Used: Karl Pearson's correlation coefficient was applied to find the correlation between the duration of online classes and stress, depression, neck, and back disability.

Analysis and Discussion

The finding of the present study is in accordance with existing literature that suggests prolonged use of screens beyond 3 h a day impacts mental and physical health in terms of eyesight, sleep disorders, stress, depression, and nonergonomic designed devices used for 6 h or more may lead to musculoskeletal discomfort and disorders. A study on usage of cell phones and its effect on health among college students found that headache, stress, and anxiety are the most common mental symptoms, while body aches are the most common physical health issues accounting for 32.19% of the total population. An association was found between smartphone use, stress, and anxiety. In comparison to other mental concerns, the greatest effect of using mobile phones was mental stress. A significant positive correlation has been reported between the duration of phone use and neck pain. The excessive use of mobile phones poses significant health-related issues more specifically over the head-and-neck region, whereas prolonged use of laptop may lead to cervical musculoskeletal dysfunction and overload the back and neck.

- **Impact of Digital education on health**

Technology and automation have made their way into nearly every aspect of life, and many parameters indicate that it has been beneficial as well as it affects the mental health for us. Physical exposure from smartphones and laptops while taking online classes necessitates frequent neck movements, and extended sitting has a negative impact on the back and lumbar spine. The disability of neck pain among them could be due to frequent neck flexion posture, and back pain could be due to uncomfortable sittings or unfit furniture to sit on during class, which alters the natural curvature of the cervical and lumbar spine, increasing stress on the spine and causing pain in the musculature. The long-term usage of mobile phones and laptop computers can cause upper back pain, stress, and strain injury. According to the findings of this study, students have moderate stress, mild depression, mild neck discomfort, and moderate back pain, and that taking continuous online classes for more than 6–8 h is one of the causes of rising depression among students.

- **Stress and anxiety**

The concentration levels of students dropped in online learning as the eye meanders elsewhere on the screen. This in response made it difficult for most students to keep up with the teachings. The pressure to concentrate and produce the required results has resulted in a great amount of stress and anxiety. Tasks, assignments, and homework slacked. Most children were seen lagging behind and succumbing to the pressure. The mental state of the children was fragile and tampered.

- **Fatigue**

Zoom fatigue refers to the exhaustion after having attended zoom classes, or video conferences. With the screen time increasing drastically, the mind is overwhelmed with information and the brain finds it rather difficult to register all the information. Over involvement of parents also has added to the pre-existing anxiety and stress. Parents are confined to the walls of their houses and have taken it upon themselves to get extensively involved with their children and their online classes.

- **Effects of online classes on physical health**

The mental and physical stress among the students in the current scenario could be prevented by taking preventive measures and controlling the prolonged use of mobile and laptops. Simple lifestyle modifications such as maintaining correct posture during the use of electronic devices and avoiding its unnecessary use could prevent the development of postural issues. Physical and mental exercises may be incorporated as a part of daily routine to reduce the risk of stress and musculoskeletal disorders. The further studies could be done on a large sample size with varied age group to evaluate the long-term effects of online classes.

The implementation of digital learning, online learning, or e-learning is an issue which has been discussed extensively by education boards and committees around the world. Over the past decade, we have seen several countries adopt various technological tools to assist in their learning programs and add a dash of information technology into their education systems. Largely, the application of digitalisation in the field of education has been rather steady and unrushed. However, due to the COVID-19 pandemic, this process has been fast-tracked seemingly overnight, and it has left both teachers and students feeling bittersweet about the precipitous change. Some are convinced and thrilled by the convenience of remote learning, and

some are disappointed by the entire virtual experience of education and digital communication. Regardless, there are several benefits and drawbacks to the swift adoption of digitalisation in education.

- **Physical health Problems**

Increased screen time has increased the strain on the eyes, resulting in major headaches. This was applicable not only to the students but also to teachers. The lack of physical activities has caused children to become obese. Thanks to binge eating and watching, it's only gotten worse. Muscle spasms, muscle rigidity, and lack of calcium, etc are all based on lack of physical activity. Online Education surprisingly has resulted in a lack of Vitamin D. Lack of sunlight, poor diet, and exercise have resulted in more problems than one could anticipate. As weird as it sounds, the lack of physical activity and calcium has resulted in trivial injuries, thus resulting in extensive injuries further.

- **Advantages of digital education**

With regards to education; there are many benefits associated with digitalisation. Students can access all their study material online, including pre-recorded lessons on video. They also have the option to attend online classes instead of being physically present at an institution, which brings in an element of convenience and flexibility. Younger students in middle school and high school are able to grasp a functional understanding of various types of software quickly while attending online classes, or taking examinations online. It is evident that the future is digital, and a functional understanding of computers can prove to be a great boon for students in terms of employability down the road. Digitisation of regular text into captivating graphics and visuals has been proven to improve the retention of information. The option to employ digitisation into day-to-day lessons delivered via digital education has greatly increased the desire in students to attend school and simplified learning about complex concepts or ideas.

Conclusion-

Technology and automation have made their way into nearly every aspect of life, and many parameters indicate that it has been beneficial. Online education initially started as a great advantage but took a drastic turn and didn't work so much in the same spirit. The physical and mental well-being of the students is a concern, especially in the COVID-19 pandemic. The longer duration of using laptops and phones to attend online classes is affecting their mental and physical health. Maintaining proper posture and understanding the impact of the long duration exposure to electronic devices is the need of the hour. Although it may not be possible to avoid the exposure completely in the current times, incorporating simple exercises and postural advices in the daily routine can prevent from long-term adverse effects. The current period in time is known as the digital age for a very good reason. With the increased screen time, eyesight issues, headaches, and strain have increased a great deal. Not only that, children have also been exposed to stress and anxiety from an early age and parents only add to the pressure. Physical well-being has gone for a complete loss. It is important for us to keep in mind all these aspects to prevent any future harm that might turn into lifelong problems.

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Role of digital technologies in education: A review

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Abstract

Technologies are simple to detect emissions sources, prevent additional damage through improved energy efficiency and lower-carbon alternatives to fossil fuels, and even remove surplus greenhouse gases from the environment. Digital technologies strive to decrease or eliminate pollution and waste while increasing production and efficiency. These technologies have shown a powerful impact on the education system. The World Bank Group (WBG) is the largest financier of education in the developing world, working on education programs in more than 80 countries to provide quality education and lifelong learning opportunities for all. The recent COVID-19 Pandemic has further institutionalised the applications of digital technologies in education. These digital technologies have made a paradigm shift in the entire education system. It is not only a knowledge provider but also a co-creator of information, a mentor, and an assessor. Technological improvements in education have made life easier for students. Instead of using pen and paper, students nowadays use various software and tools to create presentations and projects. Technology played and continues to play an essential role to deliver education to the students outside of school. Commendably, all countries were able to deploy remote learning technologies using a combination of TV, Radio, Online and Mobile Platforms. However, many children in low income countries did not participate in remote learning with about a third of low income countries reporting that 50% of children had not been reached in a joint UNESCO-UNICEF-World Bank survey.

Introduction:

Educators have always experimented with the art of teaching, which has evolved over centuries by adopting new approaches, methods, tools, and technologies. We have experienced a rapid growth in science and technology in the last century that resulted in ground-breaking innovations and exciting new technologies. The introduction of new technology-assisted learning tools such as mobile devices, smartboards, MOOCs, tablets, laptops, simulations, dynamic visualisations, and virtual laboratories have altered education in schools and institutions. When compared to a stack of notebooks, an iPad is relatively light. When opposed to a weighty book, surfing an E-book is easier. These methods aid in increasing interest in research.

This paper is brief about the need for digital technologies in education and discusses major applications and challenges in education. Large numbers of teachers and students use social media as an essential element of the overall e-learning experience. It is a critical venue for exchanging information about crucial topics these days. Digital technologies influence agricultural operations, and they will soon revolutionise how farming is done in developed countries, reducing our dependency on pesticides and substantially cutting water use. COVID19 Pandemic, lockdown, and quarantine are three concepts that have recently entered

our lexicon. Traditional classroom instructions fall short of providing an immediate learning environment, faster evaluations, and more engagement. In contrast, digital learning tools and technology fill this void. Some of the efficiencies such technologies provide are simply unrivalled by traditional learning methodologies. The utilisation of projectors, computers, and other cutting-edge technical gear in the classroom may make studying fascinating and entertaining for students. Student learning can become more dynamic and engaging by establishing tasks in class that incorporate technology resources, oral presentations, and group participation. Participation can extend beyond verbal communication as well.

With smartphones and other wireless technology devices becoming popular among the general public, it only makes sense that schools and educational institutions make efficient use of them by putting technology in the classroom. Indeed, today's technology's adaptability and non-intrusive character make learning more appealing to the next generation. However, it may be a formidable technique to manage initially since traditional instructors are hesitant to include contemporary technology and gadgets in school, viewing them as a distraction rather than an intelligent learning aid. An online classroom calendar, where we may display class schedules, assignment schedules, field excursions, speaker events, examinations schedules, or semester breaks, will help students plan accordingly. Student response systems, such as smartphones and clicker devices, provide a quick and easy technique for teachers to determine students' learning of the presented content quickly and whether more explanation is required.

From the environmental impact of using less paper for handouts and books to the time savings and convenience of research, digital learning is a wonderful way to cut costs, better utilise resources, promote sustainability and expand both reach and impact for students and teachers. The utilisation of projectors, computers, and other cutting-edge technical gear in the classroom may make studying fascinating and entertaining for students. Student learning can become more dynamic and engaging by establishing tasks in class that incorporate technology resources, oral presentations, and group participation. Participation can extend beyond verbal communication as well. The digital revolution that is sweeping the world has begun to infiltrate the realm of education. It is rapidly transforming the way students learn, and as a result, technology is expected to improve the face of education by making it more inexpensive and accessible.

- **Digital technologies Need in education:**

The globalisation of education has already necessitated the application of digital technologies. Online platforms were available for conducting classes, sharing resources, doing the assessment and managing the day-to-day activities of academic institutions. However, the use of these platforms was proactive. The COVID-19 Pandemic has forced the institutes to adopt the online teaching mode to sustain the education system. **The changing roles and new skills for teachers in hybrid learning systems and how can additional human connections be leveraged through technology.** The World Bank is exploring teacher competency frameworks, teacher networks, and communities of innovative teachers to support countries to empower teachers. Digital technologies assist in developing abilities that will require students' professional performance, such as problem-solving, thinking structure creation, and process comprehension. Educational resources and digital tools help to improve the classroom atmosphere and make the teaching-learning process more compelling. Furthermore, they give

each educational institution greater flexibility and customisation of curriculum based on the requirements of each student.

Student learning can become more dynamic and engaging by establishing tasks in class that incorporate technology resources, oral presentations, and group participation. Participation can extend beyond verbal communication as well. Teachers are still central to learning even, or rather, especially in an environment rich with technology. Evidence is growing that bypassing Teachers and not engaging them with technology does not lead to student learning improvement.

❖ **Communication and Collaboration Technology**

The World Bank will collaborate with partners developing open global public goods and strategies to engage the large ecosystem of innovators in client countries to support the design and development of new educational content and curriculum. Digital classrooms are defined by using electronic devices or platforms such as social media, multimedia, and mobile phones to teach students. With digital technology in education, today's educational landscape has altered for the better or improvements. With teaching practices and resources going virtual, the need for effective communication between student and educators increases significantly.

It is important for educators to be able to communicate with students using multiple communication channels. Virtual communication methods include email, tele-conference, and video-conference. These methods support one-to-one, one-to-many, and many-to-many communication. Educators also need to communicate with the class as a whole. Forums, discussion boards, and wikis are usually used as group communication methods. Courses with collaborative components are designed to encourage the communication among students. Such courses need effective communication platforms to support virtual collaboration. The internet has resulted in the rise of new communication channels, which have extended the options for the transmission and access to educational information. These media and virtual venues serve as learning facilitators. The team will develop communities of practice around EdTech innovation hubs and creative talent to develop new open educational libraries. A key content area of focus will be climate change.

➢ **Education at its heart is about human connections and relationships.**

While we can never replace the magic that happens between great teachers and students in an in-person environment, we should focus on the social aspects of technology to enhance connections from a distance. Much more attention must be directed on how technology will enhance teaching and learning in a blended learning environment reaching students, both in school and at home.

❖ **Challenges of digital technologies in education**

Educational technology is not without its difficulties, notably in implementation and usage. Educators must generate and comment on online educational content, encouraging students to analyse a topic from several angles in particular. Furthermore, while some students thrive in online learning settings, others struggle due to various factors, including a lack of support. However, online education may provide difficulties for instructors, particularly in areas where it has not been the norm. Some of the reasons for the learning crises are widely known. One crucial factor is the poor quality of instruction. Though investment in EdTech has

been increasing, learning and outcomes as a result have not changed considerably in many countries. An OECD report found that, when it comes to impact of computer usage in schools as measured through PISA, "impact on student performance is mixed, at best." COVID however has changed the debate on EdTech from a question of if to a question of how.

There are technology solutions to this, and they could be helpful in both training instructors and instructing students. Technologies can provide in-service training or a combination of online and in-person training. Additionally, there is evidence that instructors require better incentives. Teachers are teaching through video, but they are not always teaching better than they would if they were standing in front of a classroom. More massive open online courses are being offered and taken up, but many are not for primary education and do not address the learning issue. It necessitates hardware and connectivity at home, inaccessible to children in low-income homes. Gamification and other strategies may encourage youngsters to devote more time to studying. Finally, consider that effective learning outcomes may be obtained without using education technologies.

Some students are having difficulties as a result of this online schooling. Some students come from low-income families and do not have cell phones in their homes; thus, they struggle in school. Millions of youngsters simply do not have access to the internet at home. Students under 15 acquire this complex technology early, yet they struggle with poor vision and backache. Teachers are also having difficulty since some are utterly inexperienced with digital technologies. Nonetheless, they do everything possible to educate their children through online classes. College students who take more practical subjects than theoretical subjects face similar challenges because practical knowledge is not attainable in online programmes. Experience to date highlights that teaching and learning remotely is not the same as face-to-face pedagogy. Many teachers with access to e-content, for instance, use it like any another textbook to read from in class. Some adjustments include shorter and more modular content, more engaging content such as edutainment, continuous feedback, smaller group on-line discussions on more open-ended questions.

❖ **Educational Resources**

While books are commonly used as educational resources, lectures play a pivotal role in teaching. Digital technologies are changing how books are published and shared. It is also changing the nature of lectures. Newer technologies are allowing educators to use animation and simulation in class. The following subsections provide brief reviews of these areas.

➢ **Lectures:** Teaching has always involved communication in some forms. Higher education was no different. Classes often comprise of lectures. Lecture series on special topics published as books created a passive learning channel parallel to the classes. Such passive communication persisted with the introduction of broadcasting technologies. Ease of recording videos and editing them are pushing the boundaries of recorded lecturers. Educators are capturing their lectures during or prior to a class. Not only educators, instructional videos are being created by people who are coming from different professions. Free video hosting sites, such as YouTube and Vimeo, are helping to making these videos public. These sites allow students to view the lectures at their convenience. Quality of the content also poses concern since anyone with the right tool and not necessarily the right knowledge can create

and host the videos on various topics. Educators have to practice caution on utilizing third-party educational video materials.

- **Books:** Digital technologies are starting to supplement or replace traditional paper-based book. Many printed books now have electronic versions, which are known as e-books. Portability of e-books is one of their biggest advantages. Compared to paper-based books, e-books cost less, can contain interactive animation and simulation to describe concepts, can have integrated assessments, and are often customizable. E-books are being published by publishers as well as groups and individuals. Hence, quality of e-books needs to be assessed properly to help educators make informed decisions on proper e-book for a class. In classrooms, educators spend significant time explaining new concepts. The dynamic properties of many e-books help educators convey the same information without spending significant time and effort on presenting the topics during class. However, we should keep in consideration that while some students are good at responding to visual cues, others respond better to auditory instructions. Interactive digital books only add another layer to the activity to support learning.
- **Visualization, Animation, and Simulation:** Visualization, animation, and simulations are different ways of representing abstract concepts in an interactive way. Educators, across disciplines, use these techniques Visualization can be static and dynamic. Static visualizations often include images, figures, and diagrams. Dynamic visualizations show the progression of a concept along with the state changes. Open-source and commercial software are helping educators to make various types of animated lectures.

❖ **Discussion:**

Digital technologies allow students to experience the globe and go to faraway places from the comfort of their computers. Inviting a guest speaker to talk to the class about their expertise is terrific to spice up any lesson plan. Video conferencing systems make it simple to bring a subject matter expert face-to-face to our classroom, no matter where they are. We can easily organise a classroom video conference with kids from another institution. Online polls and other digital technologies engage all students, timid kids who would not ordinarily raise their hands in class. Student insights can also be utilised to identify areas where students may be struggling. Student response systems promote digital citizenship in the classroom by allowing students to participate in class while also being rewarded.

As a result, faster-paced students no longer need to wait for all of their colleagues to finish before continuing their studies, while slower-paced students are no longer tempted to rush through their work. This Education 4.0 programme will be implemented in future schools to improve education and better prepare the next generation of potential. Further, Artificial intelligence will help driverless cars travel more effectively and reduce emissions. Material scientists are using AI to produce biodegradable plastic substitutes and techniques to clean our seas. Recycling and upcycling may appear to be simple procedures, yet they are highly effective instruments for increasing sustainability efforts. Recycling is a game-changer for sustainability, whether it is consumers reusing bottles to decrease plastic waste or businesses fashioning discarded objects into new goods.

❖ **More technologies in education:**

This will improve the quality of digital infrastructure across the country, making innovative educational technology more accessible to larger masses. E-learning and m-learning programmes provide students and teachers access to a vast pool of information content. While technology will play an essential role in shaping the future of education, ensuring that new teaching tools are used effectively will require a new generation of educators who understand the importance of human connection in the classroom. In upcoming years, education trends will ride the tide of growing internet capabilities and network capacity, making it easier to incorporate innovative technology into classrooms. However, there is no complete substitute for offline teaching & learning.

Conclusion:

Digital technology in the classroom refers to various software and gadgets meant to help students with particular accessibility needs. The most effective way to reduce the number of repetitive, time-consuming duties a teacher undertake is to use technology in the classroom. As technologies advance, pedagogical practices should carefully evolve to adopt the changes while keeping track of the impact of such technologies. One of the advantages of digital technologies in teaching is the ability to capture resource usage and student activities. Educational technology applications may save a lot of time and energy by automating or partially automating day-to-day operations like attendance tracking and performance monitoring. Another advantage of digital technology is the ease of developing educational resources. The biggest challenges of this area are the quality of material and the permanence of such artifacts. Archiving and preserving educational resources are critical for understanding the transformation of higher education. These technologies provide students with a virtual world and the freedom to access digital knowledge according to their learning styles.

Organizations should also provide support and incentives for adopting technologies. Another challenge is to have interoperability between different technologies to support seamless integration of various digital components in a class. Students can learn more efficiently and track their progress with the help of technology and sophisticated equipment. Modern technologies have been instrumental in complicated data analysis and management to make long-term decisions in areas such as climate change, air and water security, biodiversity protection, catastrophe resilience, etc. Course objectives, student demographic, and personal pedagogical philosophy and practice should guide such adoption. While technology is not the substitute for educators, it can complement various areas of teaching. Rigorous studies need to be conducted to understand the impacts of using digital technology in teaching.

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Ethics of Using Digital Trace Data in Education

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Abstract

In an educational system now mediated by digital technologies, data are being generated, recorded, manipulated, and distributed on an unprecedented scale and scope. These kinds of data have been incorporated into a variety of learning scenarios and can be seen, for example, in the creation of real-time learning dashboards, the use of predictive analytics of learner performance, the development of educational apps and games, and data-driven decision making in education institutions. Digital trace data have been heralded as a means to improve the quality, efficiency, and, in some cases, equality of educational systems. Despite the evidence for these claims remaining a significant focus of debate, digital trace data are now a feature of many education systems across the globe. At the same time, there is increasing attention to the ethical considerations surrounding the use of such data for learning and education. These ethical challenges must be addressed across the complex networks of actors of the educational landscape-between policy, politics, administration, schools, commercial software providers and third-party data mediators, who are often responsible for technical data services around software and databases.

Keywords : Ethics of Digitalization, Data trace, Digital education, Thematic review.

Introduction

For decades, education researchers have used technologies to capture data. However, there has been an exponential interest since the early part of this century in the availability and potential to use "digital trace data." Digital trace data are the data that are generated as people interact with any kind of digital device. For example, when students complete an assessment, read a page, write a response to a forum post, or compose an essay, digital systems capture an array of data about these activities. Such data may include the time taken to carry out the various stages of the task, patterns of engagement, who responds to whom, what was written and edited out, and what images were uploaded and when. These and other digital activities, that in the past were often not directly measurable by researchers, can now all be routinely captured by digital systems-potentially offering insights into how students are thinking or understanding a particular concept. These forms of data relevant to learning are not only captured by keystrokes but can include other kinds of engagements with digital devices such as movement, speech, or eye movements and facial expressions, and include the metadata from each interaction. Such data can be generated within a particular system but this data collection is not confined to one site or one location. The use of cookies, IP addresses, and the availability of GPS tracking enables activities to be further tracked across contexts and time.

These data, that we and others have called digital trace data, can also be referred to as 'Big Data', and is viewed as uniquely different to previous forms of data collection. Such data as huge in volume, consisting of terabytes or petabytes of data; high in velocity, being created in or near real-time; diverse in variety, being structured and unstructured in nature;

exhaustive in scope, striving to capture entire populations or systems; fine-grained in resolution; and flexible, so that it may be extended and expanded easily. While the majority of these data will be generated in its "raw" form of alphanumeric symbols, it can then be processed and manipulated through "data work", when data are processed into "more socially meaningful, representations, models, calculations and visualisations". As such, the term Big Data are used to refer not only to the sheer size of datasets themselves but also to their internal complexity and the complexity of associated analytics.

It should also be made clear that academics from many social spheres are exploring the ethics of systems that use digital trace data. In particular, the Human Computer Interaction (HCI), Computer Supported Cooperative Work (CSCW), and Computer-Supported Collaborative Learning (CSCL) communities are areas where substantial work on the ethics of the use technology has already been explored, particularly in terms of the ways ethics can be incorporated into the design of technological systems. In addition, Science and Technology Studies (STS) communities have conducted substantial work on data bias and algorithmic accountability, especially focusing on algorithmic bias, to understand, and ultimately challenge, the kinds of data-driven inequality and discrimination that can play a part in many spheres of social life.

Furthermore, new methods across the social sciences, which is premised on extracting information about users and their actions, and subsequent analysis and manipulation of these data to understand and describe behaviours more clearly; are also encouraging researchers to examine ethical practice in relation to the use of digital trace data. The purpose of this review is to establish the evidence base and conceptual discussion within the particular fields of learning and education. There are two academic communities engaged in such debates: those from data analytics (learning analytics, educational data mining) and sociological scholars of datafication and digital governance.

Objective

Digital trace data-the data generated when people use digital technologies-are playing a progressively central role across informal and formal education contexts. The objective of the study is to get knowledge and analysis the types, nature and methods of the trace and use of digital data and violence of the its ethical obligation.

Method

In this study, due to the new and emerging nature of the research field, and the diverse presentation of research evidence, a meta-analytic systematic review, such as, has not been possible. Instead, a systematic qualitative/thematic analysis, similar to the approach employed by has been conducted.

Data analysis and Discussion

The increasing prevalence of digital data work within education is apparent in the growing adoption of data analytics. The measurement, collection, analysis and reporting of data about learners and their contexts, for purposes of understanding and optimising learning and the environments in which it occurs. Broadly speaking, this body of work has originated out of the learning science community, and those particularly focused in understanding online learning in the context of higher education.

- **What is the Digital Data Trace:**

Interactive digital educational tools, such as those mentioned above, generate immense quantities of granular information or "digital trails" about students, including view and download commands, start and end time, time on task, and correctness. Although not yet operational in most systems, applications that can monitor bodily movements and indicators such as heart rate, eye movement, and facial expressions already exist and can also provide data concerning students' physical reactions while performing educational tasks. Analytics dashboards now appearing in most virtual learning environment/learning management system online learning platforms present a range of graphs, tables, and other visualizations used by learners, educators, administrators, and data analysts. Learners may receive basic analytics such as how they are doing relative to the cohort average as well as summaries of their other online activity, such as library loans, purchases, and participation in social networks.

Learning analytics can thus provide learners with insight into their own learning habits and give recommendations for improvement, or, for example, help identify "at risk" learners. Through learners' static and dynamic data, researchers have tried to "classify" learners' trajectories or predict which students are likely to succeed or drop out of a particular course with a view to offering more timely interventions. As such learning analytics is focused both on the processes and outcomes of learning. Educational data mining (EDM) is an emerging discipline that draw significantly from methods in computer science and engineering to optimize learning systems, where optimization typically relates to learning efficiency. Such approaches may not always provide insights into the process of learning but can nonetheless offer insights into how to improve outcomes. Many of the methods used are similar to those in learning analytics, although EDM historically has a greater focus on automated methods and learning analytics has a greater focus on human interpretation and visualization.

- **Ethical Issues and Responses: A Thematic Analysis**

Scholars widely recognized the ethical challenges of informing and obtaining appropriate consent for collecting a range of types of digital data, subjecting it to analytics, and interpreting it. They were privacy, informed consent, and data ownership; validity and integrity of data and algorithms; ethical decision making and the obligation to act; and governance and accountability. In this section, we will address each of these four ethical topics, implications, and author proposals to respond to these ethical issues in turn.

Notions of privacy, informed consent, and the extent to which digital data can and/or should be anonymized represent the most commonly and extensively discussed ethical issues across the selected papers. Of the 50 papers that discussed these issues, more than half were from the learning analytics tradition, which tends to be focused on HE institutions. Only four papers talked explicitly about privacy in relation to a school-aged context. The remaining papers, which made reference to Big Data, did not position the discussion within a specific context of education. Rather, they were broad, conceptual papers that discussed the issues of privacy and consent in relation to education and education policy in general. As this review will set out below, it is problematic that these discussions have been taking place without a great deal of attention to specific educational contexts, given the recognition that ethical issues must be considered in a context-specific manner.

- **Traditional approaches to ethics in education**

There are well-established ethical guidelines across the field of education research. These include the guidelines on ethics from British and American Educational Research Associations and the Australian Association for Research in Education (AARE). However,

while there has been some recognition by professional associations in the field of education about the need to examine the ethical implications for research using digital data (e.g., a useful bibliography provided by BERA), to date there have been limited professional resources for researchers in the field of education who are engaged in the collection and use of digital data, especially those focused on the use of digital trace data, to guide their ethical choice.

There is thus significant need to bring together the existing advice on this topic, to understand the ethical issues that are arising as digital data are increasingly central to the educational landscape, to identify the emerging responses to these challenges in relation to both governance and legal regulation, and to question the ethical theories and values upon which they are based. We therefore ask three questions about the emerging domain of research on the ethics of digital trace data use in education and learning:

- ✓ What are the characteristics of research in this domain by study type, academic community, institutional setting, and national context?
- ✓ What are the primary ethical concerns and related responses in this domain?
- ✓ What research gaps are there in this domain and how might these be addressed?

- **Threats to learner privacy**

A significant number of authors in the included studies recognize that privacy of student information is important for education because of the adverse impact that inappropriate uses or disclosures may have on student learning and social development. The mass collection and centralization of student information have been argued to pose significant threats to learner privacy and raise questions about data ownership and consent: who owns the data and who has the right to use and/or profit from it. Several studies highlight that the process of data aggregation can mean data are combined from many different sources, is used and/or shared by many actors and for a wide range of purposes cite an example of the use of data in a regional university in Australia in which there was an institutional assumption that student data, consensually gathered at enrolment, could be analysed beyond the scope of the original consent. Yet, as and several others make clear, the potential value of the gathered data becomes apparent only after they are subjected to analysis by computer algorithms, not beforehand. Many scholars recognize that it is hard to predict what correlations will emerge from the data, let alone what their impact on the individual will be. Thus, a number of scholars have emphasized the potential unexpected consequences of data use and the related implications for privacy.

- **Digital Education Governance**

A quite separate academic community are those from the Sociology of Education, who have a relatively long history of discussion and critique of the growing "datafication" of education. Scholars from this community have argued that education has been subjected to a process of "digitally driven datafication," whereby schools, colleges, universities, and commercial institutions now collate masses of digitized data on a daily basis and function increasingly along "data-driven' lines. While there has been an intensification of more "traditional" digital data recording, there has also been a broadening of the use of digital trace data collected by digital devices. For example, describe how a process of "datafication" of

discipline and student behaviour has taken place through ClassDojo, a classroom management and communication platform with a "gamified" behaviour shaping function.

An important issue within this area of research is the significant role of commercial stakeholders within this space. Companies such as ClassDojo, along with Google, McGraw Hill, Knewton, and Pearson, are using data-driven methods in the educational products they market to educational institutions or to parents/guardians. In addition, data are at the heart of the business model of many other mainstream platforms that young people may use for learning such as YouTube, Facebook, or Twitter that can be used to facilitate informal learning, or indeed have become reconceptualized as learning spaces and "course management systems" for schools and higher education institutions. This is taking place in an environment where digital datasets have become increasingly commercially valuable and appropriated by the digital knowledge economy.

The growing commodification and commercial value of digital data sets, and their use in these domains, are blurring the boundaries between the roles of the private and the public sector in determining educational policy and practice. Internet empires—such as Google, Apple, Amazon, and Facebook-now have major control over the ways in which knowledge is generated and accessed. Such observations have important ethical consequences, as the ethical practices of companies tend to be less transparent than public institutions, which, in turn, can have significant implications for public trust. Digital data are not neutral and objective truths, but rather the products of human decision-making and technological design features that are embedded within wider social, cultural, and economic arrangements. There are thus further implications concerning whose judgments are informing and supporting learning processes and educational practices.

Conclusion

In this article, it has carried out a systematic qualitative analysis of the emerging research in the ethics of digital trace data use in learning and education. The thematic analysis of the ethical issues and responses that are highlighted in existing research on the ethics of digital trace data use in education and learning; and reported on the findings and arguments from four identified themes of work: informed consent, data transparency, validity, integrity of data, algorithms, governance and accountability; and ethical decision making and the obligation to act. From this process we also found important gaps in the literature. Given the importance of this area, and the likely growth in the use of digital trace data for learning and education, we suggest there is a need for future research to begin to work toward a more cohesive community of thought, where the wider learning and educational ecosystem is recognised, explicit engagement with ethical theory is central, and mid- to long-term issues are also considered alongside immediate concerns. In so doing, the academic community can build a proactive ethical agenda in this developing domain.

The thematic analysis has shown that there are four main areas of focus in this domain. The first theme-privacy, informed consent, and data and ownership-formed a central focus of the majority of papers, followed by issues related to the validity and integrity of data and algorithms, then governance and accountability, with a small number focused on the theme of obligation to act.

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An Impact of Digital Transformation on Organizations' Research Procedures

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Abstract

Digital transformation and resultant business model innovation have fundamentally altered consumers' expectations and behaviours, pressured traditional firms, and disrupted numerous markets. Consumers have access to dozens of media channels, actively and effortlessly communicate with firms and other consumers, and pass through rapidly increasing number of touchpoints in their customer journey, many of which are digital. However, these new online retailers do not limit their reach to traditional retail industry; they use their digital resources to enter markets that were previously thought to be completely unrelated to retail, in search of further growth opportunities. At the company level, many traditional firms have been surpassed by innovative fast-growing digital entrants, and suffered as a result of this.

Keywords: Digital transformation, Organizations, Research procedure, Innovations.

Introduction:

To the best of our knowledge, there has been no multidisciplinary discussion on digital transformation. We believe that such a multidisciplinary discussion is required, given that digital transformation is multidisciplinary by nature, as it involves changes in strategy, organization, information technology, supply chains and marketing. In today's business world, managers are increasingly confronted with responding to the advent of new digital technologies that blur market boundaries and change agent roles. In order to provide managerial guidance for digital transformation, we must increase our understanding of how firms can gain a sustainable competitive advantage by building on specific resources, which strategies they should adopt to win, and how the firm's internal organization structure must change to support these strategies. This paper thus contributes to existing discussions on digital transformation by taking a multidisciplinary focus. The emergence of digital transformation requires the building of a scientific knowledge base and development of a research agenda to stimulate the cumulativeness of future research in the multiple domains on this important topic.

Digitalization describes how IT or digital technologies can be used to alter existing business processes for example, the creation of new online or mobile communication channels that allow all customers to easily connect with firms, and which change traditional firm-customer interactions. Such a change often involves the organization of new sociotechnical structures with digital artifacts, which were not possible without digital technologies. In digitalization, IT serves as a key enabler to seize new business possibilities by changing existing business processes, such as communication, distribution, or business relationship management. Through digitalization firms apply digital technologies to optimize existing business processes by allowing a more efficient coordination between processes, and/or by

creating additional customer value through enhancing user experiences. Hence, digitalization is not only focused on cost savings, but also includes process improvements too.

Digital transformation is the most pervasive phase, and describes a company-wide change that leads to the development of new business models, which may be new to the focal firm or industry. Firms compete and can attain a competitive advantage through their business models, which is defined to represent "how the enterprise creates and delivers value to customers, and then converts payment received to profits. Digital transformation introduces a new business model by implementing a new business logic to create and capture value. For digitally transforming incumbents, achieving high growth is also important, but not at the cost of profitability. Hence, incumbents, which want to transform digitally, need to simultaneously attain two main objectives to reducing costs through automation and growing revenues through enhanced customer experience. Given the possible incompatibility of realizing both objectives, some researchers suggest that digitally transforming incumbents should develop digital initiatives in new separate ventures that would function similarly to a digital start-up in order to justify a primary focus on growth.

Aim and Objective

In this paper, the aim to identify and assessed the impacts on the phenomenon of research idea and thoughts due to digital transformation. The objective of the paper is to identify and discuss research idea, strategic imperatives that result from digital transformation regarding required digital resources.

Analysis and Discussion

The different phases of digital changes toward digital transformation have important strategic imperatives for firms. An impact on required digital resources, organizational structure, digital growth strategies, and metrics. In our subsequent discussion we mostly - but not exclusively - focus on the digital transformation stage, as this is the most pervasive and complex phase, and the main focus of our paper.

- **Digital resources**

Resources represent a firm's ownership and control of assets and capabilities. Assets represent the firm's resource endowments in physical and intellectual assets, while capabilities usually reside in the firm's human, information, or organizational capital, and glue assets together to enable their successful deployment. In pursuit of digital transformation, the firm's redefinition of how it creates and delivers value to customers often requires it to access, acquire or develop new digital assets and capabilities. In this section, we will highlight the most essential digital assets and capabilities needed for digital change: digital assets, digital agility, digital networking capability and big data analytics capability.

- ***Digital assets:***

Firms require digital assets, like the storage of data, information and communication infrastructure, and accompanying technologies to effectively compete in the digital era. Today's firms invest heavily in the development and acquisition of digital technologies to allow for AI, Machine Learning, and robotics. The endowments made in technologies and data provide the basic ingredients to leverage existing firm knowledge and other resources to create more value for customers. For example, big data as a digital asset can be leveraged by

using a firm's data analytical capabilities to personalize services and offers. We discuss these digital capabilities that can enhance the value of digital assets in the section below.

- ***Digital agility:***

Digital agility concerns the ability to sense and seize market opportunities provided by digital technologies. Digital agility is vital for an incumbent's survival. In today's dynamic and unpredictable markets, firms must be flexible:

1. To allow for the repeated switching of organizational roles;
2. To respond to the changing customer needs and introduction of new digital technologies.
3. To respond to the intensified competition due to the blurring of market boundaries and removal of entry barriers.
4. To respond to these challenges, firms should be digitally agile to continuously modify and reconfigure existing digital assets and capabilities.

This will also have implications for the organization structure. To achieve digital transformation, digital agility is needed to recombine digital assets with other organizational resources in order to change the way of doing business. By continuously sensing and seizing market opportunities, digital agility fosters the recombination and development of new products, services and business models that enhance the value created for the customer. This capability becomes increasingly important when a firm shifts to more advanced phases of digital transformation; that is, from digitization to digitalization, and from digitalization to digital transformation.

- ***Digital Networking Capability:***

The digital networking capability, which refers to the firm's ability to bring together and match distinct users to address their mutual needs via digital means, becomes more important in digital settings. In environments increasingly permeated with digital technologies, firms realize that they need to take a network-centric view and co-create value with a set of digitally connected firms. In a recent study, 75% of executives indicated that their competitive advantage is not determined internally, but by the strength of partners and ecosystems they choose to work with. That could explain why more than one-third of the firms had doubled the number of partners they work with in just two years. Furthermore, firms may allow customers on their digital platforms to co-create value by generating own content, customize their products, and become brand ambassadors via the use of social media technologies, making customers a valuable asset for generating competitive advantage. The capability of firms to select, attract, link and engage a heterogeneous set of network stakeholders like customers, suppliers, and third parties strongly stimulates the value creation and growth of platforms, and is important to realize digitalization and digital transformation.

- ***Big data analytics capability:***

In the phase of digital transformation, the capability to acquire and analyze big data for decision making is crucial, given that the functionality of digital technologies all rely on digital data. Despite the wide availability and ease of collecting big data, firms struggle to develop this capability to analyze and utilize big data: 79% of surveyed executives admit that their most critical systems and strategies rely on data, but that many of them have not invested in verifying the reliability of these data. Furthermore, employees with strong digital and

analytical skills are required to create value from big data for both firms and customers. Firms should have big data teams that have analytical, data management, data visualization and business skills. Pure digital firms like Amazon and Booking.com constantly use analytics to tailor new offerings to customers as well as to optimize revenues with dynamic pricing and revenue management. Once the big data analytics capability is built in, continuous training programs need to be put in place to update skills, as techniques become more advanced.

- **Organizational structure**

Apart from the digital resources needed to achieve digital transformation, a key issue to consider is the organizational changes needed to adapt to digital change, especially regarding organizational structure that is flexible for digital change. Past research argues that digital transformation has implications for the organizational structure, favouring a flexible structure composed of separate business units, agile organizational forms, and digital functional areas.

- ***Separate business units*:**

As incumbents tend to be slow when it comes to detecting valuable technologies, recognizing the need to react fast, and/or overcoming the often conflictive and competence-destroying nature of digital technologies is critical. To deal with this, business model innovation research recommends to develop such new and often disruptive business models in autonomous business units that are separated from the headquarters, allowing for experimentation and quick learning, as well as avoiding cannibalization perils and conflicts.

- ***Agile organizational forms:***

The use of standard, more hierarchical organization schemes, with multiple management layers and a strong top-down approach, may no longer be effective in fast-changing digital environments, as the bureaucracy involved reduces response speed and innovativeness. To stimulate their digital agility, firms require flexible organization forms that allow for fast responses to constant digital change. For example, in their digital transformation journey ING has adopted the so-called Spotify-model with self-steering teams that have their own responsibility to act. This approach emphasizes an agile way of working, implying short cycles to quickly test and update market assumptions via trial-and-error. Some organizations also adopt so-called Holarctic organization approach, which is a self-management practice for running purpose-driven, responsive firms.

- ***Digital functional areas:***

An important feature of digital transformation is the increased reliance on IT and analytical functions. Most notably, the IT function itself needs to transform from a line function focused on enabling communication or data flows into a more proactive and orchestrating role supportive to digital value creation via fast and explorative responses. Firms often do not realize that - apart from changing the functional role of IT department - the employees' digital skills in marketing and service operations also need to be upgraded to enhance value creation. From a human resource management perspective, digital transformation implies the attraction of employees with digital and analytical skills that may replace existing workforce. For example, in marketing, traditional brand and product marketers are replaced by online and mobile marketing experts, while data analysts may take over the role of marketing researchers. One key challenge for incumbents is to compete for

talent with these skills with new digital entrants. Young digital and analytical talents tend to prefer tech giants like Google and Apple, or FinTech start-ups to a traditional bank like Deutsche Bank.

- **Digital growth in Research Procedure and strategies**

A variety of digital growth strategies exist for digital firms, but the most prominent growth strategy involves the use of digital platforms. The variety of growth strategies across digital transformation phases, and indicates that platform strategies are more common for the more pervasive phases of digital change. This section explains the origins of the fast-paced growth of digital platforms, and identifies new digital growth strategies based on the classic Ansoff matrix. A near ubiquitous characteristic of digital firms, and digital platforms in particular, is their impressive growth figures. We relate Ansoff's growth strategies to platform firms to assess the growth opportunities that may emerge. Using the lens of a digital platform, we find new themes and growth strategies that broaden the conceptualization.

- **Metrics and goals**

To realize the full potential of digital transformation, digital firms need to measure the performance improvements on key performance indicators (KPIs) to facilitate learning and fine-tune the business model, as we discuss in this subsection. The relevance and use of KPIs may differ across the phases of digital transformation. While certain adjustments and updates of metrics usually happen when a firm goes through digitization and digitalization phases e.g., measuring website clicks, video views and mobile downloads, after the introduction of online and mobile channels, overall outcome-related metrics like ROI, profitability and revenue growth, typically remain relevant for firms that engage in digitization and digitalization. Although the end goal of new business models - as generated by digital transformation - will also be to generate revenues, profits and improve investor value, here it is also particularly useful to track intermediate results via process-related metrics to assess how well the new digital business model is creating value.

Especially in the digital transformation phase intermediate "digital" metrics are valuable, as they provide more fine-grained insights. For many digital platforms, this may include obtaining measures of online sentiment and engagement as well as network co-creation and value sharing. For instance, when judging the success of their app developer network, Apple and Google can benefit from measuring the number of developers creating apps for their app store, the revenues generated by those apps, and the customer satisfaction with those apps. The collective assessment of the multiple intermediate metrics shows how well the complex business activity system operates and performs, and where changes are needed.

- **Research Procedure and Strategies**

Looking horizontally, i.e., growing across markets, industries or organizations we identify three strategies. Finally, some firms are able to combine all approaches in a single strategy, which we label as:

➢ ***Market penetration* and *(product-based) market development*:**

Representing two traditional dimensions of Ansoff's original work. Platforms can leverage their digital – and disruptive – technologies to achieve significant growth by attracting non-users, who have never consumed the product or a traditional substitute before,

into customers. About 30% of Netflix users do not watch TV, but stream content using tablets, laptops or mobile phones. In some cases, this may lead to creating entirely new markets. The introduction of the Apple Watch jumpstarted the growth of the smartwatch market, while Google and Amazon created the market for smart speakers when introducing their voice-controlled products. Importantly, not only firms in the digital transformation phase, but also firms in the digitalization phase can embrace these market-development strategies. For example, traditional retailers can add an online channel to attract customers from other retail stores to increase their market share, but also target and serve new business markets. In addition to these more traditional strategies, digital firms can also execute

- ***Platform-based Market/Organization penetration*:**

Introducing a platform consisting of various existing products into a new market that are offered by external parties. The Norwegian telecommunications company Telenor has developed a platform consisting of mobile, fixed-line machine-to-machine technologies serving a wide range of markets across Europe. Similarly, Apple has developed a global eco-system for its phones, tablet computers, wearable devices and TV. Looking at the vertical dimension, we observe two distinct strategies. The first strategy,

- ***Product Development:***

Introduced by Ansoff, can also be followed by digital firms. Digital firms can often more efficiently develop and launch new products in a platform environment, as platforms allow for stronger synergies among products. Mobile gaming companies, such as *Ketchapp*, for example, use gaming platforms to introduce a constant stream of mobile games into the market with relatively limited development and promotional costs. The second strategy consists of developing that allows external users to actively co-create value by giving them the authority to perform certain activities themselves on the platform. Relatively simple forms of co-creation exist in which digital platforms allow customers to engage in word-of-mouth or write product reviews or share innovative ideas on crowdsourcing platforms. At the same time, platforms can also allow customers to perform more substantive activities by shifting roles, such that customers become suppliers, like on online marketplaces, or become co-producers as they design, modify, or assemble products. The shifting of customer roles into producers or suppliers is rather firms that have transformed digitally, while we do rarely observe these far-stretched co-creation strategies for firms in earlier phases.

- ***Platform Diversification*:**

This growth strategy is often deployed by large, successful platforms aiming to create additional growth in unexplored markets with new products. This approach consists of expanding the platform to serve new markets, update the product and service assortment, and open the firm to co-create value by partnering with sponsors (Google and Android), or with other interoperable platforms, suppliers, consumers and complementary service providers.

Conclusion

The key goal of this paper is to provide a multidisciplinary perspective on digital transformation. We started with a discussion on why firms need to transform digitally and conclude that digital transformation occurs in response to changes in digital technologies, increasing digital competition and resulting digital customer behaviour. Next, by analysing the literature, we identify three stages for digital transformation: digitization, digitalization and

digital transformation. Each phase places specific demands on firms' digital resources, organization structure, growth strategies and metrics. Firms aiming to transform digitally not only need to have digital assets, but also acquire or develop capabilities related to digital agility, digital networking and big data analytics. Internally, organizations need to develop agile structures with low levels of hierarchy, and internalize IT and analytical functional skills within the firm. Inspired by the Ansoff matrix, we identify specific growth strategies for firms that use platform-based strategies, namely: platform-based market development, customer co-creation and platform diversification. Finally, we discuss the importance of developing new (intermediate) digital metrics and objectives for digital firms.

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Psychological and Emotional Effects of Digital Technology on the Children in COVID-19 Pandemic

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Abstract

COVID-19 has caused obstacles in continuing normal life almost everywhere in the world by causing the implementation of social distancing and eventually imposing the lockdown. This has become the reason for the increase in technology usage in daily life for professional work as well as for entertainment purposes. There has been an increased prevalence of technology usage in adolescents and children during lockdown leaving its impact on their lives either in a positive or negative aspect. The overall documented percentage increase of technology usage in children was about 15%, of which smartphone usage has 61.7% of prevalence. Disturbance in brain functioning is suggested to be originated by compromise of neuroplasticity of the nerves. The radiofrequency radiations emitting from the smartphone are of doubtful concern as a brain tumor risk factor in children. The increased usage can have effects on brain functioning that will compromise sleep and cognitive abilities and develop risk for certain mental illnesses including, but not limited to, depression, anxiety, Alzheimer's disease, and attention-deficit/hyperactive disorder. Despite being a threat for developing mental illness, video games are proven to reduce depression, anxiety and increase creativity, skills, and cognition in children.

Keywords*:* Digital Technology; Brain Condition; Neuropsychological Effects; COVID-19

Introduction

Increased technological usage during the pandemic has its positive and negative impacts, depending on the usage. As much as smartphones are way of escaping loneliness in lockdown, they are also responsible for causing serious mental illness including depression, anxiety, sleep irritability, and cognitive impairment. The RF radiations emitting from the smartphone are of doubtful concern as brain tumor risk factor in children. Further on, although television usage might be not as much as the smartphone, it also has its effects on children up to some extent. Videogames are proven to be stress relief tools for the children as well as adults. Videogames are claimed to reduce depression and anxiety, and increase creativity, cognition, and skills.

The most common symptoms of COVID-19 include fatigue, fever, dry cough, headache, dyspnea. The mortality rate of the COVID-19 patients in the world is reported to be 17.1% as of March. The mortality rate in non-critical patients was found to be 11.5% while the mortality rate in critically ill COVID-19 patients is 40.5%]. Due to the alarming levels of spread and severity all over the world, WHO declared the COVID-19 as a pandemic. Following the concern of increased cases and severity along with its declaration as a pandemic, officials of governments all over the world took drastic measures along with imposing lockdown during the pandemic to reduce the spread of the virus.

Although lockdown proved to be effective to reduce the spreading of virus, there's been another rising concern in the form of behavioral, emotional, psychological, and neurological effect of lockdown as well as worsening of the pre-existing neurological disorders in this pandemic. Upon imposing the lockdown, there had been reports of the occurrence of anxiety, somatic problems, obsessive compulsive, post-traumatic stress, and thought problems in children ranging from 1.5 to 18 years of age. It has been documented that children are fearful of the pandemic and feel anxious due to the quarantine and also feel isolated because of prolonged closure of parks, schools, theaters, and lack of playing outdoor games. Previous studies have observed anxiety, depression, irritability, inattention, mood swings, and poor sleep quality as a common problem during the quarantine in the COVID-19 pandemic. Students have also been observed to suffer due to interrupted education, and an uncertain future.

The use of smartphones and other technologies during the pandemic has been increased noticeably due to quarantine and nowhere to go. Not only parents, but children also, increased their technology use, i.e., in the purpose of gaming, online classes, time passing including social media use. Along with other factors to cause psychological, and neurological effects on children during a pandemic, the overuse of technology is also considered a concerning factor to have these effects on the mental health of children. According to one study, there had been 15% increase in technology use in participants who were using it 'all the time'. This increase in technology use is documented as the risk factor of developing psychological conditions.

- **Objective**

As much as technology is being used in a positive perspective during a pandemic, it is also being convicted of negative impact on neurological and psychological functions. The objective of this study is to review systematically the effects of technology on the neurological functions of children in the COVID-19 pandemic.

- **Method of the Study**

An analytical research design as used for the present study. Primary data was collected from the 50 parents of victim children by the used of questioner which made upon the Google form. The data were compiled and analyzed on the basis of the objective of the study and interpret data in qualitative form for the present social reality of the digitalization and its impact on the children in presents. Population Selection: The population for the current review is children and adolescents to measure the effect of technology. Studies including children with the age of lesser than 18 years are included in the study following the objectives of the current study. In order to establish the methodological quality of this study, the reliability was determined based on the survey.

Discussion and results

The increased usage of technology can have a positive and negative impact on the mental development of adolescents and children depending on the trends in the usage. Parents should be checking on their children for any possible negative impact of increased usage of technology However, parents should be monitoring their children's mental health and behavior in these difficult times of pandemic.

- **Impact of Digitalization on the on Children's Health**

WHO should focus on such technologies in order to deliver quality education & attract the maximum number of students. It is suggested that it is imperative that college gain exposure to potentially disruptive, cutting-edge technologies, and more importantly, deeply ingrain the conceptional, inquiry, critical thinking, creativity, and integrative learning skills needed to enhance their future decision making and human capabilities. Hence, we can simply say that education institutions globally should direct their efforts towards undergoing change in context with the disruption of digitalization technologies. The children from the newer generation bring various different learning habits as compared to their older generation of students. Hence, the digitalization of processes rather requires so-called future skills. These skills can simply be explained as competencies learned by graduates which are needed in the future. But, Students in this case did not have to face major challenges when dealing with technology. This can be said when we talk about the usability of the new technologies induced the neurological changes in the childrens which impacted to physical and mental health.

- **Neurological Changes in Children**

Neuroplasticity refers to the structural and functional changes in the brain caused by neuron development with passage of time leading to the experience-dependent change. The connection between neurons increases more rapidly in childhood than adulthood, that is why early experiences have huge impact on brain development. The use of technology affects the neuroplasticity in children and adolescent resulting in change that might be transient or permanent. Early infancy and adolescence are crucial years for brain growth and reorganization; thus, experiences and environmental variables can have a significant impact on future brain functioning.

- **Brain Conditions and Diseases Associated with Smartphone in Children**

The addiction of technology has risen up to noticeable point and it keeps rising in the children and adolescents of different communities around the globe. Among the technologies, most widely used machine is smartphone. There are many worrisome conditions that are caused by the smartphones as mentioned in the aforesaid section. Smartphones are said to emit radiofrequency (RF) capable of reaching the brain leading to the unwanted events. This RF emission is documented for developing the brain tumor risk in children and adolescents. It was found that the brain region exposed to RF radiation are prone to develop the glioma and acoustic neuroma for tumors in children and adolescents. The risk is reported to be highest in population of <20 years. Children and adolescents are more exposed to RF radiations of wireless phone due to smaller heads, higher conductivity, and thinner skulls than the adults. These factors contribute in the higher absorption of RF radiation through children's brains. Smartphone also cause the sleep disturbance due to the RF radiations.

The use of cellphones was associated with the lower concentration of Beta-trace protein which synthesizes the essential sleep-promoting neurohormone named as prostaglandin D. Along with the brain tumor risk, WHO reported the wireless phone being the health risk including, attention deficiency, impaired cognition, impaired learning, sleep disruptions, and sensitivity to stress. Other noteworthy conditions are Alzheimer's disease, "got dementia", depression, anxiety, and risk for developing any possible neurodegenerative condition. There is positive and negative evidence regarding the use of technology in relation to neurodevelopment or neuroplasticity: among the negative effects, excessive exposure to the

screen can influence brain development in negative ways, it can increase the risk of cognitive, behavioral, and emotional disturbances in adolescents and young adults.

VRT (virtual reality technology)-based rehabilitation is increasingly used to encourage patient recovery in the physical and cognitive domains. The advantages of using VRT in neurorehabilitation are the possibility of recovering a compromised function as a way to stimulate, neuronal reorganization and the induction of neuroplasticity (to maximize motor learning and neuroplasticity) and regain functions and abilities by interacting with a virtual reality environment (VRE). The reference literature suggests that the alleged danger of the use of smartphones, in particular as a risk factor for the development of brain tumors, is in fact still debated and, even if the fear can be justified, we have no evidence that the danger is real.

- **Impact of usases of Digital and E-Devices on Health**

Studies have associated the television with the attention problem in adolescence and children. It is also documented that watching television before 3 years of age may have noticeable effect on cognitive functioning of the child. This pandemic has been the reason for increased use of television among children. Analyses of how children's brains react to television use are scarcer than those concerning cognitive or behavioral outcomes, and causality remains difficult to ascertain. Gaming has become an essential part of the life of children, sometimes leading to the "Internet Gaming disorder" or "Gaming disorder" due to their addictive propensity. Gaming is suggested to have great impact on human reward system (through dopaminergic pathways), impulse control, and sensorimotor co-ordination. Game playtime and frequency of play has increased rapidly during the events of COVID-19. Playing videogames in the pandemic embarked some positive results in reducing depression, anxiety, improving mental health, and combating loneliness. Videogames are also documented to stimulates or improve the cognitive function as concluded by the recent research.

According to the previous study on videogames in COVID-19, videogames have more positive impacts as aforementioned than the negative impact, and the included negative impacts were relatively least impactful on daily life as they were only complaining about the wastage of time. The use of smartphones and other technologies during the pandemic has been increased noticeably due to quarantine. One study found the daily smartphone and tablet exposure of 2 out of 3 children under 48 months in Spain. The children increased their technology usage during COVID-19 pandemic, i.e., in the purpose of gaming, online classes, and passing time including social media use. As already mentioned, the advent of the pandemic has influenced the behavioral pattern of the younger generation in relation to health, lifestyle, and physical activity level to screen addiction, causes various diseases, social problems, poor school performance and negatively affects on indicators of their physical and mental health. In fact, there was an increase in the time spent in front of screens or a hyper-connection to the internet.

In general, the associated sedentary lifestyle. In a study conducted in China, the prevalence of PSU (problematic smartphone use) was 43.3% in the overall sample, with 41.9% in women and 45.5% in men. To date, little qualitative research has been conducted with adolescent smartphone users when this is particularly problematic or excessive use. The results of the study by Conlin and Sillence demonstrated the complexity of discriminating between functional and fun smartphone use from problematic use in an era where

smartphones are so deeply present in modern life. Among the problematic aspects reported was the need to have their phones in the immediate vicinity even at night, the anxiety of having lost their phones or the distraction from their phones while getting to know other people. The sense of comfort and evasion provided by smartphones seems to help avoid unpleasant thoughts, emotions or experiences by providing a variety of new stimuli. When the degree of internet addiction becomes high, subjects (usually young adults) show a low level of inhibitory (psycho-physiological) control, while subjects who have a lower degree of dependence on both a computer and the Internet have a more flexible nervous system, which is indicated by the highest level of inhibitory control. From this study, it can be assumed that less Internet dependent students will be able to adapt to a rapidly changing environment.

Conclusions

Increased technological usage during the pandemic has its positive and negative impacts, depending on the usage. As much as smartphones are way of escaping loneliness in lockdown, they are also responsible for causing serious mental illness including depression, anxiety, sleep irritability, and cognitive impairment. The RF radiations emitting from the smartphone are of doubtful concern as brain tumor risk factor in children. Further on, although television usage might be not as much as the smartphone, it also has its effects on children up to some extent. Videogames are proven to be stress relief tools for the children as well as adults. Videogames are claimed to reduce depression and anxiety, and increase creativity, cognition, and skills. Parents should be checking on their children for any possible negative impact of increased usage of technology. Individuals who are sensitive to stress or prone to develop depression, anxiety should be encouraged to make their distance from the daily news because of negativity. Parents are suggested to introduce productive and creative games in their homes and should motivate their children.

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A Study on the Applications of the Blockchain Technology in Sharing Mode Based on the E. Learning Resources in India

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Abstract

The construction of digital teaching resources is one of the important contents of higher education informatization. Today, with the extremely developed network, the problem of sharing digital teaching resources in colleges and universities becomes more and more prominent. Network can not only realize the sharing of educational resources, but also greatly expand the information exchange between teachers and students, and create a learning environment for individual teaching for learners. With the continuous improvement of technology and the maturity of application, the Blockchain and new energy and related applications will develop rapidly under the impetus of the government and the huge social demand. As a new force to change the Internet, Blockchain and new energy will bring great changes to information resource sharing activities and information service institutions. This paper explores the application of Blockchain and new energy technology in the co construction and sharing mode of digital teaching resources in Colleges and universities through the research on the participation subjects of block chain technology and digital teaching resources co construction and sharing.

Keywords: E. resources, Blockchain Technology, Colleges and universities, Sharing

- **Introduction**

With the rapid development of digital campus construction in Chinese universities, the co-construction and sharing of high-quality digital teaching resources in Chinese universities has achieved initial results Information resources in the information society are not only a kind of resource, but also a kind of social wealth. Information resources should be shared by the public in a certain way under an efficient organization and allocation mechanism, and be used fairly, orderly, and fully. More and more shared products and shared services have been introduced to the market in an endless stream, changing the original traditional economic model of the Chinese. "Sharing economy" seems to have become the economic model of this era and the future, giving birth to various studies of Chinese economists in this field. The construction of digital teaching resources is one of the important contents of higher education informatization.

Today, with the development of network, the problem of sharing of digital teaching resources in colleges and universities has become more prominent. Examining the status quo of teaching resource sharing, we can find that although various enterprises and institutions have a large number of informationised teaching resources, it is difficult for teachers to obtain effective resources, and there are still big problems in resource sharing. There are more and more applications of digital resources in education and teaching. How to mine high-quality digital education resources and realize the sustainable development and sharing of digital

education resources is an important link and key measure to promote the rapid development of modern education and teaching. This article explores the application of Blockchain and new energy technology in the co-construction and sharing model of digital teaching resources in colleges and universities through the research of the Blockchain and new energy technology and the co-construction and sharing of digital teaching resources.

Discussion and Results

With the deepening of the construction of educational resource pool, how to avoid the same resource or equivalent resource being repeatedly collected has become a prominent problem in the construction of educational resource pool.

- **Problems in the construction and sharing of teaching resources in Colleges and Universities:**

Teaching resources refer to the resources used to support teaching and learning in the process of school teaching, that is, all the materials, energy and information used in teaching and learning that can be developed and utilized by teachers and students. The production, circulation, retrieval and sharing of resources have become an effective way to highlight their value. In order to solve the problems in learning, resource demanders often log in to the resource service platform, and use the retrieval function to select their own resources from the database. Digital teaching resources in colleges and universities are mainly composed of the resource's construction and development of academic affairs office, library, educational technology centre and secondary colleges or departments. Digital teaching resources are no longer limited to the external phenomena experienced by teachers and students, and are not limited to printed materials. Teachers and students can spread through electronic media.

Table 1. Survey on the source of acquisition of digital teaching resources.

Resource source	Web page	CD	Ele. books and periodicals	Paper books and periodicals	Other
Teachers (%)	65.3	18.9	38.4	22.3	11.9
Students (%)	63.2	21.6	36.7	29.5	10.2

Many school reference rooms have supporting CDs of teaching materials and reference books, but many teachers and students make little use of these resources, which makes these resources useless and shelved. For example, Table 1 is a survey of the sources of digital teaching resources. In the ideal state of resource sharing, the digital resources of various sharing institutions or universities are interrelated, just like a large and complete database, and the whole database is composed of various universities or institutions. Fig. 1 shows the teaching resource sharing structure driven by virtual currency.

- **High cost of platform operation and management**

The co construction and sharing of teaching resources in colleges and universities involves the division of labour and cooperation among many colleges and universities, and it is a cross departmental and inter university system project. Therefore, in the process of platform construction and operation, this almost involves many factors such as information system, cost, personnel, process, etc. The sharing of digital teaching resources enables

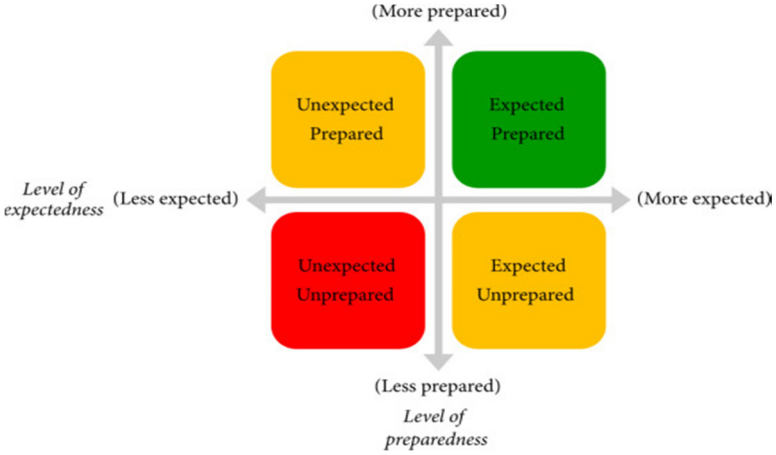
different users to use the same resources at the same time without interference. Through the rational use and sharing of digital teaching resources, the optimal allocation of resources and the efficiency of resources utilization can be improved. In the highly developed information technology network era, digital education resources sharing has brought great convenience to all. Although China has promulgated laws and regulations on the protection of intellectual property, due to the lack of awareness of intellectual property protection, most people do not prevent possible infringement, which results in the damage to the rights of property owners due to the fact that other people's resources are not used in accordance with normal ways.

In order to ensure the long-term operation of the platform, it is necessary to balance the relationship between various aspects and deal with the complex distribution and coordination of benefits. However, these need high operation and management costs. Institutions and Universities Participating in digital resource sharing can plan and build their digital resources as a whole. For digital resources that can be shared by other universities, they cannot be constructed and purchased repeatedly, so that limited funds can be invested in the construction of the University's characteristic digital resources.

- **Educational information resource sharing mode based on Blockchain and new energy**

Under the existing environment, the development of various colleges and universities is uneven, and the professional construction is also uneven. As a result, some colleges and universities have sufficient resources or even idle resources, while others have developed slowly because of insufficient resources. Because the public chain is completely decentralized, each teacher and student in colleges and universities can acquire or create resources according to their own preferences, thus greatly meeting the diversity, complexity and personalized needs of users.

Fig. 2. Classification of problem complexity factors of teaching resources.

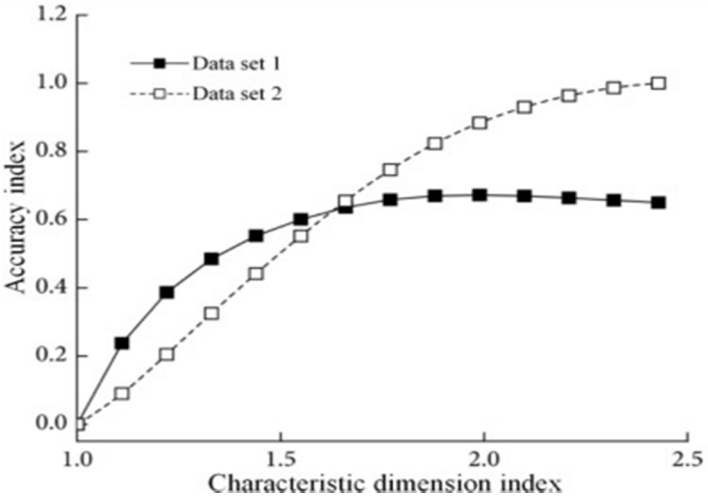


The basis of information resource sharing is information accumulation, that is, information storage and organization. Blockchain and new energy has realized the organization of information with the linked list structure of blocks, so the key to realize information aggregation on the basis of Blockchain and new energy is to solve the problem of information storage. Blockchain and new energy uses distributed computing and storage mode, and there is no centralized management hardware organization or institution. Decentralized structure makes the interaction and sharing between nodes more autonomous

and simplified. If a large number of transactions are conducted at the same time, it will save a lot of time and improve efficiency. Blockchain and new energy is used to query or find information resources in peer-to-peer networks, and the exchange of information resources is actually completed by the underlying network.

Blockchain and new energy can ensure the integrity and immutability of data, which provides the most favourable technical support for protecting the private data of teachers and students and the originality and copyright of teaching resources. Among them, vA and vB represent the sharing speed of information uploaded by providers, aAB and aBA respectively represent the inhibition coefficient between different information providers, and bAB and bBA respectively represent the promotion coefficient between information providers.

Fig. 3. Changes in building information construction models with different characteristics.



When the information overlap degree of shared information uploaded by different information providers is 0, it means that the sharing of information resources is balanced, and the degree of receiving information resources by information demanders tends to be saturated. Solving the equilibrium condition can get the coordinates that satisfy the equilibrium condition. When the information resource sharing level of A and B is equal, the information resource sharing can be realized within a certain range. The purpose of the informatization construction work experiment based on information ecology is to study the influence of different vector dimensions on the results of emotion-oriented discrimination. Table 3 shows the accuracy results of the data set in different dimensions. The change trend of accuracy across different feature sizes.

- **Function module of university digital teaching resources co-construction and sharing based on Blockchain and new energy**

Blockchain and new energy realizes decentralized management in network system through distributed accounting, distributed propagation and distributed storage, platform interface can realize interconnection and intercommunication with diversified curriculum resource platforms. Generally speaking, the sharing of information resources is mainly accomplished through the sharing mechanism of government allocation of information resources and the sharing mechanism of market allocation of information resources. There are

many kinds of digital teaching resources on the Internet, and it is a necessary foundation to establish a regional shared operation platform in order to implement effective shared services. However, this sharing platform must establish a unified technical standard from the aspects of management, browsing, integration, query and sharing application. Blockchain and new energy in peer-to-peer network realizes information accumulation in the form of linked list of blocks, and realizes information resource sharing in the form of copy of Blockchain and new energy, which has dual functions of information accumulation and sharing. In the framework model of digital educational resources sharing.

Blockchain and new energy technology is used as the underlying framework, and consensus mechanisms such as encryption algorithm, rule verification and digital signature with high technology maturity and educational intelligent contract system are used to realize the specific operations such as automatic loading, downloading and updating of educational resources. Traditional decision-making is usually based on the manager's own experience and wisdom, but it is limited by personal energy and experience.

Table 4. Investigation of changes in student learning ability.

Changes in learning ability	Learning ability has improved	Learning ability has improved greatly	Learning ability remains unchanged
Number of people	96	24	20
Proportion (%)	68.6	17.1	14.3

Through the sharing of digital resources, some underutilized resources in various universities can be used by more users, so that resources can exert their maximum utility and improve the utilization rate of resources. In this way, users can be stimulated to obtain more virtual currency and open more authority by means of learning, resource creation or resource sharing, so as to arouse their enthusiasm for resource co-construction and sharing. Resource sharing focuses on the circulation of resources, while resource management focuses on the preservation and arrangement of resources, so there is no direct quantitative relationship between centralized management of resources and resource sharing. In the process of sharing digital educational resources, if a certain transaction record information is tampered or forged, the system can use the preset calculation rules to detect and proofread through the corresponding hash value and Meckel root value, so as to find out the tampered or forged information.

- **Conclusions**

The development of blockchain and new energy provides new ideas for the co-construction and sharing of teaching resources in colleges and universities. The development and application of blockchain and new energy provide technical support and development space for the real-time, reliability and security of digital education resources sharing, and provide a large number of free and open digital education resources for the global education industry. The information resource sharing system based on blockchain and new energy is an autonomous system, which realizes the complete, credible and open record of sharing behaviour. Blockchain and new energy technology can be used to supervise the invasion of

data privacy, data leakage or data abuse involved in the open sharing of teaching resources, so as to avoid the risks brought by the open sharing of data. The establishment of digital teaching resources sharing system can help universities establish long-term effective links, truly realize resource sharing, promote the healthy development of higher education, and better train and deliver high-standard talents for the society.

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Digitalization of Education and Change of the Learning Concepts

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Abstract

As shown in research and practice digitalization processes are many times limited to implementation of digital technologies without pedagogical and organizational change. In this study it is argued for a broader perspective on the concept of digitalization, viewing it as a process involving change and transformation in different stages and several organizational levels. Based on cultural - historical activity theory and the concept of levels of learning, this study will elaborate on the concept of digitalization as well as how schools are dealing with digital and educational change. Two schools known for their large-scale digitalization processes are analysed. In the analysis, it is indicated that the object of digitalization is planned for and enacted within the school organization. How schools conceptualized-what is theoretically and practically meant by digitalization - influence how they plan their budget, professional development, and organizational change.

Introduction

The development and use of digital technologies have spread like waves over schools and society. Rapid growth and enhanced access to technologies are said to pose new possibilities to teach and learn. Simultaneously, the integration of digital technologies in schools has been reported to be a complicated process. Several researchers report that digitalization initiatives have difficulty gaining sustainability in schools and that the technologies implemented tend to support and reproduce previous practices rather than developing new ones. For digital transformation to take place, some researchers argue that change and support must occur at several organizational layers, including organizational, cultural, and administrative change. As argued on the digitalization should be considered an organizational task, including various levels and competences acting within the school organization. In a similar line of thought, studied how schools could be strategic in enacting resources, structures, and activities to support actors, practices, and structures and establishing pedagogical and organizational objects that drive digital and educational change in schools. However, few studies have conceptualised the digitalization process via an organizational and multilevel perspective on change and transformation.

In this study, we elaborate on the concept of digitalization, viewing it as a process involving transformation in various steps and on several organizational levels. To this end, cultural–historical activity theory, including the concepts of object, change, and transformation, will be used as an analytical framework, providing an opportunity to study school organizations as collectively created activities. In addition, this study will use the concept of levels of learning, which should be seen as an attempt to understand steps of transformation in school. Following the introduction above, this study aims to explore and understand structural and educational transformation. More specifically, the aim is to explore

how digitalization is conceptualised in school as well as how structural and educational change occur in schools known for large-scale digitalization.

- **Research Question**

The following research questions are raised:

- How do actors in schools conceptualise the object and process of digitalization?
- How do teachers, school leaders, and educational technologists deal with digital and educational change?
- How do new educational practices and organizational infrastructures occur as part of digitalization?

Analysis and Discussion

The school leadership level, the core of digitalization was related to change and transformation in teaching and learning. As students are geographically widely distributed, new pedagogical methods and ways of thinking about teaching and learning practices have been the central focus. This could provide a more nuanced picture on how this framework could be used to understand digitalization processes in school.

- **Digitalization of the Educational Institutions**

In previous Studies, there have been several attempts to understand factors that influence digitalization and educational change in schools, including access to digital technologies, digital competence, development of teaching and learning designs (e.g., flip, and organizational or institutional change (e.g., administrational and institutional support, ICT infrastructures, ICT leadership, and ICT school culture). Researchers have concluded that digitalization in school can be a complicated process. Digitalization initiatives have problems gaining sustainability in schools, and the technologies implemented and used tend to support previous practices rather than lead to change and development. The evidence-based research on digital transformation in teaching practices is often small-scale, and the processes are often driven by, and dependent on, individual enthusiasts. Accordingly, over the years, students have been offered digital course modules and digital support for schoolwork for the what do we, as a municipality, mean by digitalization and what does it require in terms of resources and professional development.

The study shows that digitalization is a complex process requiring large-scale transformative changes, and with support from school organizations and leadership. Following this line of thought, an ecological approach that included several organizational levels. To integrate digitalization in schools. From a teacher perspective, changes in teaching and learning practices are mainly described as enhanced possibilities for individualized teaching, distribution of information, and become more involved in students learning, stating. Hauge argued for a shared understanding by school leadership, administrators, and development and learning staff, as well as the need to develop common tools for institutional learning. However, it should be noticed that this study is based on schools known for their large-scale digitalization processes. Future research could focus on larger numbers of schools on different digitalization stages and with different objects.

- **Process and Effects of Digitalization of the Educational Institutes**

To analyse how digitalization is conceptualised and how structural and educational change occur for teachers, school leaders, and educational technologists. Digitalization

focuses on formation and development of object-oriented activities, providing an opportunity to study school organizations as activities that are changed and transformed. Building on the concept of mediation, expanded the theory and structure of activity to include three additional collective forces framing the activity. These forces include rules directing the activity, a community in which the activity is conducted, and the division of labour among actors in the activity. At the same time, a limitation in this field is extensive focus on tools and subjects without trying to understand the (pedagogical and organizational) object of digitalization. An important aspect of understanding the appearance and development of activities is the object of activity, characterizing the aim or goal the subjects attempt to reach.

In other words, the object of activity can be defined as a sense-maker, which gives meaning to and determines values of various entities and phenomena. Identifying the object of activity and its development over time can serve as a basis for reaching a deeper and more structured understanding of otherwise fragmented pieces of evidence. In the context of school and digitalization, transformations could take shape as new knowledge and practices of teaching, learning, communicating, and organizing work in school. However, as a productive but painful and comprehensive process taking place in a previously described inert system with strong norms and visions of teaching and learning, processes of transformation can be somewhat rare in schools.

Table 1: Examples of learning levels in a digitalized school context.

Sr. No.	Learning Levels	Examples of Change
1	Learning I	Digitalization as very small-scale implementations of new digital tools supporting previous practices
2	Learning IIa	Digitalization as implementation of new digital tools supporting previous learning practices without changes in learning practices
3	Learning IIb	Digitalization as implementation of new digital tools with development of new teaching and learning practices
4	Learning III	Digitalization that includes new ways of teaching, working, and organizing the school organization, including its form and structures

From: Understanding digitalization and educational change in school by means of activity theory and the levels of learning concept.

To sum up, conceptualising digitalization as emerging through smaller steps can enable analysis of a gradual digitalization, even though it might not end up with a complete transformation in school. The analytical focus in this study is how teachers, school leaders, and educational technologists understand the object of digitalization, how schools are implementing digital and educational change, and how new practices and infrastructures occur as part of digital transformation in schools. This, in turn, is expected to contribute to a picture of various levels of learning and thereby steps of transformation in school

- **Change and Transformation in Education due to Digitalization**

The teaching becomes so alive this way instead of handing in papers and waiting two weeks for comments. However, as expressed by the teachers, these aspects require digital systems and organizational support. One educational technologist described the benefits of their digital system when it is time to plan, book, and conduct meetings. From an

administrative perspective, the use has supported the concept that "the administration should be able to see where teachers are instead of running around searching for them. From a teacher and student perspective, learning platforms are used to support students' access to teaching, learning, communication, collaboration, and learning materials distributed at other premises based on contextual differences and leaning needs.

Table 2 Examples of learning levels, change, and focus in professional development.

From: Understanding digitalization and educational change in school by means of activity theory and the levels of learning concept.

The goal was to have mirrored classrooms that is, digital mirrored classrooms of what we did in real life, so that everyone would have a classroom on the learning platform and everything that happened, i.e., orally, in writing, submissions, materials. That aside, the two major insights for the student health team have been the possibility to allow pupils to make councillor and psychologist appointments online, which means that pupils don't have to be anxious about being seen by someone when they knock on the health team office doors. The insight, which we've gained through pilot testing, is the usefulness of mento-meter systems in anonymous and easily feasible weekly evaluations of well-being and classroom study environments. The change and transformation are related to organizational support the school.

Conclusion

This study adds to research and practice by conceptualizing digitalization as a process with different objects and stages that includes several organizational levels. This paper

Sr. No.	Digitalization as	Change and transformation	Focus for professional development
1	Learning I	Digitalization as very small-scale implementations of new digital tools supporting previous practices	New digital tools; practical use of technologies
2	Learning IIa	Digitalization as the implementation of new digital tools supporting without changes in teaching and learning practices	Learning new technical tools
3	Learning IIb	Digitalization as the implementation of new digital tools together with the development of new teaching and development of new teaching and learning practices	Using new tools to develop new digitalized learning practices
4	Learning III	Digitalization with new ways of teaching, working, and organizing throughout the entire school organization	Rethinking organizational structures; new ways of thinking about schooling.

provides an empirical example of how learning could be used to discuss digitalization and transformation in schools. Seeing digitalization from the theoretical perspective and levels of learning reinforces the idea of a stepwise process from technology investments exemplified in previous research to digitalization as a form of strategic educational and organizational development, and everything in between. Since the object, according to the direct planning, and organization of the activity, the object and learning steps could be used as a practical framework in school to stimulate explicit discussions and conceptual clarifications on what digitalization is, what it involves, and what it should or could involve or require in the specific school context. Thus, using the framework could be a potential of creating shared meaning to

guide priorities and plans and to enable development beyond access to new digital tools. Such framework and discussions could also be useful at regional and municipality level for planning, prioritizing, budgeting, and decision making. This could support schools and municipalities to create a shared path for digitalization and to guide effort, activities, budget and priorities.

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Ethical Intervention in Usage of Digital Resources

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Abstract

The construction of digital teaching resources is one of the important contents of higher education informatization. Today, with the development of network, the problem of sharing of digital teaching resources in colleges and universities has become more prominent. Examining the status quo of teaching resource sharing, we can find that although various enterprises and institutions have a large number of informational teaching resources, it is difficult for teachers to obtain effective resources, and there are still big problems in resource sharing. There are numerous applications of digital resources in education and teaching. How to find high-quality digital education resources and realize the sustainable development and sharing of digital education resources is an important link and key measure to promote the rapid development of modern education and teaching.

Keywords: Ethical Intervention, Digital resources, Educational Institutes, Sharing mode

- **Introduction**

With the continuous deepening of the process of education informatization, digital education resources are being used more and more in teaching. After long-term construction, various colleges and universities have accumulated large number of educational resources, and through the construction of educational information, more and more educational resources have become digital resources. Since the implementation of the modern distance education resource project, major universities have launched the construction of online education resources, and the digital construction of education resources has entered a new stage. With the penetration and application of various new computer technologies such as multimedia, hypermedia, network, and artificial intelligence in the field of education, the technical means and methods of education are constantly changing, showing a vigorous trend towards networking, multimedia, and intelligence. Online teaching is an important product of this period.

How to give full play to the role of these resources, use information technology to share resources and promote education equity, improve education quality, promote scientific research cooperation, and enhance social service capabilities have gradually become an important content of college education informatization. With the help of network, not only sharing of educational resources can be realized, but also the two-way information exchange between teachers and scholars can be greatly expanded, and an individualized teaching learning environment can be created for learners. In terms of teaching resources construction, with the in-depth development of theoretical research and practice, the focus of attention has beenshifted from the initial hardware construction to more complex and key software construction, resource construction, and resource sharing models and mechanisms. Although the popularization and sharing of educational resources has become the common demand of teachers and students, from the current practice, there are still many problems in the process

of sharing educational resources in China. Blockchain and new energy technology is regarded as another innovative technology that completely subverts the transformation of human society after the Internet.

Once proposed, it has been highly valued and concerned by experts in financial institutions, computer science and other fields. Whether the effective sharing of resources can be achieved has become an important constraint on the in-depth development of education informatization. As an emerging technology application and information infrastructure, Blockchain and new energy has been highly valued in the banking, securities, insurance and other financial industries, as well as logistics, energy, notarization, medical, e-commerce, Internet of Things, Internet and other industries in the past two years. The new power to transform the Internet is the cornerstone of the future value Internet. With the continuous improvement of technology and the maturity of applications, driven by the government's vigorous promotion and huge social demand, Blockchain and new energy and related applications will develop rapidly. For this reason, building a new digital education resource sharing model has certain value and significance.

Analysis and Discussion

Teaching resources are stored and processed digitally by multimedia technology, presented by multimedia and connected by hypertext structure. Network technology spreads and exchanges the information of teaching resources on a large scale and in an integrated way, which makes today's digital teaching resources more widely used.

- **Scattered teaching resources**

In terms of access to digital resources, using search engines, logging into relevant professional websites, and using the school's self-built resource library are the most common ways for teachers and students in colleges and universities. Questionnaires were distributed to 300 students and 100 teachers to investigate the ways of obtaining digital teaching resources. The ways of obtaining resources are divided into "search engine", "related websites", "digital resource bank", "friends communicate with each other" and "other".

Table 1. Survey results of access to digital teaching resources.

Access to teaching resources	Search engine	Related websites	Digital resource bank	Friends communicate with each other	Other
Teachers (%)	65.9	54.2	48.2	28.3	9.9
Students (%)	62.1	68.9	56.7	38.6	10.5

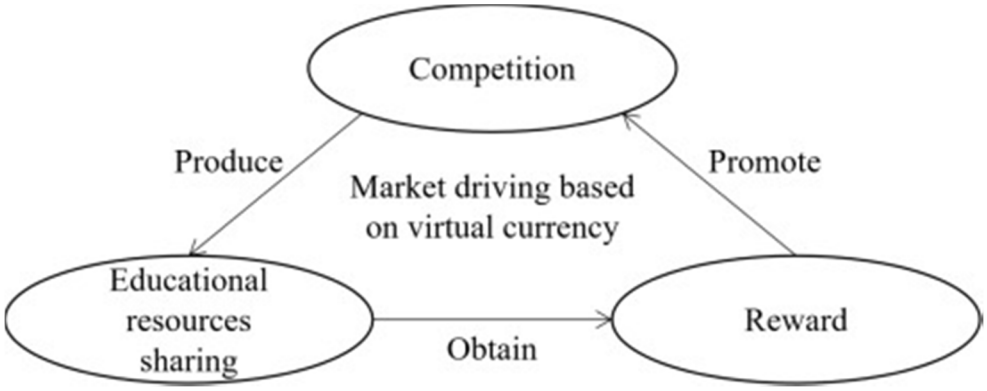
As a new Internet application technology, Blockchain and new energy has a wide range of practical achievements in many fields such as service industry and information technology. However, as far as the application of Blockchain and new energy technology in education is concerned, the current research results are not rich enough. If there is a lack of sharing consciousness and the concept of collaborative sharing, it will affect the sharing effect of digital education resources. If we cannot change the related subjects' understanding of sharing digital educational resources from ideology and concept, and stimulate the enthusiasm of related subjects to share high-quality digital educational resources, it will affect the effects

of resource sharing. The platform company of "sharing economy" separates the ownership and use right of fixed assets, uses time difference and space replacement, and generates relevant income through matching transactions.

- **Lack of high-quality teaching resources**

Sharing educational resources in colleges and universities is an inevitable choice for the development of higher education. With the establishment of the socialist market economic system, especially the implementation of the policy of enrolment expansion in colleges and universities, the transformation and development of higher education requires China's higher education to realize resource sharing. The educational resources of colleges and universities refer to the totality of different forms of resources that exist inside and outside colleges and universities and can serve the educational tasks of colleges and universities under certain social environment and conditions. After years of construction, digital education resources have gained a lot of experience and achievements, but high-quality resources are still relatively scarce.

Fig. 1. Teaching resource sharing structure based on virtual currency drive.



Due to geographical conditions and environmental constraints, it is difficult for remote areas, especially rural primary and secondary schools, to obtain diversified high-quality educational resources, resulting in the lack of educational resources in teaching points. Many teachers are worried that the copyright of the teaching content written by them will not be guaranteed after it is made public, which makes many high-quality teaching resources ineffective. Many teaching resources are often built to cope with teaching evaluation or participate in teaching competition, so they are completely separated from the teaching process. These teaching resources generally have problems such as valuing quantity and neglecting quality, which leads to the lack of high-quality resources that are really suitable for teachers and students. The greater the demand for resources by the resource demanders, the higher the capital cost of updating, managing and maintaining the centralized resource pool. Once the capital chain breaks, the sustainable development of resources will suffer a huge impact.

- **High cost of platform operation and management**

The co construction and sharing of teaching resources in colleges and universities involves the division of labour and cooperation among many colleges and universities, and it is a cross departmental and inter university system project. Therefore, in the process of platform construction and operation, this almost involves many factors such as information

system, cost, personnel, process, etc. The sharing of digital teaching resources enables different users to use the same resources at the same time without interference. Through the rational use and sharing of digital teaching resources, the optimal allocation of resources and the efficiency of resources utilization can be improved.

Table 2. Results of informatization experiments based on information ecology.

Feature dimension	**20**	**40**	**60**	**80**	**100**
Accuracy (%)	75.54	71.31	75.55	78.35	67.86

In the highly developed information technology network era, digital education resources sharing have brought great convenience to all. Although China has promulgated laws and regulations on the protection of intellectual property, due to the lack of awareness of intellectual property protection, most people do not prevent possible infringement, which results in the damage to the rights of property owners due to the fact that other people's resources are not used in accordance with normal ways. In order to ensure the long-term operation of the platform, it is necessary to balance the relationship between various aspects and deal with the complex distribution and coordination of benefits. However, these need high operation and management costs. Institutions and Universities Participating in digital resource sharing can plan and build their digital resources as a whole. For digital resources that can be shared by other universities, they cannot be constructed and purchased repeatedly, so that limited funds can be invested in the construction of the University's characteristic digital resources.

- **The framework of university digital teaching resources on Blockchain**

Blockchain and new energy is used not only for querying or searching information resources in peer-to-peer networks, but also for storing information resources. According to the different ways of information dissemination, there are two basic modes of information resource sharing: centred mode and non-centred mode. The centred mode is shown in Fig. 2, and the non-centered mode is shown in Fig. 3.

For the heads of educational resources management institutions at all levels, it is necessary to actively reflect the importance and urgency of building educational resources information to universities. With the continuous development of technology, it is necessary to constantly absorb new information and use new technology to establish teacher information technology. Not all educational information products or services are completely non-exclusive and non-competitive. Some educational information products or services are not fully non-exclusive and non-competitive. According to the theory of public goods, they should belong to the category of quasi-public goods. In order to ensure that the information of shared digital resources can be reasonably distributed, firstly, it is necessary to collect and classify the shared information resources according to different providers, and define the information resource sharing process of information.

- Fig. 2 & 3 shows the classification of problem complexity factors in educational resources.

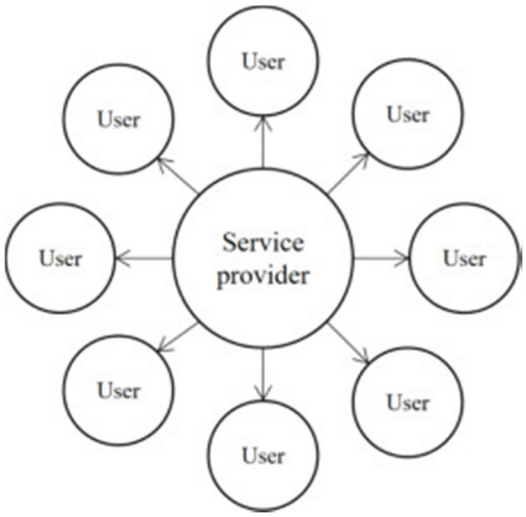


Fig. 2. Centred mode.

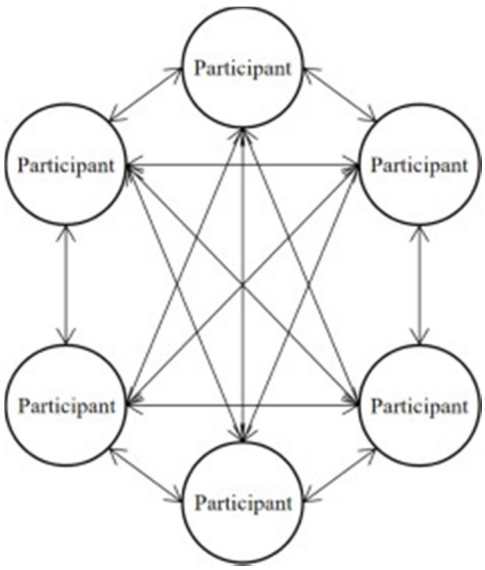


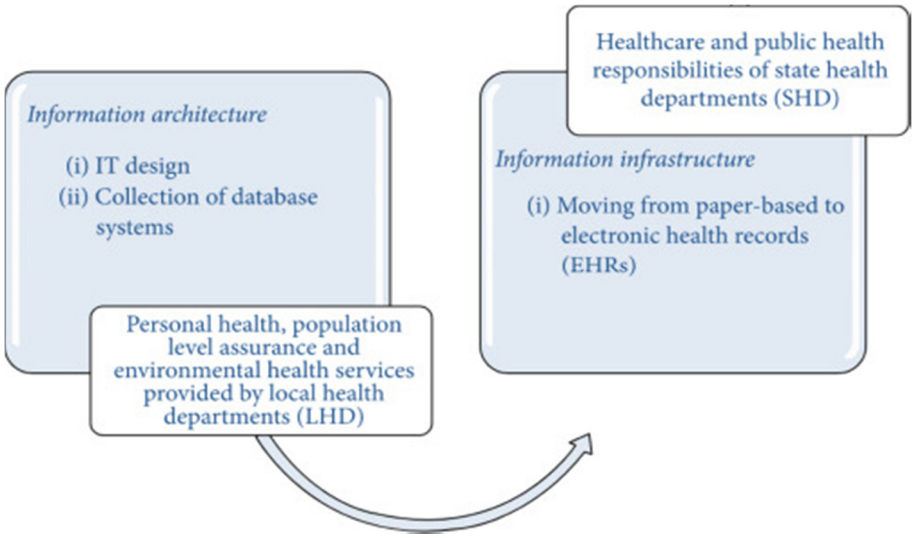
Fig. 3. Centre-less mode.

Many colleges and universities have gathered high-quality educational resources and characteristic curriculum resources, which are only owned by their own schools in the traditional sense, while other colleges and universities need to re-establish new educational and curriculum resources by themselves, which must pay a lot of manpower and material resources. From this point of view, it is more efficient for universities to realize resource sharing and balanced allocation through a platform, which is to establish a regional service and distribution center, so that all kinds of digital teaching resources in the region can be exchanged and shared. By reaching consensus conditions through links and using intelligent contract technology, all departments in colleges and universities can not only manage their own teaching resources in the previous way.

- **Teaching resources in Educational Institutes with sharing the Blockchain:**

Because Blockchain and new energy realize decentralized management in network system through distributed accounting, distributed propagation and distributed storage, platform interface can realize interconnection and intercommunication with diversified curriculum resource platforms. Generally speaking, the sharing of information resources is mainly accomplished through the sharing mechanism of government allocation of information resources and the sharing mechanism of market allocation of information resources.

Fig. 4. Information view of the public information system.



There are many kinds of digital teaching resources on the Internet, and it is a necessary foundation to establish a regional shared operation platform in order to implement effective shared services. However, this sharing platform must establish a unified technical standard from the aspects of management, browsing, integration, query and sharing application. Blockchain and new energy in peer-to-peer network realizes information accumulation in the form of linked list of blocks, and realizes information resource sharing in the form of copy of Blockchain and new energy, which has dual functions of information accumulation and sharing. In the framework model of digital educational resources sharing, Blockchain and new energy technology is used as the underlying framework, and consensus mechanisms such as encryption algorithm, rule verification and digital signature with high technology maturity and educational intelligent contract system are used to realize the specific operations such as automatic loading, downloading and updating of educational resources.

Traditional decision-making is usually based on the manager's own experience and wisdom, but it is limited by personal energy and experience. Therefore, in some cases, the manager's decision is unscientific. Fig. 6 shows the information view of the public information system. Through the sharing of digital resources, some underutilized resources in various universities can be used by more users, so that resources can exert their maximum utility and improve the utilization rate of resources. Table 2 shows the investigation on the changes of students' learning ability after using digital teaching resources for education.

- **Conclusions**

The development of blockchain and new energy provides new ideas for the co-construction and sharing of teaching resources in colleges and universities. For teachers and students, according to their grades and the number of virtual coins, they should set their access rights to resources, such as restricting the type or quantity of learning resources, and whether they have the qualification to participate in the certification of creative resources. In this way, users can be stimulated to obtain more virtual currency and open more authority by means of learning, resource creation or resource sharing, so as to arouse their enthusiasm for resource co-construction and sharing. Resource sharing focuses on the circulation of resources, while resource management focuses on the preservation and arrangement of resources, so there is no direct quantitative relationship between centralized management of resources and resource

sharing. In the process of sharing digital educational resources, if a certain transaction record information is tampered or forged, the system can use the pre-set calculation rules to detect and proofread through the corresponding hash value and Meckel root value, so as to find out the tampered or forged information.

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Digital Age and Emerging Socio-Educational Changes

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ABSTRACT

Nowadays which learning one come forward more than teaching, we can define students as digital natives and teachers as digital immigrants. Therefore, reconsidering of educational administration have become an obligation with these student and teacher profile which have changed in new age. As the major factor of education teachers have to be aware of the changing characteristics of students in the classroom, otherwise this will bring many conflicts. The purpose of this study is to explain the effect of the education to community culture in the digital age, and the features and concepts of the digital natives and digital immigrants for an effective classroom management. In addition, the basis of these concepts is to determine an effective classroom management. The domestic and foreign publications on the subject were reviewed and suggestions were made in accordance with available data.

Keywords: Emerging, Socio-educational, Change, Digital Age, Digital Native,

Introduction

In today's world of rapidly change, the education system of society, faced with new educational paradigms developing and changing global and on a national basis. Actual unable to keep up with the changes and development of society and society's education systems remain in a difficult situation. Societies with adapting to the new paradigm of education must fulfil the age requirement. In parallel with the changes and developments in the culture of the society, according to the aims and objectives of education it is possible to have effective educational system. As a requirement of the digital age, the subject and authority in the face of societies with other societies in the field of education systems are advantageous. In today's digital world, the natives in the society need analysis and relevant components of the education system are gaining importance in the change and development of society.

The digital era education management is one of the features must be available in the education manager. The education manager the digital age, the era of the supposed topic of the changing and developing technology and knowledge of the field are aware of the advantages and disadvantages of following these developments and changes is a person who has a sense for the impact on the culture of society. Humanity has encountered several massive transformations throughout the history. This massive transformation is the first of the soil and the transition to settled life, the second is the transition to an industrial society, and the third is the transition to the Information Society. There has been a change in society, developments in information and Communication Technology.

In parallel with the development of technology to conduct the education also experienced change has given effect to the idea of individual learning. Education and teaching rather than acting teacher-centered which has become independent of the physical environment can be executed. Education is one of the basic needs of the individual and

society. Societies need to have their qualifications and aims to educate individuals, the individuals in society are trying to improve themselves in accordance with the norms of the new world order to meet this demand. This development is made possible by restructuring the country of education and teaching programs.

Communities are issues that led to these changes.

- The obligation to provide educational services to a large audience at the same time.
- Individual differences cannot be taken into account.
- Individuals can be determined from the amount of information they need.
- Failure to submit the appropriate methods and techniques of information.
- It requires a lot of time to transfer the information.

In this digital era, we encounter with teaching and learning technologies at all levels of Education. Computer and information technology; education, economy, trade and health has set standards such as on many parts of our lives (Cepek and Hnojil, 2005). Information is changing so fast, the skills of being dumped, but many teachers and even educational institutions are not possibly reach the rate.

Discussions and Results

Education is one of people's most natural right. In our age, too much time is spent in education. Education encompasses a large part of life. However, the demand for education, so it is not possible to meet outside of educational institutions. Today's employment conditions are regulated according to their individual skills and the current state of knowledge.

- **Emerging of Technological Development and Change**

The technological development of technical skills as a result of the changed or former these skills in the direction of the inclusion of training demand cycle compartment as continuous learning continuous education defending possible approaches may be invalidated. Computer and want candidates to address these deficiencies identified by the use of online learning with the Internet emerges as a new education trend. Technology is making great strides in advanced societies and the underdeveloped societies to increase the distance between the causes. Despite of all this, the technology in the true sense of what that is yet save what is lost is not fully known. Constantly changed under the influence of objective conditions of humanity, as a result, the transformation of perception and attitude has created generations of passing. Twenty and twenty-first century as a result of rapid social change, the differences between generations become more evident.

Change is the truth of modern age, despite the fact that individuals, organizations and Societies tend to the protection of the habits. The philosophy of each generation, culture and habits are different. Therefore, these conflicts are taking place and affects all systems of the generational conflicts. "Generation Z" as they are defined today's elementary and secondary students educated in a digital environment. Various aspects according to the characteristics of this generation are mentioned. In this process, the first two, the basic concept has emerged.

- **Impression of Digital Native on Socio-Educational Circumstances**

Digital Natives, in short today's young generation, about children growing up in a network environment can be used to express a concept that asserts that there was a difficulty. But then, this in-depth, working as an expert, the most appropriate naming scheme for this generation of the digital language by main language (Native speaker) motion to be spoken of

as a "digital native". Digital natives can easily adapt to new technologies and who aren't afraid to make mistakes while using it or disturbing of the tool and technology with the re-launch, knowing that he might return everything to its former state, the individuals that use technology in a more comfortable way. In this context, learning the properties of digital natives can be explained in the following manner:

- Cognitive structures are not parallel rows so that they prefer games instead of serious work,
- They want quick access to information and Prefer a graphic instead of text,
- Random read an article in capsules instead prefer to read in a linear fashion from start to finish,
- They want to learn by exploring, quick access to information they want and many jobs at the same time,
- Instead of reading an article in a linear fashion from beginning to end, the capsule in case of random read prefer.

These factors for digital natives access to information at the point of over speed, it can be argued that it is important for visuals and entertainment. Information reaching the desired speed can reach during the phase, and visual elements, and hosts that wish to have entertainment in a way that it is observed. For a long time because deal with more than one topic on the network are not considered in the focus of a topic. This has created a generation that is changing the cultural and structural changes in addition to new social relations, identity and belonging the structure, creativity, security, artistic production, privacy, information quality, and toxicity differences are found to occur on some issues, such as with a team.

✓ **Digital Immigration and Migration**

Digital Migrations Born to before millennium (internet and web age) technology and technology products for individuals who met after puberty with the term "digital migration" concept is used. In other words, digital migration, in twenty ages and beyond meet internet, web and technology, use technological tools and technology-based or technology that digital natives can experience various difficulties in learning literacy identifies individuals at lower levels compared to compliance issues. Digital immigrants are confronted with various problems when used in the process of trying to get new technology. Whatever the digital natives, according to the purpose of access to information at the point of utilization of this tool. One of the most important characteristics of digital immigrant individuals is that they are able to use digital media tools effectively.

Because the characteristics of digital natives; cross-country, such as the demographic structure of the affected domestic and socio-economic levels. The conditions that affect the existence of the digital natives in the studies conducted in the European countries are stated quite heterogeneous distributed as a result of studies. Therefore, a country's education system or a school has not yet been proven that all of the arrangement according to the profile of a student will lead to incorrect results. However, although the characteristics of the digital natives is heterogeneous from country to country, and from region to region, socioeconomic status differences between the shows even though the beginning of change was spreading all over the world and now it is noticed that along with the technology.

✓ **Digital Wisdom**

Depending on the age when this distinction is made on the basis of research, a distinction has been made shows that. Therefore, the interest in and intimacy in an age of technology, it is hard to argue that arise from the relationship. Prensky (2009), in his study of immigrants that right now are in the age range 30-40 more use of the technological tools in order to facilitate their work and they benefit from technology in a useful way. The digital age of the twenty-first century, the difference between digital natives and immigrants was gradually reduced and "digital wisdom" would reveal the concept of the front sees. Digital wisdom, our innate cognitive capacity that occurred as a result of the use of digital technology to access the power of wisdom. It means that the wisdom in the intelligent use of technology is to improve our skills at the same time.

The seekers of wisdom in the minds of the future both in terms of structure present in both our brains will be completely different. The wisdom of the future, seeking wisdom offered by today's increasingly complex digital technology without the need for us to strengthen the level of cognitive may have access to, but this is complicated and in terms of the quality of what wisdom is, nor the nature to find his way in a world more technologically advanced will not be sufficient. Especially it should be noted that the one human in the process of education and teaching principal. Technology, the use of good-bad or biased way, technology loaded "value" is closely related to progress.

- ✓ **Socio-Educational Change**

Social change, a group, organization, community or society is the process of switching from one format to another format. Some of the assumptions are available for social change. This change is a natural phenomenon of change is unstoppable, inevitable, change is constant, change is necessary, change shows similarities. Education and Social Change from a theoretical perspective for viewing social change, thinkers have suggested that social change is at the forefront of the various factors. The concept of social change as you progress in the direction specifies the meaning of devolution. In both directions of social change. In fact, there is a reciprocal relationship between education and social change. There is a unidirectional relationship between education, social change rather than a reciprocal relationship. So education on the subject of social change (impressive) both the object (affected) state.

Here it is difficult to determine the degree of mutual been mentioned, although a cause-and-effect relationship. Change in the desired direction and nature of change is already and by definition, education is one of the most basic functions. The function of Education, provide social continuity by transferring only the existing cultural values to new generations, even though in doing so, makes the child's behaviour by changing a biological entity as a social being. The fundamental purpose of Education is to improve the level of individual welfare, the welfare of the society, to gain the individual's personality. Then education, the country's political, social, economic, and scientific institutions can be seen as a process that increases production capacity. A major change in the student profile that emerged as a result of this change and the possibilities of the educational system-educators and student characteristics across decision makers face mismatch that is the question: How should be behaved the digital natives? However, the information which needs to be known explicitly and primarily, the characteristics of the target audience.

Social education in the digital age and perhaps to be amended and transferred to future generations which preserved the elements of which will be forgotten where a significant social policy issue has become. Besides, politicians also determine short and long-term goals, the future of social communities, educational policies and school configurations should adjust accordingly. It makes the environment to the forefront of the globalization of society and values, education and school systems, re-directing, developing and developed much more than it was in the past in all societies have configured in a different way.

Conclusion

The current digital age with individuals of students trained with the methods and techniques of old digital native can be said to be wrong. In this case, teachers and students to understand each other, can cause failure to happen in a more qualified education. The difference in this binding for the closure of some of the teachers with training, self-improvement, it can be argued that they should use technology in the classroom especially in integrated activities. In societies where the technology reaches of society never met with current technology could be and should be noted in this context should be kept separate. Future-oriented education in terms of the fiction of the new world order, functioning to educate individuals in the effective way information is becoming important. As a result, education, real quality and value on the democratic life of the entire people and institutions that there is a purpose for the individual, the social, and therefore finding. Educational, social, political, economic, etc. there are many aspects and is responsible to perform the functions usually does not determine itself. Education, one of if desired in the same twins someone "Hitler", the other one "Gandhi" effective or is a powerful tool and power to grow as well, mostly receives from the purpose and power determine the social level, socio-economic and socio-cultural policies.

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Transformation of E-Learning Devices: Nature and Advantages

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Abstract

Internet communication has drastically increased the abilities of educators to reach a global scale. The rise of mobile devices has also given online educators leverage to engage students on a personal level while allowing students the ability to interact with their classroom in any location. These advantages provide the student with fully dynamic learning through any digital outlet. While current technologies are indeed innovative, future developments will take the online learning experience into new and uncharted territory. Predicting trends may be difficult, but it can be accomplished by examining the devices and technologies used today and extrapolating forward. These technologies, combined with current trends, have been analysed in this paper and compiled into a workable technology model. The application of the models outlined in this study will allow educators and academic institutions to position themselves at the forefront of online learning for years to come.

Keywords: Transformation, E-Learning, Evolutionary Trends, Technologies Advantages.

Introduction:

The future of wearable computing will not stop simply at stand-alone devices. Research is underway to develop synthetic wearable "skin," a complex array of sensors and processors that can seamlessly integrate with the human body. These skins are currently simple arrays of sensory feedback that are typically integrated into larger systems. This research initially focused on mimicking human skin patterns for robotics or creating prosthetics. However, in the future, these bio-skins will include wireless technologies and dynamic interfaces, allowing a greater degree of capability and usability. The technology could easily be integrated into any manner of functional areas, including education. Student athletes may be able to receive guidance from a coach, located miles away, simply based on the feedback of these sensors.

The rise of mobile devices must be considered the most important shift in business. The question must be asked - why not with online education. With mobile devices now mainstream, educators need to leverage student desires to use their personal devices for school. Using mobile awareness, schools can connect with online students and create a more personal relationship. This relationship can provide the student with opportunities to download dynamic learning from digital displays. These digital displays include mobile phones, notebooks, and tablets. Indeed, there is rapid expansion of wireless synchronization between media devices with Smartphones, notebooks, and tablets which should lead to a much more enhanced digital experience. Today, mobile phones increasingly perform a wide variety of media programming with video playback, photo displays, and media storage. A mobile device will allow the student to gain additional information, such as what each component is that they are handling, where it should be located, and any environmental

hazards they might not be aware of. Furthermore, educators can receive feedback from each student as they perform these assignments in real-time.

The classroom of the future may not fully adopt this type of rapid, miniaturized learning structure, but it may implement it to a certain degree to provide introductory content at a manageable level. Combined with such technologies as augmented reality, students with mobile devices will be able to present themselves entirely differently. Imagine a scenario by which a student presents a paper at a conference. This student has a collective profile, ranging from their academic background to what skills and topics they are interested in. Audience participants with a device like Google Glass will have this information immediately displayed when looking at this speaker. This "profile" can drive every interaction that student has, whether it is someone accessing their paper on a tablet to an employer interested in a student's credentials.

Empirical Analysis and Discussion

Today's students typically have a number of social media outlets. In the future, we will see these disparate entities merged into a cohesive student profile. E-devices like mobile, net-book boost that online E-learning, and information. While the device become more user-friendly, refined and more powerful in creating a collaborative educational experience. Discussion will include hardware, new devices, and software as well as the changes in learning and cognition as a reflection of these new technologies.

- **Evolutionary Trends and E. Learning on Mobile**

Beyond the specific function of media programming, with digital display, students can filter a syllabus for class information, play an interactive business game, take a quiz, and immediately display quiz scores and overall class standing. The use of mobile devices allows for teachers and learners to interact anytime from anywhere with seamless technology and borderless networks. The task of extrapolating and predicting the future of mobile learning is a justifiably difficult task, but predicting trends can be accomplished by close analysis of the products and services used currently. One can already see that increased mobile advancements have changed the way users interact with established technologies.

Researchers note that more users will interact with the Mobile Web than traditional desktop Web by 2014. Additionally, a number of innovations and inventions have been created in recent years that have yet to enter mainstream acceptance. These technologies, combined with current mobile trends and the focused application of online and mobile learning, can paint a logical picture of things to come. The ensuing sections will detail some of these predications. Specifically, distinction will be made between evolutionary near-future developments in the next five years and transformative far-future changes from ten years and beyond. Lastly, the following developments are an extension of current trends in mobile computing with possible application to the mobile learning environment. These technologies represent immediate changes already being witnessed in the mobile environment, how they will relate to mobile learning within the next five years, and possible implications.

- **Wearable Computing**

As ubiquitous computing becomes the driving force of mobile learning, so will the need to integrate devices seamlessly with the user. Wearable computing is an extension of this trend, developing technology that a user can wear without interfering with their day-to-day

activities. Some of these devices already exist, such as Bluetooth headsets, earpieces, Smart-Watches, and most recently Google Glass, an overlay vision-based wearable device. Furthermore, many wearable devices find special niche markets, such as users with disabilities, healthcare, and military personnel. Likewise, education will aim to benefit from advances in this field. The key features of wearable computing, as a continuation of the core principles of ubiquitous computing, are permanence, extensibility, and multi-tasking. Permanence means that these devices will no longer have the distinction between "on" or "off." These devices will always be available and operational. Extensibility refers to wearable computers as an extension of ourselves, providing insight into the local environment that may not readily available to normal human perception. Multi-tasking represents our ability to operate and interact with such devices while simultaneously performing other tasks.

Wearable computing will provide tremendous value to the mobile and online learning fields. Through a student's perspective, these devices provide constant and immediate feedback throughout their day regarding classroom updates, assignments, and learning material. Furthermore, these devices can provide location-based contextual information without the need for a physical educator present. For example, students working in electronics may perform assignments on a simple breadboard or logic circuitry. A mobile device will allow the student to gain additional information, such as what each component is that they are handling, where it should be located, and any environmental hazards they might not be aware of. Furthermore, educators can receive feedback from each student as they perform these assignments in real-time. The future of wearable computing will not stop simply at stand-alone devices.

- **E-Readers**

Since the mainstream introduction of eBook Readers such as the Nook and Kindle in 2007, users have become more accustomed to reading large collections of text on mobile devices. This trend will likely continue in the education realm. Many states and countries already have initiatives planned to phase out traditional textbook learning in favor of tablet-based devices. California has proposed replacing student textbooks with eBooks and South Korea has mandated that all academic institutions phase out physical textbooks in favor of tablets and e-readers by 2015.

The benefits of e-readers are clear; they save students money on purchasing books and they eliminate the need for costly updates and editions. With each eBook, a student may have access to countless updates over the course of their education. E-Readers occasionally suffer from some of the drawbacks that all mobile devices face such as glare in sunlight and battery life. Further developments will not only improve the E-Reader in terms of hardware performance, but may fundamentally alter the way students interact with textbooks. New devices, like the Note-Slate, allow students to hand-draw notes directly into text, make annotations, and physically interact with learning materials in much the same way they traditionally have done with paper-based materials.

- **Data Interpretation**

The mobile environment is a heavily data-driven environment, conveying large amounts of data from various sources all onto a small handheld device. Mobile devices have a limited amount of viewable screen space to present and communicate ideas and concepts with.

Therefore, it is necessary to create information displays that intelligently present vast amounts of data in a succinct format. Informatics is the academic study of information processing and a rapidly growing sub-domain in a number of areas, including health care, crisis management, military analysis, and business development. Mobile learning will need to incorporate many concepts of informatics in the future, whether directly or indirectly. Future devices will be able to convert large amounts of course material into visualizations that are appropriate to the context of mobile device usage. For example, instead of reading static text about anatomy, medical students will be able to browse a full recreation of the human body in 3D. The underlying data will be the same, but the presentation will be much more intuitive.

- **Micro-Learning**

As mobile devices have changed the way users handle computers, they have also changed the way users interpret and process data. Mobile devices provide immediate access to the Internet and with it a vast array of knowledge. It has been well-documented that the Internet has already changed the way humans collect and retain information. Mobile learning has further accelerated this shift in cognitive processing. It's important to understand these changes and discuss the future implications to develop online learning tailored to this mindset. One of the basic patterns of mobile device practice is the tendency towards "burst usage."

This is the process by which most users interact with a device in short concentrated bursts, intermixed with prolonged semi-focused multi-tasking. As focused usage diminishes, the need to divide content into more manageable sections is essential. Educators in the future will have to implement a system of "micro-learning," redeveloping content into smaller bites, while still maintaining the overall cohesive focus of the course. Certain subjects will likely be better served by this approach than others. Programmers learning specific commands in a step-wise fashion may be more adept at this approach than a law student understanding an intricate, intertwined set of rules and regulations.

- **Transformative Technologies**

Emerging technology trends are now building over the Web. Devices are becoming more inter-connected to create a more coherent user experience. We can expect changes in our technology, media, and telecommunications ecosystems. Ultimately, advancements in hardware will continually drive the future of mobile technology possibilities. As miniaturization and nanotechnology improves, so will the capabilities and possibilities of mobile devices as they relate to mobile learning. Miniaturization can be explained as a trend to manufacture smaller mechanical, optical, and electronic products and devices.

According to Hu et al., nanotechnology was the construction and use of functional structures designed from atomic or molecular scale with at least one characteristic dimension measured in nano-meters. Nanotechnology was important because it provided understanding about materials and devices that were likely to impact many fields – such as new generations of biological sensors and mechanical properties. The subsequent section details advancements that could arise in ten years and beyond, as cost barriers and device limitations give way to new and remarkable.

- **Social Media**

No discussion of mobile devices is complete without discussing the impact social media has had with the way we communicate with each other and the world. In many ways,

the rise of mobile device usage and social media are intertwined. Mobile devices provide the capabilities and context that allows the rapid sharing of information that social media relies upon. In turn, the popularity of such services helps drive the mobile device industry. In fact, many social networking services were originally intended for academic pursuits. Facebook itself was designed specifically for college students to connect with one another.

Conclusion

Mobile devices are optimally designed to take advantage of location-awareness, the ability to interact with and interpret a user's immediate surroundings. This is evident with the advent of augmented-reality technology, but there are other targeted location services available for mobile education. One example, already in use in a number of museums, is the use of contextual audio feedback. These technologies exist as simple applications, scan codes at particular exhibits, or specialized devices that push content to nearby phones. However, new developments are taking the possibilities one step further. One of the most interesting applications of "content push" systems is presented in Apple's iBeacon product. These devices are beacons that emit localized content in a physical area. Cheap in design and easily configured, the beacon will automatically push content out to any device that is listening in a particular area. Initially designed for commercial use with small businesses, these devices could be tailored for education. A student could be visiting a manufacturing plant or facility, where at particular points in the building, special beacons would relay material that would teach the students about what they were focusing on. This would facilitate a hands-on teaching experience without necessarily needing an educator present.

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An Overview of the Uses of Digital-Health in Social Sciences Research

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Abstract

Conducting research in a social-sciences setting requires quantifiable quality measures to ensure ethical study conduct. Digital health technologies are proven to improve research study quality and efficacy via automated data collection, improvement of data reliability, fidelity and resilience and by improved data provenance and traceability. Additionally, digital health methodologies can improve patient identity, patient privacy, study transparency, data sharing, competent informed consent, and the confidentiality and security of social work operations. It can seem counterintuitive to press forward aggressively with digital technologies at a time of heightened population vulnerability and cyber security concerns, but new approaches are essential to meet the rapidly increasing demands of social sciences research. In this paper we present the case for the digital modernization of social work research in conflict and other social sciences settings as a vehicle for improved research quality and ethics.

Keywords: Digital Health, E-health, m-health, Social Sciences, Research, Hazards

Introduction

The recent Covid-19 crisis in India highlighted the limitations of paper systems for patient care, research and logistical support during an infectious disease outbreak. While common and readily available, paper is fragile, easily damaged by weather, greatly limited by the skills/literacy of the user, often difficult to read or reproduce. Most of all, paper itself can be a transmission vector during infectious disease epidemics. Digital technologies, on the other hand, continue to improve and to be proven effective, even in low resource settings when properly engineered and implemented. Success is far from automatic. Essential elements for successful digital technology implementation include proper methodologies, qualified personnel, strong use case and scenario selection, realistic expectations and high-touch stakeholder management. Unless these elements are fully understood and effectively executed, digital technology implementation can result in costly mistakes. The fact that massive amounts of resources continue to pour into digital technologies should provide optimism.

One important challenge of conducting research in conflict and social sciences settings is that it is resource-intensive and could divert attention from patient care. In some cases, this resource burden can be offset by automation. When data is captured electronically, some tasks are automated, and others can be expedited. Conduct of surveys provide the most common example. Paper surveys can be time consuming, illegible, poorly understood by the worker administering the survey, easily damaged by weather or transport and easily stolen or destroyed by hostile actors. Not only was the app found to be quickly superior to paper for data collection, data quality, data protection and accuracy, the program has proven to be useful for healthcare systems strengthening as there are now more than 100 community health

workers using the system. In addition to disease epidemic information, clinical knowledge inside conflict settings has also been successful collected through electronic surveys study. The study showed that initial awareness of TMH was low but that the polled physicians were interested, willing to try and thought that such interventions could be effective. Indeed, these tools can actually reach massive numbers of users and bring great utility in a short period of time.

The arguments against the use of digital health tools for the purpose of expanding the reach and minimizing the resource burden of research is that the technology will be too foreign, too complex and too difficult for successful utilization within some settings. While these concerns are valid and important, the landscape is evolving very quickly. Digital transformation appears to be accelerating in low resource areas and conflict zones. One fascinating example is the rapid adoption of cashless currency in challenging settings such as Somaliland. Indeed, even in a country with very high illiteracy rates, it is both simplicity and enhanced functionality that are helping cashless currency flourish. Clearly, the familiarity of cellular phones and tablets is on the rise in low and middle-income countries (LMIC), and this trend will help offset the concern that these technologies appear too foreign.

The potential complexity and difficulty of using digital health technologies must be managed and mitigated carefully by experienced personnel. Digital projects fail primarily due to project management and social issues, regardless of country income level. The most common reasons for failure include avoidance of root cause challenges, unclear or under-articulated goals, lack of proper methodology, lack of understanding of true customer needs, inadequately qualified leadership and staff, poor technology selection, poor communication and poor change management. While information technology (IT) project management is beyond the scope of this writing, common technology delivery project pitfalls and offers practical guidance. That these solutions are in close reach and will continue to improve.

❖ **Aim and Objective:**

The aim and objective of the study is to overview the uses of digital -health in social science research and analysis advantages and disadvantages of digital data security of the practitioners, clients and researchers of social science setting.

❖ **Method and Design of the study**

The study conducted an inductive thematic analysis of uses of digital-health in social science research a text-based data. This adopts a qualitative approach, various relevant existing journals and studies have been reviewed and analyzed using the thematic analysis method and interpret the fact for the present of the social reality.

Discussion, Analysis and Results

- **Technologies for Improved Ethical Informed Consent:**

Properly documented informed consent is an essential basis of ethical human subject research. All studies are ethically and legally bound to ensure that any and all potential research participants fully understand all aspects of the process they are being asked to undertake. This requires that potential research subjects receive, comprehend and make decisions on information that can be completely beyond experience or understanding. Common challenges include basic literacy, health literacy, the proper local context, cultural

competency, proper documentation and the challenge of successfully communicating complex research and clinical protocols.

These challenges are not limited to social sciences or low-resource settings, as the entire world struggles to ensure that the informed consent process truly satisfies its ethical purpose and study documentation purposes. Fortunately, progress is being made, and technology is playing a greater role. For example, digital informed consent tools can include multi-media videos, stories, pop-up definitions and quizzes, all of which have been shown to improve patient comprehension and retention. But are the same principles and tools being used to improve the informed consent process in the industrialized world suitable to social sciences use? Early evidence is positive, but challenges remain. Multiple studies of informed consent across multiple medical discipline and in various developing nations show that the use of audio and visual multimedia demonstrate quantifiable improvements in understanding and retention. The challenges reported include fear of data and privacy concerns and hesitance by potential research subjects to sign off on the consent forms.

With respect to data and privacy concerns, one of the risks is that more data can be collected than a subject understands. For example, apps could passively capture the GPS coordinates of the exact location of the consent, and this data could be used by other parties if the devices were not adequately protected and controlled. This may be difficult, or impossible, to effectively communicate. Clearly, there are important patient sensitivities and concerns regarding privacy, the potential misuse of personal information and fear of unintended consequences. This is where digitized personal identity may help greatly.

- **Next-Gen. Digital Identity and Privacy Protection**

The United Nations Sustainable Goal 16.9 calls for legal identity for all citizens including birth registration by 2030. This goal is aspirational and complex as no truly ideal global identification strategy exists. The complications of an unprecedented refugee crisis, unstable states and exploding identity theft and misuse in the industrialized world make this a global problem for all peoples, not just those in developing nations. The particular challenges to uniform global identity solutions include the lack of consistent state-issued identification (ID), political instability, corruption and fear of persecution and stigma. Indeed, even in the most developed nations, there is a growing trend of individuals that are choosing to live off-the-grid. For many peoples, feeling safe has a great deal to do with feeling anonymous.

But what aspects of life need to be associated with identity? Date of birth, place of birth, social security number and other personally-identifiable-information (PII) such as home address form the basis of modern identity and, truly, most of this information has likely already been stolen. Estimates vary but the data breaches are now affecting 100 s of millions of citizens per year worldwide. Many now question this strategy identifying people with personal information and then de-identifying those same people as research subjects by stripping a subset of the personal data. Must unique identification be based on some of the most personal and private attributes of life? Probably not, as newer technologies and smarter identity schemes are rapidly evolving. Digital identity is likely the best path forward given the complexities and the financial, health and security issues around global identity. For populations at risk or threat, the additional capability to support those living on-the-grid and off-the-grid will be essential. This can be less tricky than it seems.

Fortunately, in the case of biometric ID, the source of uniqueness is not marketable information such as PII or PHI; it is simply biological traits, such as fingerprint or retinal scan, which need not be associated with any personal information to be fully unique. In many ways, this strategy is essentially proactive de-identification according to HIPAA guidelines as long as none of the 18 types of identifiers are ever associated with the ID. These technologies are rapidly evolving. Admittedly, this is a great deal of technology and complexity to comprehend, and many humanitarian missions and settings lack the required technological sophistication to do so. This is where digital identity services can bring excellent value. Digital identity services provide identity solutions 'as a service' and are now being used by many sectors worldwide.

- **Digitalized Data of Social Science and Transparency**

It has been argued that the attainable minimal quality standard in epidemiology is reproducibility, and that availability of data sets, software, detailed protocols and statistical approaches enables the types of critical evaluation that ensure study quality and transparency. Maximum transparency is considered an essential element of ethical research as it ensures people are treated properly and that the research itself was conducted with the best interests of the most vulnerable in mind. For industry sponsored clinical trials, transparency via access to data, protocols and results is expected and mandated, although performance varies greatly. While there is clearly much room for improvement in the way that industry shares clinical trial data, the fact is that industry does systematically share data, and there are no truly comparable sharing efforts within academia or the humanitarian sector. Commitment to open sharing of study data would truly raise all boats with respect to the perceptions and concerns regarding the ethics of conducting research in humanitarian settings, and technology can only help.

Data that has been systematically collected, properly managed and evaluated using rigorous statistical methods can be readily examined and evaluated by editors, reviewers and other researchers. Studies that lack well-controlled source data have inadequate chain of custody and lack procedural rigor account for a great proportion of irreproducible research. In contrast, simple checklists have been shown to improve methodological information such as randomization, sample-size calculation and blinding. As previously mentioned, checklists can be readily automated via digital means and can even be improved upon as data quality and completeness can be managed as mandatory. In addition to ensuring quality, digitally shared data can be aggregated. The issues of data ownership, control and access all must be settled.

- **Ethical Issues in Health-Related Social Sciences Research:**

The basic principles behind ethical human subject research are well articulated and include respect for persons, beneficence, non-maleficence and justice. These principles are elaborated on within the International Ethical Guidelines for Health-Related Research Involving Humans published by the Council for International Organizations of Medical Sciences in collaboration with the World Health Organization. Despite these guidelines, the application of ethical frameworks to digital health is still new. It is not always clear how to best apply specific ethical guidelines to new technologies. Technology can be unfamiliar, scary and intimidating.

Common concerns include training, accuracy, reliability, privacy, security, inequality and protection of relationships. Despite CIOMS guidance, further subtleties that must be examined are the differences in the collection and use of aggregate population data versus individual patient data. One emergent example is the debate around the use of aggregate phone call detail record data from mobile phone systems within low and middle-income countries. When aggregate data is being made available for research via third parties, how is consent handled? Is the research really in the best interest of the consumers about whom the data was collected? One of the primary requirements of research, of course, is trust between the various actors. When considered thoroughly, these concerns are not new, unique or limited to conflict and social science settings. In fact, these concerns are the same as are being actively debated and managed in most healthcare systems.

Some argue that the only answer to the collective challenges of dire unmet humanitarian need and significant ethical hurdles is the forward press of innovation. Indeed, Médecins Sans Frontières considers innovation an essential element of humanitarian response and has published a framework for humanitarian innovation that considers harms, benefits, local participation, longer-term consequences and specific delivery methodologies. Similarly, it has recently been suggested that, with proper education and outreach, mHealth and telehealth offer a relatively low-resource platform for the Sustainable Development Goals-3 in conflict-affected populations. There has also been excellent recent work done to assess and describe responsible data approaches for humanitarian settings. Specifics include risk assessment, data value chain, legal foundations, and accountability and best practices. Using the growing body of positive evidence of digital capabilities, an association can be constructed between specific CIOMS guidelines and the best practices of digital technologies. Each digital capability enhancement opportunity will be discussed in detail.

- **Data Protection in Social Science Research and Cyber Security**

The author has previously provided guidance for research study cyber security and privacy protection so will not dive deeply into these technicalities in this writing. The most important aspects to consider in humanitarian settings are the specificity of the environment, prioritization of data and systems, access and identity management, proper device patching and management, comprehensive daily data backups, good physical security and regular testing of all procedures and technology controls. Fundamental to all security and privacy strategies is an understanding that all data is not of equal risk and importance. In the wrong hands, a clinical case report form that identifies a subject solely based on a unique patient ID, carries much less risk to the patient and/or provider than does the spreadsheet or database that associates personal information with those unique patient IDs.

Data is not of equal risk and this is the basis behind HIPAA, GDPR and other privacy laws. These regulations must be seen as an opportunity to make research more efficient, portable and transparent. Decide what is important and protect what is important. Worry much less about everything else. In considering data privacy and utility, electronic data can be more useful and secure overall. Consider the case of collecting and managing informed consent forms during any large medical intervention or study. If paper forms and wet signatures are used, what are the odds that a subject could be found and competently re-identified in a crowd fifteen minutes later? Chain of custody of data, including the ability to attach results and

documents to particular subjects, is fundamental to ensuring study quality. Now consider the same scenario where an electronic case report form app and a digital biometric identity were used; instant and highly reliable re-contact would be possible and credible as needed.

One last important topic on cyber security is a specific caution around the Android operating system. The Android operating system is far more 'open' than the analogous iOS operating system used by Apple. This has truly enabled rapid and worldwide utility of mobile applications. Most open-source software systems run Android and most reasonably priced phones and tablets run Android. Because Apple controls the entire iOS ecosystem, Apple devices tend to be more secure. Practicality and economics will cause most of the work to remain on Android, and this is okay, as long as users are vigilant. Technology strategies that rely on Android OS, especially those that handle sensitive information, must be carefully managed. Android devices can indeed be as secure as iOS devices if managed correctly.

- **Hazards of Digital Data Management in Social Science Setting:**

In addition to the previous cautions on education and training, project management, proper sponsorship and staff involvement, there are specific cautions that must be understood when implementing digital data collection technologies. First there are the logistical requirements of managing devices, managing users and protecting against theft and misuse. Next are the operational and technical requirements of ensuring that devices can be properly charged, cleaned and kept in good working order. In highly challenging physical environments that may be wet, dry or dusty, proper protective casings and an adequate store of spare devices is required. Lastly, it is undeniable that these technologies and the corresponding preparation and management add financial cost to any research study, but the return on these investments can be extraordinary.

Conclusion

While digital health is imperfect and still in its adolescence, the field is rapidly evolving. New digital studies and capabilities are being reported almost daily, and many have the ability to improve the ethical conduct of research in humanitarian settings. By automating chain of custody of data, by using smart metadata and by exploiting the other inherent capabilities of digital technologies, the quality and conduct of research in humanitarian settings can improve. The change will not be easy, but the rewards appear worth the risk. The decision to conduct research in humanitarian settings is incredibly complex, and a case can often be made against intervention. However, when the decision to intervene is made, that intervention must be thorough and profound, as each clinical interaction happens only once and is irreplaceable.

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Review of The Consequences of Digital Education on Children's Mental Health

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Abstract:

Because children and adolescents spend so much time using digital media, it can be considered an important part of their lives. This increased use of digital media is linked to poor behavior and health. Through health education, society in general, and public health practitioners in particular, should promote digital media use strategies. This review discovered that excessive use of technology can have negative health consequences as well as impair student learning. Educators are struggling to keep up with the rapid development of new technologies. This study aims to assess the impact of the use of digital technology on the mental health of students. The research analyzed helps raise awareness of the downsides of using technology in the classroom and suggests ways to better integrate technology into the classroom and the personal lives of students.

Keywords: Digital, Mental health, Children, Students, Education, Technology

- **Introduction:**

Technology has increasingly blurred the distinction between the physical and digital worlds. This has resulted in dramatic changes in daily life, altering the way children and adolescents live, socialize, move, and learn. Covid-19 has wreaked havoc and devastation around the world in ways that no one could have predicted. The world came to a halt in some way. Life as we knew it changed. And this shift became the new constant. Online education has become popular among educational institutions. With not having to rush and get ready to get to the institutions and being in the comfort of their homes, the beginning of this change felt rather enticing for the students. The pandemic's effects are unpredictable, and it has an impact on the educational system; most countries have had to adapt to new teaching and learning methods (Shahzad et al., 2020).

Today's children are different because media has a dominant force in their lives, from television to new forms of media (including mobile phones, iPods, and social media). Thus, they grow up in a media-saturated world with near-national television access. Media and technology are here to stay and are almost certain to play an increasingly important role in our daily lives (Brown A., 2011). Technology is becoming more and more pervasive in today's education system. Many schools offer funding to conduct Individualized education initiatives. The Individualized Education Initiative refers to the practice of educational institutions that provide each of their enrolled students with a computing device, such as a laptop or tablet, so that students can Internet access, digital course materials, and textbooks to become "1 on 1" with a device technology (Vu, Fredrickson & Gaskill, 2019). As technology is used every day in the classroom, schools need to keep up with ever-changing technological advancements.

- **Objectives of the Study:**

This paper aims to draw public attention to the impact of online education on student health and well-being. It endeavored to grasp the mental state problems of students attending online classes. Besides, it also intends to look at the role of psychological capital in mitigating students' psychological state problems and improving their study engagement.

- **Method and Design:**

This study adopts a qualitative approach, various relevant existing journals and studies have been reviewed and analyzed using the thematic analysis method.

- **Digital Education**

During the coronavirus outbreak, many nations confronted a severe crisis in the educational sector. To ensure training continues, HRD Minister Ramesh Pokhriyal endorses academics and college students to elevate their classes through the use of digital platforms. E-learning has emerged as the most tremendous replacement for the face-to-face physical lecture room that can rescue thousands and thousands of students. Digital Education is an evolving vicinity that is exceptionally worried about the teaching-learning- system and the use of digital mediums. This has advanced from activities such as sharing text resources and students submitting assignments online to the availability of several types of content such as audio, video, and multimedia resources. The non-stop advancement in the discipline of Information and Communication Technology (ICT) and the internet has made more than one mode of digital schooling possible. Several digital platforms are boosted amidst the pandemic to make certain 'learning by no means stops.'

Digital apps like Google Meet, Google Classroom, Microsoft Teams, Skype, Team Link, Zoom, and more. widely used to educate students. Digital technology exposes children to information, social connections, education, online support groups, and professional help. However, children engaged in the digital world also face a range of threats.

- **Mental health issues among students:**

The amount of display screen time college students are experiencing per day has a direct correlation to their emotions, behaviors, and mental health. During the COVID-19 pandemic, college students were required to spend the majority of their day in front of screens which negatively impacted social interactions and time that might also have been committed to sports activities or other extracurricular activities. Of the 1500 mothers surveyed, a majority (60.2%) determined behavioral adjustments in their children. The most regularly located signs and symptoms have been restlessness (69.1%) and aggressiveness (33.3%), and anxiety (34.2%) (Scarpellini, et al., 2021). As noted, using Sutarto et al., (2020) the learning process, at first was performed face-to-face in the classroom but has been shifted to domestic learning with the use of the online system or distance mastering (Nasir et al., 2018) via the use of more than a few existing media. Online mastering was once used for their day-by-day lesson and to verify their academic overall performance and it one way or the other causes the students to get stressed. It is supported by Irawan et al. (2020) who cited that one of the contributing factors to students' stress rate is the stress of online lecture tasks, which requires them to use online media that they have solely realized and have to recognize instantly.

A study by Mahmoodi et al., (2018) in Iran was used to look at the relationship between excessive use of screen devices and high school students' mental health. Over 1,000 students completed a three-section questionnaire that was utilized by researchers Mahmoodi et

al., (2018) to analyze the relationships between technological addiction, general health, and sociodemographic data. The findings demonstrated that excessive technology use was linked to poor mental health. When technology is not available, withdrawal from it may result in feelings of resentment, stress, and/or depression. Tolerance may develop as a result of excessive use, necessitating the use of extra hardware, software, or usage time. Overusing technology can make it more likely for people to lie, argue, perform poorly in school, feel isolated from others, and get tired. A lack of impulse control, despair, ongoing tension, low self-esteem, and anxiety may all be linked to excessive usage (Mahmoodi et al., 2018).

Numerous research describes how technology affects psychological and mental health. A Duke University study found that people experienced more behavioral problems on days when they used more technology compared to days when they used less technology (Reed et al.,2017). Facebook use, according to another study conducted at Michigan University, was linked to lower levels of pleasure and overall life satisfaction (Volpi 2012). Besides this, another study from the University of Gothenburg in Sweden found a link between youth and depression symptoms and heavy cell phone use (Kross et al., 2013). Researchers from Australia found that teens who use the Internet compulsively had worse mental health (Romeo., 2016). A study from Swansea University found that when frequent online users cease using, they experience psychological withdrawal symptoms (Reed et al., 2017). The American Psychological Association's Stress in America survey looked at how stress affects the health of American teens as well as how technology and social media are related to stress, relationships, and general health and wellbeing (DMRR, 2017).

Similar to this, in Howrah's Nischinda in June 2020, sixteen-year-old class X student Shibani Kumar Sau committed suicide after skipping online classes. She lacked the equipment needed to take the online programs, such as a laptop or smartphone. Because she will be taking the board exams, she was concerned about her career (Banerjee, 2020). In the region of North-East India, suicide incidents are also on the rise. In the Chirang area of Western Assam, on June 23, 2020, a class X kid, age 15, is said to have killed himself. He committed suicide because he was unable to participate in online classes and exams since he was missing a digital device. The boy's suicide note stated that he had been under stress since he had missed several days of online classes (Basumatary, 2020). As a result of the aforementioned incidents, it can be concluded that the ongoing pandemic has increased the number of instances of students experiencing mental health issues that resulted in various types of health-risk behaviors and suicides. There have been an increased number of suicide occurrences in the past month due to anxiety about losing access to online courses. Therefore, it is vital to implement various measures to safeguard these students. To ensure that pupils have healthy mental health in the face of this pandemic, the government and educational stakeholders including teachers, parents, and the community must assume joint responsibility.

Because they are exposed to technology at such a young age, children lack the self-discipline necessary to control how they use it. They struggle with figuring out when to stop using screens and how much is appropriate. Bad habits then start to develop in kids. If parents want to prevent their kids from going through any of these detrimental mental, emotional, or behavioral changes, they must impose time limits and other restrictions on how much time they can spend using technology. Students frequently "avoid reality" by using technology and

the internet as a means of communication. When people utilize technology to feel better, it frequently has the opposite effect and only serves to numb or distract them from their problems. Unfortunately, kids experience loneliness and a sense of inferiority as a result of having such broad access to the world via the internet.

- **Conclusion:**

The available data demonstrate the need for a policy intended to reduce the negative health effects of screen usage among children and youth. Academics must be aware of and stay up with changes in trends and the use of screen-based entertainment devices because screen-based technology is developing quickly (Saunders & Vallance, 2017). However, several difficulties connected to students' mental health have surfaced as a result of the inherent constraints of online learning, such as the digital gap and unequal access to digital learning. Students who are pursuing their education through a variety of digital applications have shown signs of stress, worry, and sadness, which makes them more susceptible to suicidal thoughts and other risky behaviors.

Technology will not go away. It's becoming more and more common in our society. Understanding the negative impact technology can have on a student's mental health and learning is the first step to developing healthy, conscious technology use habits. Based on the results of this study, we found that technology use affects children's mental health. Together, parents, educators, and therapists will work to awaken society to the devastating impact of technology not only on children's mental health but also on their ability to learn and maintain personal and family relationships. emphasizes the need to help.

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Social Work Practice and Challenges during the Covid-19 in India

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Abstract

The onset of COVID-19 occurred during phase two of research in which we were investigating social workers' informal use of ICT with clients. Prior to COVID-19, we were conducting interviews with practitioners and clients from four agencies serving diverse client populations in a large city in Canada. With the onset of COVID-19, we adapted to the COVID-19 context and amended the questions to investigate ICT use during the pandemic. In addition, with ethics approval, we conducted second interviews with practitioners interviewed prior to COVID-19 with a revised guide to address the pandemic context; and we continued to recruit and interview practitioners and clients using an amended interview guide incorporating pandemic-related questions. The sample comprised 27 practitioners and 22 clients. Eleven practitioners participated in interviews prior to and during COVID-19. Analysis of transcribed interviews revealed that the COVID-19 context had led to a paradigm shift in practitioners' ICT use, with two key themes identified: (1) boundary challenges and (2) clients' diverging ICT needs. We discuss these themes and present implications for policy and practice in a post-COVID-19 world.

Keywords: ICT, Social work practice, Boundaries of technology, client accessibility, Equity

Introduction

Information and communication technologies (ICTs) entered social work practice long before the onset of COVID-19. ICTs include mobile devices, computer hardware/software, and other communication media. In response to COVID- 19, practitioners were required to quickly transition to ICTs to replace face-to-face services, without adequate training or support. The purpose of the current study, which was underway at the onset of COVID-19, was to investigate social workers' informal ICT use with clients in India. Recognizing the context of COVID-19, we amended the questions to investigate ICT use during the pandemic. The original guiding research questions examined the ways social workers used informal ICTs with clients and the impact of this use on face-to-face practice. We amended the research questions to investigate the ways social workers used ICTs during this global pandemic and the impact of this use on practice.

Prior to COVID-19, ICT use in social work had become a "significant component of the contemporary clinical land in three ways: formal online ICTs, which are standalone programs whereby secure ICT communication is the single mode of treatment; formal blended ICTs, which combine ICT and face-to-face components; and informal ICTs, in which unplanned ICT use occurs in conjunction with face-to-face practice. Formal and blended online therapies are as effective as face-to-face therapy. Ethical concerns related to social workers' informal ICT use include boundary issues and "friend requests" on social media.

The pandemic brought an abrupt need to close non-essential workplaces, which led to an unparalleled incorporation of ICTs into practice. Psychologists' delivery of tele-mental health services increased from 7% to over 85% during the pandemic, and clients' use of telehealth increased from 10 to 90%. This dramatic change represented a paradigm shift, as previous distinctions between formal and informal ICT use came into question. Inclusion of ICTs has had variable effects. ICTs have allowed practitioners to provide continuity of care, and maintain the therapeutic relationship during COVID-19. ICTs removed client barriers related to transportation, work commitments, and childcare, and improved client attendance and engagement. Many practitioners intend to continue providing digital services to some degree beyond COVID-19.

Alongside benefits, ethical concerns associated with remote services have been identified. Practitioners have experienced increased blurring of boundaries and challenges managing private and work lives. The pandemic has exacerbated existing inequities by sharpening the "digital divide" among clients. Clients face barriers to remote services due to matters such as poverty/financial, privacy, and childcare issues, rural settings, lack of technology literacy, psychiatric diagnoses, and age. In this article, we provide a unique analysis of practitioners' and clients' perspectives before and after the onset of COVID-19 Pandemic.

- **Theoretical Framework**

Ecological Systems Theory situates individuals in their social and environmental contexts, recognizing the interconnected factors that influence wellbeing. Expanding the ecological systems framework to incorporate ICTs increases our understanding that individuals are both influenced by and influence all levels of their environments. As ICTs affect all aspects of human interaction, it is critical to understand the implications of ICTs. The Technology Acceptance Model enhances understanding of ICT use by demonstrating that practitioners and clients use ICTs based on their perceived usefulness and ease of use. The shift to working remotely amid COVID-19 is an unprecedented example of the influence of societal context on ICT uptake. Integrating these theoretical frameworks into social work's foundational and ongoing education marks an important move to treating ICTs as a core component of practice.

- **Objective:**

Analysis of practitioners and clients' perspectives of service delivery signaled a paradigm shift in ICT use during COVID-19. The objective of the study is 'To identify and analysis the social work practice during Covid-19 pandemic in India and boundary of challenges and clients' diverging ICT needs.

- **Method of the study**

The study conducted an inductive thematic analysis using a semantic approach, in which themes were identified within the explicit meanings of the data, i.e., what a participant said. Following six step approach to engaging with text-based data, we read and re-read the transcripts. Using NVivo, two researchers coded interesting features of the data, and collated codes into potential themes. The research team reviewed, defined, and named the

themes. An initial thematic map was created and reworked until the themes captured the coded data. We used strategies to enhance rigor and trustworthiness, including an audit trail of decisions, peer debriefing, and researcher triangulation.

Empirical Analysis and Discussion

Due to the drastic restrictions to deter the COVID-19 virus, agencies and practitioners across the globe rap- idly shifted from in-person to online treatment. Unique analysis exploring the experiences of clients and practitioners before and during COVID-19 revealed a paradigm shift. The two main themes comprised boundary challenges and clients' diverging ICT needs.

- **Diverging ICT Needs of Clients**

A second key theme is the diversity of client needs and preferences regarding ICTs, intensified by the COVID-19 context. The transition to remote services improved some clients' access to services, while posing greater barriers for others. Practitioners and clients noted the enhanced access to services for certain client populations, including those inremote areas, LGBTQ + youth, and some clients with mental health issues such as anxiety. This corresponds with findings that clients with anxiety disorders often benefit from digital services which they experience as less overwhelming and threatening. Attending sessions remotely can alleviate barriers related tostigma in accessing mental health services, as well as barriers to individuals in geographically remote areas with limited mental health resources or those with impeded mobility due to medical or emotional concerns.

In their survey with clinicians, found that the shift to online services benefited clients with adequate technology access and digital literacy skills. In contrast, client populations lacking ICT access or digital literacy skills suffered. While gaps existed prior to COVID-19, the move to remote sessions emphasized inequities and clients' divergent ICT needs. As ICT communication reduced barriers to service for some clients, a critical challenge will be to maintain remote options beyond COVID-19. Concurrently, the barriers faced by clients in accessing digital services, due to issues such as lack of Inter-net, privacy, or digital literacy, highlight the challenge in developing policies and supports to provide clients equitableaccess to digital services.

- **Implications for Policy and Practice**

Due to the paradigm shift in ICT use, practitioners face more difficulties navigating boundaries with clients. Analysis revealed several contributing factors including modified regulations to accommodate COVID-19, practitioners' internal as well as client pressure, and a lack of clear agencyguidance. Once face-to-face practice resumes, it is likely that the greater incorporation of ICTs in social work practice will continue. The complex factors producing boundary challenges emphasize that practitioners require support and viableoptions to maintain boundaries, while ensuring that clients receive needed support. It will be important for agencies to implement clear policies regarding professional boundaries. In phase one of the study, a significant percentage of participants did not dis- cuss their ICT use with supervisors or colleagues.

This finding underscores that organizations must provide support for practitioners in maintaining professional boundaries and ensuring wellbeing, for example, providing work cellphones, as participants found this helped them keep work separate from their personal lives. Notwithstanding the 2016 declaration by the United Nations General Assembly that Internet access constitutes a basic human right, our findings indicate that agencies and practitioners are faced with the challenge of reducing barriers to clients' access to digital services. The digital divide represents a social justice issue with regard to high-risk populations. It is incumbent upon social workers to help identify and advocate for communities who continue to experience the digital divide, beyond the pandemic, and to advocate for agency and government policiesthat ensure ICTs are provided to all clients.

- **Boundary of Challenges**

Prior to and during COVID-19, clients regularly contacted practitioners outside of business hours and appreciated practitioners' prompt responses. Dur- ing COVID-19, practitioners expressed feeling greater pressure to respond to ICT communication, which may be due to factors such as the changed context of service delivery and practitioners' consequent flexibility. In accommodating to the pandemic context, practitioners extended established boundaries. For example, as their practitioner offered sessions and emailed in the evening during COVID-19, one client believed the practitioner had a greater "window of opportunity" to respond to ICT communication. This corresponds with literature indicating that there is a greater likelihood of boundary issues associated with services offered after office hours, due to remote work during the pandemic. Although an acute response to a crisis, such adaptations could confound client expectations.

Flexibility in connecting with clients may enhance the therapeutic relationship and concurrently generate boundary challenges through more frequent and less formal content. Despite claiming that they did not expect practitioners to respond beyond office hours, clients appreciated practitioners responding promptly to ICT communication. Several practitioners believed that clients assumed practitioners had greater flexibility because of working from home during COVID-19. Indirectly or directly therefore, clients' expectations appear to contribute to the increased pressure expressed by practitioners to respond beyond business hours. Fear for client safety and wellbeing was another factor that exerted pressure to respond. Some practitioners depicted struggling internally, feeling compelled both to respond to clients outside of business hours and to maintain the boundaries. The context of the pandemic and remote service complicated practitioners' ability to differentiate these alternatives. This finding corresponds to other findings that during COVID-19, social workers commonly reported "perceived or overt pressure 'to be available' to meet emergent and acute patient needs.

- **Limitations**

The study has several limitations. The small sample size, voluntary, and self-selected participation suggest the need to be cautious in generalizing findings to practitioners and clients. Furthermore, there is not gather information of socio-economic background.

Conclusion:

A practitioner described pressure to respond outside of business hours as "morally triggering" because of the difficulty determining what was best for their client. This finding corresponds with the literature on "moral distress," whereby repeated ethical dilemmas can produce distress and burnout. There has been increased moral distress during COVID-19 due to dramatic policy changes as well as ethical dilemmas, boundary uncertainty, isolation, and burnout. This work was supported by the Social Sciences and Humanities Research Council of India. Rather than attempt to return to the way things operated previously, this is an opportunity to develop client-centered models of service delivery that enable more options of access. Concurrently, it is critical to develop policies and supports for practitioners to maintain boundaries and wellbeing. Nevertheless, the current study provides a unique opportunity to examine practitioners, ICT use with clients both prior to and during COVID-19. Moreover, the results are supported by the existing literature. Practitioners reported feeling consistently affected by boundary difficulties both before and during COVID-19.

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'Impact of Digitalization in Education and Status of the Students' Learning'

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Abstract

The world is faced with a shortage and an unequal distribution of health workforces across low-income, middle-income, and high-income countries. The shortfalls and inequitable distributions affect the likelihood of reaching the United Nations' third Sustainable Development Goal-health and well-being for all by 2030. To enable an increase in and a more equitable distribution of competent health workforce, there is a need for more effective and accessible health professions education. The use of digital technology in health professions education can help in overcoming some of the health workforce–related challenges by providing more accessible, standardized, relevant, timely, and affordable medical education and training. Until recently, digital education was perceived as primarily supporting in-person health professions education.

Keywords: Digitalization, Education, Students Learning, Learning Experience, Research

Introduction

The social distancing measures introduced to control the COVID-19 pandemic have dramatically changed the delivery of health professions education worldwide. Many medical schools and health professions education institutions had to pivot to digital education. With this sudden shift, research and evidence in digital health professions education have become even more important. The evidence on digital education has grown substantially in recent years and has been the subject of many systematic reviews. Existing reviews seem to mostly focus on the effectiveness of different digital education modalities. However, the adoption of digital education is complex and includes other research questions, in addition to its effectiveness. It is important to identify evidence that already exists and evidence gaps across the full scope of relevant questions to inform and guide future research and reduce research waste. To address this need, we seek to

(1) create a map of existing research,

(2) develop a conceptual framework outlining key components of digital education, and

(3) highlight specific research questions across a comprehensive research framework

Universities and HEIs should focus on such technologies in order to deliver quality education & attract the maximum number of students. It is suggested that it is imperative that college gain exposure to potentially disruptive, cutting-edge technologies, and more importantly, deeply ingrain the conceptional, inquiry, critical thinking, creativity, and integrative learning skills needed to enhance their future decision making and human capabilities. Hence, we can simply say that education institutions globally should direct their efforts towards undergoing change in context with the disruption of digitalization technologies. suggest that the students from the newer generation Y and Z bring various different learning habits as compared to their older generation of students. Hence, the digitalization of processes rather requires so-called future skills. These skills can simply be explained as competencies learned by graduates which are

needed in the future. But, Students in this case did not have to face major challenges when dealing with technology.

This can be said when we talk about the usability of the new technologies provided by the university, but we do not know what impact did it have on their learning experience. Courses that integrate technology enhance the probabilities of all students taking an active character in the learning experience. For the business-customer relationship, target marketing, and the marketing mix, technologies such as artificial intelligence, augmented reality, blockchain, gamification, internet of things (IOT), 3D printing, etc. are being adopted as a regular practice. Mobile technology faces critical issues in the near future, ones that will need to be addressed if mobile devices are to adequately handle increased usage.

One of the most important issues facing mobile networks is the limitations of the wireless networks. Cellular networks, which handle the majority of mobile bandwidth, are structured differently than traditional desktop-based networking. The infrastructure of wired networks is much more robust and intended for heavy data loads. Users have come to expect a certain amount of response time in browsing on desktops and have carried those expectations to the mobile environment. The problem is that mobile web usage is expanding at a much more rapid rate than the infrastructure. Short term solutions to this dilemma include the distribution of more cell towers, offloading data onto wired networks via Wi-Fi, or licensing more parts of the frequency spectrum to accommodate more channels of data. However, these solutions may be too cost-prohibitive for companies to implement at a large scale.

The implementation of these models will provide educators with much greater insight into the future and may even allow them to influence or build on them to greater heights. Mobile technology will play a key factor in the future growth of online learning, and with it comes several recommendations. The trend towards ubiquitous and wearable computing will necessitate more integrated devices, allowing a much greater range of feedback both for the student and the educator. Specific features of these devices, such as location-integration and data interpretation, will provide much more dynamic means of interacting with complex information that was previously impracticable in an online environment. Platforms and technologies, such as social networks and NLP, will allow students to communicate and learn across cultural, political, and language barriers. Adaptive course mechanisms will also allow greater freedom in online learning content delivery while content itself will need to be generated specifically designed to take advantage of the micro-learning method prevalent in the mobile space.

- **Aim and Objective of the Study**

The aim of the study is to obtain empirical evidence on what is the effect of digitalization on students' learning experience. The objective of the study is to understand and explore the learning experience toward the digitalization of education and it impact.

Discussion and Findings

Findings from studies comparing digital and nondigital education have limited generalizability as these studies cannot account for variance within and between these 2 educational formats. Future research should compare different digital education modalities as such studies are more likely to generate meaningful, generalizable findings. It should also aim to explore potential challenges related to the implementation and adoption of digital education interventions in different settings.

- **Digitalization in the context of education**

Digitalization is going to make a great shift in the economy and society of any environment it is applied to and will affect all areas of individual activities in both developed and

developing countries. Digitalization can simply be explained as the transformation of the skills needed by the world's working population and the young in order to successfully engage in a globalised modern economy. In a learning environment, it is changing the way students learn and also the ways by which institutions deliver education. In recent times the need of digitalization has shown a steady high in national, regional and Higher Educational Institutions (HEIs) all over the world. These HEIs across the globe are undergoing constant transformation so that they can meet the needs and requirements of the society and their respective markets. In this modern era, in order to stay in competition and to stay relevant, universities and HEIs need to develop the capabilities that help them in order to match the needs of the digital age. As an outcome of the covid-19 pandemic, universities, HEIs, governments, businesses and other institutions have started to rapidly shift their focus towards the acquisition of digital services and hence in doing so, have accelerated a number of previously existing trends.

This has led to moving student support, teaching and research into online formats requiring different methods, processes, and skill sets. With the case of covid-19 pandemic, the education system in many countries faced problems as they needed to lead the lectures through digital technologies. But before pandemic digitalization was presented as a universal good but after it became a need and higher education institutions observed a need to provide digital platforms to their students to minimise influence in their learning process. But on the contrary, studies showed that it is difficult to replace physical education with digital education. For instance, universities have encountered extreme difficulties in the administration and management of the business process since the rise of the pandemic. The new restrictions by the pandemic did not allow staff and personnel to attend the university physically so all their coordination and management moved to an online setting.

- **Students Learning Experience**

Before we discuss further on digitalization of universities, we must look into the concept of learning and what is in it. Looking at past literature, learning is simply described as changes in the behaviour of an organism that result from regularities in the environment of the organism. Further research into past literature brought forward that learning is defined at many places as the 'change in behaviour that occurs due to experience'. But it must be noted that the definition mentioned here does not simply mean that the changes in behaviour of an organism leads to the presence of learning, but rather that learning occurs when the organism has experienced an instance and then changes his/her behaviour. Hence, it is a process which is said to be different for different individuals as their capabilities to gain experiences from their surroundings are different. It must also be noted that not all individuals are expected to perform the same provided a specific environment.

This difference in experiences may be due to several personal individual factors. Some according to their own psychological patterns may excel in an environment whereas some individuals might find it very hard to cope in the same environment. Hence, it can be easily said that the learning experience for all individuals may differ in the same environment. With the rise of the covid-19 pandemic, the general conventional ways to learn and educate individuals was shifted to a complete online setting. We believe that this has had a major effect on the experiences of individuals which has changed their behaviours which ultimately leads to a change in their learning experience. Experiential learning theory describe learning as "the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience.

- **Digitalization for Students' Learning Experience**

In this section we look at digitalization from the human perspective and our review of past literature shows that whenever digitalization or digital transformation is discussed, two different kinds of reactions are observed from the public: one group is excited and satisfied and the other is interested and worried. We can say that this works in a similar mechanism for companies regardless of their size. Higher education is one of those industries that should feel the need to assign infrastructure and provide digital technologies for education. Digital transformation alters the experience of the universities and universities need to understand the necessity of developing new situations. Nowadays, especially during and after the pandemic, people use digital technologies for study, work, and for their leisure time and nobody can imagine their life without digital technologies. Similarly, the education system is rapidly changing towards distance learning and cloud computing tools are examples of significant technologies responsible for online lecturing.

Today distance learning, tutoring and mentoring sessions can be supervised remotely and promotion and recruiting students digitally is not an exception. This means that as opposed to the standard process where students need to be physically present in a university, students can now attend classes remotely without being present physically. Along with that the services of a university can now be marketed effectively using digital channels of marketing which enables them to reach a higher pool of customers. With the advancement in digital technologies, organisations and industries present globally are increasingly being challenged to keep up with the disruptive market. Universities and schools are also a part of this digital competition. In their pursuit to maximize their pool of students, we often find universities utilizing extensive funds to attain the latest technologies available in the current market. It can be easily said that with the help of sufficient digital technologies being utilized, the quality of graduates produced increases overall. A common occurrence is for leading institutions to decline or fail when technologies change. This means that when universities fail to keep up with the change in technology, they are less likely to attract many students which will ultimately lead to their decline.

Digitalization in this regard comes into play, and it should be the focus of major institutions to direct their attention towards it. In their research, Crittenden and his fellow writers (2018) point out that as many business practices are being meaningfully digitalized, channel interactions have become easier which leads to creating new ways of interacting between businesses and customers, in many cases disrupting normal marketing practices. In our instance, the techniques used to expand and deliver an online course need precise planning. Teachers are expected to establish how to combine the learning from the classroom with the Internet. The urge of using technology in higher education for the purpose of learning is extended outside the classroom. Courses that integrate technology enhance the probabilities of all students taking an active character in the learning experience. For the business-customer relationship, target marketing, and the marketing mix, technologies such as artificial intelligence, augmented reality, blockchain, gamification, internet of things (IOT), 3D printing, etc. are being adopted as a regular practice. For example, in the customer service sector, artificial intelligence systems are being extensively applied.

Universities and HEIs should focus on such technologies in order to deliver quality education & attract the maximum number of students. We can get a slight idea of what the future holds for us in terms of digitalization if we ponder upon the maturing social media applications, data analytics, optimizations of search engines, and the number of e-businesses present online. It is suggested that "it is imperative that college gain exposure to potentially disruptive, cutting-edge technologies, and more importantly, deeply ingrain the conceptional, inquiry, critical

thinking, creativity, and integrative learning skills needed to enhance their future decision making and human capabilities". This gives us a huge idea about how important digitalization can be for students when getting their education at a university. Hence, we can simply say that education institutions globally should direct their efforts towards undergoing change in context with the disruption of digitalization technologies. As a result of digitalization, production processes have been transformed into Industry 4.0 and analogue devices into the Internet of Things (IOT) which directly in turn change and reshape workplaces.

Earlier, universities have had to adopt new technologies since the rise of Covid-19. These changes result in a complexity of problems that require new solutions and graduates must cope with these challenges. Hence, the digitalization of processes rather requires so-called future skills. These skills can simply be explained as competencies learned by graduates which are needed in the future. But, Students in this case did not have to face major challenges when dealing with technology. This can be said when we talk about the usability of the new technologies provided by the university, but we do not know what impact did it have on their learning experience. As of this point, there is not much research which can be found on what future skills may exactly be needed from graduates in order to maximize from the new technology provided and not hinder their learning experience.

- Implications for Research and Practice

Most reviews in our evidence map focused on the effectiveness of digital education interventions and rarely addressed issues around their implementation and adoption. These reviews also mostly compared the effectiveness of digital interventions with that of nondigital education. There is also a need for more methodologically robust research and clearer terminology in this field. The quality of the evidence, as reported in the included reviews, was relatively low, with a limited number of studies measuring skills and knowledge retention. Furthermore, it was at times difficult to determine which modality (or modalities) the included reviews focused on because of poorly explained inclusion criteria. Such ambiguity was particularly common in reviews on e-learning and blended, online, and internet-based education.

The conceptual framework will benefit researchers, funding agencies, and educators, among others. We also express concerns about the paucity of studies from low- and middle-income countries. Such countries could greatly benefit from digital education, especially by using free or low-cost education eg, massive open online courses. Although some research findings have a universal application eg, fundamental principles of effective learning, others such as implementation, infrastructure, and learners are more context specific. Given the presence of unique needs of low- and middle-income countries eg, distinct content priorities, learner demographics, and infrastructure, we urge more research in these contexts.

The specific questions identified and classified according to this framework provide a map for future research and can help prioritize original research studies and guide the planning of new or updated systematic reviews. We encourage investigators to broadly consider the questions we identified in this evidence map, especially those specific to areas previously less studied, such as infrastructure, learners, or quality assurance in digital education. Our framework can also be used by funding agencies to better understand the limitations of the existing research and identify areas with limited evidence with the aim of informing their funding calls in this field. Finally, this framework can encourage those developing new courses to anticipate and plan for issues that are important but might be inadvertently overlooked, such as the digital education context, infrastructure, and learners.

Conclusion

The effect of digitalization on student learning experience after the rise of the pandemic, we would like to point out the fact that although the pandemic brought situations which resulted in the abruption of normal daily life, it also gave us a chance to explore new digitalized technologies. Distance learning and remote learning were just farfetched ideas for universities before the pandemic, as there was no demand for such digitalized technologies in the market present before the pandemic. In this research, where we look into the digitalization effects in a university, initially we dove into the concept of learning by understanding how is it created in the first place. The concept of digitalization plays an important role in education industry. The pattern of education has been changed with the rise of the covid- 19 pandemic. The distance learning technologies may not be widely used before the pandemic, it is not a new concept. It was our aim to point out the shift in digital technologies used physical classes or the digital technology used to regulate the administration and workings of a university which ultimately had an effect on the learning experience of students. The pandemic gave us a change to identify new digital technologies and how these technologies can be utilized in the everyday workings of our higher educational institutions. If we talk about platform-based technologies, which in our case, Zoom is an application being the most widely used throughout university.

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The Digital Interventions in Teaching, Learning and Research: An Indian Context from History to Present

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Abstract:

Education plays an important and crucial role in society and at large in nation building. Education is not only a medium for getting skills and knowledge so as to be employable but also it is medium for overall development of the society. The fruits of educated society are in the form of technological discoveries, innovations and transformations of modern era. Education is in continuous state of evolution. As time changes; due to technological advancement teaching-learning process also updates. The journey of the education started from oral instructions and communication to written form of knowledge on stones to written books then DVDs, PowerPoint presentation to audio-visual teaching learning to online learning. In the digital era of Internet which has its implications in all walks of life and all sectors of industries. Where Internet of Things (IoT), Artificial Intelligence (AI) and Machine Learning (ML) are the trending buzz words. The digital scope is widening and therefore its intervention in the education rather teaching learning process is also inevitable.

This study reveals that the digital intervention in the education has several opportunities to ease and access of teaching-learning material, increase in scientific temper in youth, ease of doing research as abundant material availability etc. However there are technological (unreliability of Internet connections, lack of necessary electronic devices), pedagogical (teachers and learners lack of digital skills, the lack of structured content versus the abundance of online resources etc.) and social challenges (lack of human interaction, lack of physical spaces, lack of support of parents etc.).

Keyword: Digital learning; COVID-19; Ancient Education System; challenges & opportunity

1. Introduction

"Education is the most powerful weapon you can use to change the world" the famous quote by Nelson Mandela; has relevance today also and future too. The process of learning begin from birth and never ceases until we die. Right from antiquity India has rich education, teaching-learning tradition. The upgradation in education happens according to that time socioeconomic condition and region.

The influence of two education system was more in ancient period of India Vedic and Buddhism. The Vedic system has medium of instruction and communication as Sanskrit whereas Buddhism system has medium of instruction as Pali. In that period of time where "Guru-Shishya" tradition was the education system wherein "temple and viharas" acted as School and "Pujari and Monk" used to teach the "Shishya" as "Guru". During "Gurukul" tradition; Shishya used to leave there far distant home and used to go to Guru's home and until student's education was not completed he used to stay in Guru's place. The stress was given to impart the knowledge and skills which Shishya wanted to behold. The goal of Gurukul was the overall development of the Shishya and major focus was the life skills like humility, discipline, self-reliance, fraternity through self-learning and group discussion. There were different fields of studies like Brahmasthana- department of Vedic studies, Vishnusthana- department of Teaching, Rajaniti- department of politics, Khagolshashtra- department of Astronomy, Jyotishyashastra- department

of Astrology, Garudasthana- department of transport and conveyance, Kartikeyasthana- section teaching military organization, battalion, army etc. The Gurukul and/or Gurus home was mostly situated in Jungle.

The teaching-learning process used to occur in natural environment in open blue sky. The meditation and yoga was integral part of curriculum which helped learner to increase spiritual awareness, develops satisfaction, positivity, military training helped learner to increase physical fitness. The physical and mental health of person is very much essential for overall development. The students were trained to face the real-world challenges and were more connected to nature. The rivalry and psychological problems were less that time.

The curriculum consisted of Pittak, Sutras and Adbhidharma; besides other subjects were weaving, spinning, printing, medicine, surgery, Archery, Agriculture and animal husbandry etc. Takshashila University and Nalanda University were famous for its varied fields and subjects of specialization, not only in Indian Subcontinent but all across the world. In the 7th century CE, Chinese Scholar I-Qing and Xuan Zang was student of Nalanda and Yogshashtra whereas around 5th Century CE, Panini was student of Takshashila (a great scholar of grammar who published "Ashtadhyayi"). Another well-known Jivaka, Chanakya were also student of Takshashila University who is known even today for statecraft. The remnant of Takshashila University and Nalanda University sites are declared as World Heritage and Archaeological sites by United Nations Educational, Scientific and Cultural Organization (UNESCO) in 1980. Takshashila currently situated in Pakistan and Nalanda is in Rajgir, Bihar. Around ancient times other institutions which were famous are Vallabhi, Vikramshila, Jagaddala, Ghatika, Agraharas, Bramhapuri etc.

During the medieval period maktabas and madrassas became part of the education system. During re-colonial period, indigenous education flourished in India. This was an extension of forma system that had taken roots earlier. This system was mostly religious and spiritual form of education. Tols in Bengal, pathshalas in western India, Chatuspadis in Bihar, and similar schools existed in other parts of India. Local resources via donations supported education.

The ancient education system of India focussed on holistic development of the students, both inner and outer self. Thus preparing them for life. Education was free and not centralised. Its foundations were laid in the rich cultural traditions of India thereby heling in the development of the physical, intellectual, spiritual and artistic aspects of life holistically.

As time changes the resources, teaching mode and styles changes like first teacher gives knowledge orally and learners memorized them after that writing on rocks, clay, wood, leather, bone and shells were used .after the invention paper it was easy to reserve the knowledge at starting feather in dip in ink to write on paper then ink pen, pencil, ball pen were used. As the time goes DVD's PowerPoint presentations, pen drives, EBooks are used to teach students in schools and colleges but in direct communication way.

2. Digitalization in day today life

In today's world automatic electronic machines are replacing the conventional mechanical machines. Not only transport vehicles, watches, locks, kid toys are now based on electronics, but also it has entered to our home to perform our daily chores (refrigerator, kitchen chimney, washing machine, and dishwasher etc.). Looking at such deep digital intervention in our day today life, education system too has the implications of this change. The use of digital technology in education, teaching-learning process and research is the need of hour.

3. New Education Policy of India 2020 (NEP 2020)

NEP-2020 approved by the union cabinet of India on 29 July 2020, replaces the previous National policy on Education, 1986.The aim of this policy is up to 2030 transform India's education system. The "10+20" structure will be replaced with "5+3+3+4" mode. It stress more on STEM-2 science, technology, engineering and maths. In 21st Century 3rd decade some ultramodern field of studies like artificial intelligence, machine learning, 3 D printing, and life science are developing which occupies all our life and all sectors of manufacturing industries. Use of this new evolutions in computer science and data processing are increasing and its basis are scientific approach. 'Scientific Temper' word is mentioned in the first sentence of the principle of this new policy in short NEP 2020 intended ideal citizen and form a society scientific temperament In the forty-second amendment in 1976, Article 51 A (h) was added under the Fundamental Duties that states: It shall be the duty of every citizen of India to develop scientific temper, humanism and the spirit of inquiry and reform.

Scientific temper is not limited to only Science subject, it is an ideology. Human is the only animal on the earth who got Rational thinking ability. Rationalism is the central to the human evolution. Civics which do contains the sociology, economics, anthropology, psychology, and pedagogy etc. are the fields of studies where every day new knowledge base is being developed. The knowledge base so developed has to be based on the scientific principles, which should be experimentally reproducible.

4. A new Educational practice- Digital learning

Digital learning is a learning with the help of digital technology. It includes virtual learning, e-textbook, Open Educational Resources (OERs), mobile learning, blended learning etc. It was started in 1984 by University of Toronto. In early 1990s Open University in Britain was the world's first university to start online distance learning. Online learning can be defined as instruction delivered on a digital device that is intended to support learning (Clark and Mayer, 2016).

5. COVID-19 effect on Digital Education

On 12 March, 2020, the coronavirus (COVID-19) was declared as global pandemic and to contain this problem social distancing was adopted in many places in the world. Number of countries around the world decided to close schools nationwide to prevent the spread of the virus, significantly affecting the learning of millions of students across the Globe. The management of school teaching-learning processes was prominently highlighted by COVID-19. In this regard the online learning was adopted as temporary measure to facilitate the teaching learning process. But now this temporary arrangement in education is becoming more prominent and taking over to become the permanent arrangement in teaching-leaning process.

6. Advantages and Opportunities of the Digital learning

Studying from anywhere, at any time; possibility of saving significant amounts of money; no commuting on crowded buses or local trains; flexibility to choose; and saving time are few of the advantages of the online education (Nagrale, 2019). The online learning has provided opportunity to remain in touch with classmates and teachers to follow subject matter. The digital learning has following advantages:

- We have access to more information on tip of fingers at any given time, than ever before in our history.
- Promotes technical skills and students will be ready to face the new technology world
- Teacher learner communication becomes faster, within fraction of second information accessing and communication is done.

- Innovations in many fields, as we are in middle of new global development period where new techniques can create better efficiency in every industry.

6.1. Advantages and Opportunities in Research

The pace of the research has increased to a large extent; as the plenty of research data of any field of study is available online. This availability of research material on the tip of fingers is boon for researcher; whereby he/she gets an Idea about what research is already done and what needs to be done. Vis-à-vis for researchers in Science and Technology before digital intervention in research publication, the time required for Indian researcher for a publication was very large (6 months to 2 years); as most acclaimed publishers are from USA (John Wiley & Sons, Inc.) and Europe (Elsevier, Netherlands; Springer Science+Business Media, Heidelberg, Germany). Western world were able to govern the research trends earlier but now even the Asian country like China and India are expanding the research fields at faster rate.

7. Disadvantages and Threats of the Digital learning

Any technology has the advantage as well as disadvantage and therefore the digital learning too have some of the disadvantages which have to be considered for overall development of the nation. Many real life- real time challenges have been observed in different countries. During COVID-19 the main objective of safeguarding health by containing disease and therefore lockdowns and the subsequent closure of educational institutions was done. This have resulted in widening the gap between rich and poor people. Table 1 enlist the types of challenges of online learning with its characteristics.

Table 1: the types of challenges of online learning with its characteristics

Sl. N.	Type of Challenge	Some Characteristics
1	Technological Challenges	Access to infrastructure such as technological devices and an Internet connection
		manipulation and fabrication of the e-content, research data
		Students Examination- MCQs only
2	Social Challenges	Lack of suitable home learning environment to study and parents' support.
		widening the gap between rich and poor people
		social disconnect
3	Health Challenges	psychological problems are increasing mental stress, anxiety and nervousness
4	Pedagogical Challenges	Teachers' lack of skills in using technology. Need for training and guidelines for teachers and students.
		Need for teaching materials in the form of interactive multimedia to engage and maintain students' motivation.
		Lack of student feedback and evaluation system

Some of the disadvantages and threats of the digital learning are as follows:

- ✓ It is reported in literature that the school closures have a negative impact on learners from lower socioeconomic backgrounds, widening the gap with their more advantaged peers.
- ✓ The most evident and widely discussed by experts and policymakers is that socially disadvantaged groups face difficulties in meeting the basic conditions required by online learning.
- ✓ Technology allows us to manipulate content to create echo chambers.

- ✓ People works longer hours than even before because of digital technology.
- ✓ Digital communication creates social disconnects and the direct communication have more advantages over indirect form of communication.
- ✓ Lack of schoolmates, peers and teachers at different places creates confusion. Students are unable to clarify the theory and syllabus.
- ✓ In COVID-19 pandemic it is very difficult for some people to manage the ration so it is highly impossible to them to manage the data packs of mobile
- ✓ Network problem, technical problems ineffective teaching style have no proper platform for E-learning
- ✓ As due to lack of school environment and concentration from home is difficult as 64% SC-ST population lives 500 sq. feet home; it is highly impossible for learner to concentrate on study with family members daily chores
- ✓ Lack of proper study material, practice less experience given us unsatisfied learning outcomes besides improper guidance to teacher by university and to students by teacher.
- ✓ From career perspective psychological problems are increasing mental stress, anxiety nervousness etc.

Care must be taken while implementing the online learning there is infrastructure available and all sections of the society specially disadvantaged section is included in the mainstream. With coherence of Information and communications technology (ICT), social science and education the target can be achieved.

8. Conclusion:

Emergency online teaching has allowed schools to provide learning largely undisrupted during the school closures forced by the COVID-19 pandemic. However, there are several technological, social, health and pedagogical challenges that need to be addressed with new solution by experts, policymakers, citizens, teachers and learners. Reliable network infrastructure needs to be developed. Teachers, students and parents must have connectivity that allows them to be able to take lessons remotely even when other people in the same house are doing other online activities. More affordable devices must be provided. Devices such as tablets or computers to be connected should be less expensive and Governments should give households incentives to buy them. A clear and consistent plan should be developed, providing structured and planned educational material and more adequate e-learning platforms by using interactive suitable digital learning resources (video, animations, quizzes and games) to maintain students' attention. Technologies that use virtual and augmented reality need to be improved, making them widely accessible and therefore more engaging and inclusive, in order to stimulate students' involvement and interaction.

- ✓ Diverse modalities (telecourses, TV, radio, online courses) should be used to provide accessible learning experiences for students in remote areas.
- ✓ Systematic training initiatives should be provided to improve teachers' and learners' technological skills in relation to new emerging models and approaches encouraging the effective use of online learning.
- ✓ Platform need to be developed in order to make digital learning resources accessible to a wider range of people with disabilities.
- ✓ Strategies for communication and digital education assessment need to be created.
- ✓ A blended approach should be used whenever possible to reinforce a feeling of community belonging, thereby improving social interaction and collaboration among learners and between learners and teachers.

- ✓ The use of intelligent technologies for remote teaching, like artificial intelligence, needs to be reinforced to encourage personalised, inclusive and participatory online learning paths.

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The Future of Digital Education in India

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Abstract

The COVID-19 pandemic and consecutive lockdowns have affected the education system of India. Since people were stuck inside their houses for months, there was no way for kids to continue their studies. What they assumed to be holidays and were happy about, turned to be a disastrous mess. They were deprived of their knowledge so the government needed to find an alternative, and that alternative was online education. Online education is the growing face of the education system in India. Since the New Education Policy (NEP) came in 2020, many changes have been made in the education system that included online education as well but with a new set of rules comes many drawbacks. According to UNESCO, since the outbreak of COVID-19 began, 1.37 billion students in 138 countries all around the globe have been affected by the closure of schools and universities. Nearly 60.2 million school teachers and university lecturers are no longer held in the classroom. Since the whole country is under lockdown, e-education is the best and the only option left. University faculties are setting up accounts on online video conferencing platforms such as Zoom, Skype, Google Classroom, Meet, among others to engage with students.

Introduction

The new media holds out the possibility of on-demand access to the content at any given time or on any digital platform but this turns challenging for both administration and the students. Digital media today is the blend between the classical and conventional way of learning like books and notebooks and digital software like eBooks and pdfs.

The major drawbacks of Online Education

1. Socioeconomic divide

India is a diverse country and within these diversities come wide varieties of cultures and beliefs, and because of it, India suffers a huge socioeconomic divide – the division of classes like high, low, and middle and that is a major drawback. Not even one-third of the population receives online education. In rural areas, lack of internet connectivity, less to no power supply, and inability or unaffordability to buy relevant devices are the major concerns. Many teachers had complained about the non-reachability of study materials to lower class students because they are unable to attend live sessions due to a lack of network. As an alternative to this, many classes are done by sending pre-recorded videos through WhatsApp or YouTube so they can study at their convenience but even these have their own set of difficulties like lack of understanding the lessons. As a result, they are still deprived of the knowledge they should be provided with.

- ✓ Professional Courses to explore
- ✓ Technical Writing Course SEO Course
- ✓ GST Course

2. Gender differentiation

Another drawback is the differentiation between girls and boys in our country. According to a recent survey done in the government schools of Bihar, out of 733 children, only 28% of the girls had smartphones compared to 36% of the boys. And in the majority of the cases, these smartphones belonged to male adults; often lesser accessible to girls than boys. Half of these

families couldn't afford internet packages and their children had to rely on the lessons that were aired on televisions. But in those cases, girls were found to spend more of their time completing the household chores than boys, which often overlapped the time of telecast. Another factor was that in most of these cases, parents denied talking to their girl child and offered to survey on their behalf. In some cases where they were able to reach the girl child, the conversations weren't forthcoming as they had to talk in front of the male member of the family which made them understand how difficult it is for them to study with online resources.

3. Internet drawbacks

It's a big challenge to use the internet as a source of online education. Google, Firefox, and other web browsers are good sources of information but using these platforms for online education isn't easy. For teachers who had always worked in schools and universities, expecting them to be up to date with creating digital content and delivering it effectively online and for the children to easily adapt is completely unfair. For them, two main factors, body language, and eye contact are difficult to perceive in an online class. Many questions arise, are students paying attention in the class? If they are, is the session understandable for them? Is their pace alright? These questions are common for traditional classes too but they are harder to address in an online session.

4. The mental health of students

It's a mental strain on children of young age group (5-10 years old) as their period for concentrating is small and it needs physical activities to keep them engaged. But it's not just confined to the younger generation, college-going students have complained about the same. They seem to value the physical and practical way of learning than the virtual one. Subjects like science and technology need more practical laboratory sessions, thesis projects, and field trips to complement the theoretical aspects which are severely limited and almost impossible in online education.

5. Excessive screen time

Excessive screen time also becomes an issue to the parents whose children attend these classes. With class works, home works, assignments, everything going digital, children will be engrossed in their smartphones/laptop screens and it's not good for their mental health. It puts a strain on their eyes and brain. With the slight ease in the pandemic guidelines and increase in online classes, the government had capped the duration to 30 minutes for preprimary students and two sessions of 45 minutes for standard one to eight. Want to know how to create web strategies that convert? Sign up for the Best Online Digital Marketing Course

Aim and Objective:

The aim and objective of the research paper is to introduce and analysed the nature and status of the future digital education in India. The study will be shows the futuristics pattern and design of the digital education as well as its merit along with the challenges.

Design and Methods of the study

Colleges and universities like, NITs, IGNOU, CIET, NETF will be asked for conducting researches to maximize the benefits of digital learning which will include finding the most preferred format of E-content to decrease the risk of device addiction in students. E-learning platforms with tools like a two-way audio and video interface that can help with conducting the classes and monitoring the progress of students.

Analysis and Discussion

In the upcoming future, online education is going to be a part of every person's life and we need to be prepared for the changes. It's not just an option anymore but a need. With the help

of new technologies, the government needs to reach out to every village and provide them with the necessities of water, shelter, and education.

- **The Facts of the Online Education:**

Even though online education has many bad aspects, there are many good aspects too. Due to the global pandemic, online education has fallen into the most basic level- schools and colleges. For the students who have long-distance commutes, they find it a more flexible and easier option as education is reaching them and not vice versa. For the working groups who wish to continue their education or learn something new, online education is a good option for them. It is more flexible, can adjust to their existing schedules and they can complete the assignments without sacrificing hours from their existing jobs or important chores of their household. Comparing to the expenses of colleges, online education is more affordable and is helpful for aspirants who wish to go to college but couldn't. Also, they can continue earning while gaining the education they needed.

Some key benefits of online education are listed below:

- ✓ Saving extra expenses- with the implementation of online education, we will be able to save the expenses of travel, lodging, and boarding and these fee reductions will mean lower fees for the online classes.
- ✓ No limitation-in contrast to physical classrooms, digital classrooms don't have limitations.
- ✓ Flexibility- In physical classrooms, there's a limitation to the local population of the students but if we talk about digital classrooms, faculties will be able to address not just the local population but also the global population. Even in terms of faculty, we will not be confined and will be able to hire an expert professional from around the globe.
- ✓ Nature friendly- by going digital, we are actually doing the earth a favor. Trees are used in the construction of paper, so if there would be less production of textbooks, the number of cutting down of trees will significantly decrease.
- ✓ Time saver- traditional methods of teaching includes years of studies and months of waiting for the final examination results but with the digital implementation of the classes we are getting the content on spot, can give examinations with the ease of sitting at home, and can get the results instantly (or within few days) on our smartphones and laptops which is less stressful and saves a lot of time.

- **New Education Policy (NEP) 2020**

Recently the ministry of human resource development has been renamed the ministry of education and this education ministry has released a new education policy with a vision to reshape the education system of India. They aim to transform the education standards of India by the end of 2040.

According to this new education policy,

- ✓ The existing 10 + 2 structure will be replaced by a 5+3+3+4 curricular structure, i.e. it will start from the age of 3 and will last till 18. (3-8, 8-11, 11-14, and 14-18 years.) This will brings early childhood education under the ambit of formal schooling. The mid-day meal program will now be extended to pre-school children.
- ✓ The Higher Education Commission of India (HECI) will set up a single overarching umbrella body for entire higher education (excluding the medical and legal education).
- ✓ Students will have the liberty to choose from the variety of subjects they would like to study across streams. Vocational education will be introduced in schools from Class 6 and will also include the concept of internships.

- ✓ Students will also be given the choice of multiple exits within this period. The government will establish an Academic Bank of Credit for digitally storing academic credits earned from different Higher Educational Institutions so that these can be transferred and counted towards the final degree earned.
- ✓ National Educational Alliance for Technology (NEAT) a regulatory body will be created to use technology for better learning outcomes. According to a learner's requirement, NEAT aims to use artificial intelligence to make learning more personalized and customized.
- ✓ The proposal to set up a national assessment center, the PARAKH (Performance Assessment, Review, and Analysis of Knowledge for Holistic Development) is to keep a regular check on the education system.

- **Digital infrastructure**

This will include investment in the creation of public digital and interoperable infrastructure that can be utilized by multiple platforms. It will be designed in a way that technology-based solutions do not become outdated.

- **Training for Teachers**

Training will be given to the teachers so that they can gain the additional skill to manage the online platforms by themselves. It will focus on improving student-teacher engagement through various resources.

- **Virtual Labs**

E-learning platforms like DIKSHA, SWAYAM will be asked to create virtual labs where students will be able to practice the theoretical knowledge. These labs will have tools for improving hands-on experiments-based learning.

- **Availability of Courses in Different languages**

For the students of rural areas, television radios and community radios will be used to telecast prerecorded classes in their regional languages. This will make it more convenient for the students to access the study materials. Even the online content will be available for students and teachers in their medium of instruction.

- **Online Assessments and Examination**

A framework will be designed which will be based on 21st-century technology to examine the performance of the students as per the updated standards of digital education. This framework will be designed by government bodies like School Boards, NTA, or PARAKH.

- **Digital repository, Content creation, and Dissemination**

This will include Learning Games & Simulations, Virtual Reality, and Augmented Reality. The user will provide a rating system for the public to analyze the quality and effectiveness of the soft wares. Moreover, fun-based learning tools like gamification of Indian art and culture will be created with operating instructions that will be available in different languages so that everyone can understand them easily. A secured backup system will also be provided for the dissemination of e-content to students.

- **Standards of Online Learning**

The standard of the content and technology for digital education will be set by the NETF and other appropriate bodies. These will enable the government to set guidelines for classrooms, E-learning, and methods for digital learning in India.

- **Blended models of learning**

The traditional ways and modes of learning will not be compromised while promoting the growth of digital learning and education. Different modes of blended learning will be analyzed and the ones which the most appropriate method will only replace the traditional mode of learning.

- **Creating a Dedicated Unit for Digital Education**

This will be established in the MHRD. It will look after the digital learning needs of both schools and colleges. It will comprise experts from the field of education, educational technology, administration, e-governance, digital pedagogy, and IT. These experts will work on delivering high-quality education to the students and resolving their queries. Slowly and steadily, digital education is spreading and reaching out to the rural population of the country and we could see a high jump in online courses and students. Technavio's market research analyst predicts that the Indian online education market will grow at a CAGR of about 20% by 2020, which will be worth about 18 billion U.S. dollars. The number of users enrolling in online education may indeed touch 9.6 million users by 2021, from 1.6 million users in 2016. Estimates point out that the eLearning market worldwide will grow massively, presumably more than 243 billion U.S. dollars by 2022.

- **Major Challenges while incorporating online education**

✓ Incorporating online education in the general education system isn't an easy task, with the new set of rules comes many challenges.

✓ If we take the example of rural India, almost 30% of them are not computer literate and many don't even know how to start a computer. Having basic computer knowledge is important if we want to provide online education in every part of the country.

✓ Unaffordability is a big issue. For the low-class community like farmers, maids, household staffs, sweepers who have low income, affording a laptop or computer is a really difficult task.

✓ It is a big challenge for teachers too. It's not important that a classroom teacher can be good at teaching in online sessions.

✓ Practical learning is not possible in online classes. Even if teachers can explain the theoretical aspects, students still need practical training to grasp what they have learned, which is most common in subjects like science and practical arts.

✓ To conduct an online examination, India has only a limited number of resources available and moreover, the numbers of questions asked are also limited.

✓ Conducting live sessions and streaming them for the children who belong to the rural part of India is not possible because of the poor network connectivity. Even if the rural areas are gaining knowledge about new technologies like smartphones, laptops, or tablets, and are doing everything to afford it, the lack of internet network supply is still a big issue.

CONCLUSION

COVID-19 pandemic and consecutive lockdowns have caused a lot of disturbance in the education system of India. With the closure of schools for months and the loss in the business of school owners and trustees, people are leaning towards the digital platforms of learning. With the emergence of a new set of rules formed by the Indian government in 2020, we can say that digital ways of learning and education are going to be the new normal. But this is going to come with lots of challenges as I have mentioned. At least 50% of the Indian population is confined in rural areas and is deprived of basic needs like electricity, water, shelter. If we want to educate that fraction of society, we need to first fulfil their basic needs. Government needs to take actions to provide them proper shelter and 24 hours availability of electricity, only then the new guidelines

of NEP will have any effect on that sector of our society else only upper-class people will be beneficial from it and the rest of the population will still live in darkness and illiteracy.

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"POCSO अधिनियम—२०१२ संदर्भात शालेय शिक्षकांमधील जाणीवजागृती व उपयोगिता: एक विश्लेषणात्मक अध्ययन''

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सारांश

लहान मुलांवर होणाऱ्या हिसांचाराची किंवा शोषणाची रोज काही ना काही प्रकरणे चर्चेत असतात. त्यामुळे आजच्या वातावरणात असलेल्या धोक्याची जाणीव मुलांना करून देऊन स्वत:ला कसे सुरक्षित ठेवता येईल याची जाणीव करून देणे गरजेचे झालेले आहेत. शाळेचा आणि शिक्षकांचा मुलांच्या जीवनात महत्वाचा वाटा असतो. शाळा आणि शिक्षक त्यांना सुरक्षित जागा आणि वातावरण देऊन त्यांचे वर्तन तयार करण्यात मदत करतात. अनेकदा असे होते की, मुल शिक्षकांना अशा सर्व गोष्टी सांगतात ज्या ते इतर कोणालाही सांगू शकत नाहीत. काही वेळा मुलांचे हावभाव पाहुनही मुल अडचणीत असल्याचे शिक्षकांना कळते. आणि त्यापासून मुलांचे संरक्षण कसे करावे या करिता शासणाने विविध बाल कायदे अमलात आणले आहेत. त्यापैकी च्ब्ब्ब् अधिनियम २०१२ आहे. १८ वर्षाखाली सर्व मुले मग तो मुलगा असो वा मुलगी ज्यांचे कोणत्याही प्रकारे लैंगिक शोषण झाले असेल किंवा करण्याचा प्रयत्न केला गेला असेल ते POCSO अधिनियमाच्या अंतर्गत येतात.

प्रस्तावना

प्रत्येक बालक प्रत्येक देशाचा अनन्य साधारण व अतिमहत्वाचा घटक आहेत. बालकांचे संरक्षणासाठी व एकात्मिक विकासासाठी दुरगामी सतत, समयोचित बहुआयामी अशि उपाययोजना आवश्यक आहे. कोणत्याही प्रथा, परंपरा, सांस्कृतिक व धार्मिक आचार, व्यवहारास, बालकांच्या हक्कांवर मर्यादा व प्रतिबंद घालण्यास परवानगी दिली जाणार नाही. बालकांना चांगले शिक्षण, सकारात्मक दृष्टिकोन, आदर्श, कौशल्ये आणि सामाजिक मूल्यांची बाधीलकीची, जाणीव असणारा बालक वर्गच पुढे सामाजिक मूल्यांप्रती प्रामाणिकता जपणारा प्रौढ व्यक्ती बनू शकेल, जो आपल्या समुदायाच्या आर्थिक आणि सामाजिक विकास व सांस्कृतिक संरक्षणाकरीता योग्य योगदान दयायला तयार राहील.

पण आजही अनेक लोक लैंगिक नाव ऐकून लाजने किंवा मुलांशि याबददल बोलण्यास थांबतात. तरीही प्रत्येक मुलाला ज्या पध्दतीने मूलभूत शिक्षण दिले जाते हे समजूण घेणे महत्वाचे आहे. त्याचप्रमाणे मुलांना लैंगिक शिक्षण देणेही गरजेचे आहे जर त्यांच्याशि याबददल बोलले नाही किंवा त्यांना याची जाणीव करून दिली नाही, तर मुलांना त्यांच्या वयासाठी चुकीची आणि दिशाभूल करणारी माहीती, माध्यमे किंवा इंटरनेट यांसारख्या इतर माध्यमातून मिळेल. ही माहिती त्यांचे भविष्य चुकीच्या दिशेने घेऊन जावू शकते. त्यांच्या वयानुसार आणि मानसिक आकलनानुसार मुलांना लैंगिक क्रिया आणि लैंगिक अवयवांचे कार्य आणि महत्व समजावून देणे हे लैंगिक शिक्षण आहे. मुलांच्या चांगल्या विकासासाठी आणि भविष्यासाठी हे आवश्यक आहे.

२ ते ५ वर्षे वयोगटातील मुले व मुली ही खेळणी खेळणारे असते. त्यांना लोकांच्या वाईट हेतूची कल्पना नसते. विकृत मानसिकतेचे लोक या वयातील मुलांवर सहज लैंगिक अत्याचार करू शकतात. अशा परिस्थितीत या वयातील मुलांना चांगल्या आणि वाईट स्पर्शाबददल समजावून सांगणे आवश्यक आहे. तसेच ५ ते ८ या वयातील मुलांचा मानसिक विकास मोठया प्रमाणात होतो. अशा परिस्थितीत, तो आपल्या बोलण्याकडे योग्य लक्ष देऊ शकते त्यामुळे या वयातील मुलांना समजावून सांगणे सोपे जाते. त्याच प्रमाणे ९ ते १८ या वयातील मुले मोठया प्रमाणात सामाजिक वर्तणूक समाजू लागतात. तसेच लोकांशि भावनिक मार्गाने संपर्क साधण्यास शिकतात. लैंगिक शोषणांचे काय

परिणाम होऊ शकतात. मासिक पाळी नंतर गर्भधारणा ,लैंगिक समस्या आणि एचआयव्ही सारख्या समस्यांवर चर्चा केली जावू शकते.

बालकांच्या विकास सुयोग्य वातावरणात होऊ शकेल असे बाल हक्क विषयक यांचे स्वातंत्र्य व प्रतिष्ठीत असलेले बालपण आणि किशोरावस्था यांचे रक्षण आणि नैतिक व भौतिक प्रभाव यातून उद्भवणाऱ्या शोषणापासून संरक्षण करणे आवश्यक आहे म्हणून संयुक्त राष्ट्र संघाच्या महासभेने अंगिकारलेल्या बाल हक्काबाबत ११ डिसेंबर १९९२ रोजी भारत सरकारने मान्यता दिलेली असून त्यामध्ये बालकांच्या सर्वोत्तम हिताचे संरक्षण करण्यात येईल. भारतीय राज्यघटनेच्या कलम २१ नुसार भारताने भारतीय नागरिकांना बालकांच्या संरक्षणाची खात्री दिलेली आहे.

जागतिक आरोग्य संघटनेनुसार भारतामध्ये जगातल्या सर्वाधिक लैंगिक शोषित मुलांची संख्या आहे. प्रत्येक १:५५ मिनिटामध्ये १८ वर्षाच्या आतील बालकावर बलात्कार होतो. तर दररोज बाल लैंगिक शोषणाचा एक तरी गुन्हा नोंदवला जातो. National Crime Record Bureau २०१५ च्या आकडेवारीनुसार लहान मुलांविषयी एकूण ९४,१७२ अपराध नोंदवले गेले आहेत. त्यातील १९,७६७ मुलांची लैंगिक हिंसा केली गेली ज्याचे प्रमाण मुलांविरूध्द सर्व गुन्ह्यांमध्ये ३६.२% एवढे आहे. कौटुंबिक शोषणाच्या एकूण घटनांपैकी ५४.५% घटना बालकांच्या बाबतीत घडतात व यात महाराष्ट्रात सर्वाधिक गुन्हे नोंदवले गेले आहे.

चर्चा व विश्लेषण

आजच्या धकाधकीच्या जीवनात पालक मुलांसोबत पूर्ण वेळ राहु शकत नाही. म्हणून पालकांनी व शिक्षकांनी मुलांना त्या विषयीचे शिक्षण, वैयक्तिक सुरक्षेची कौशल्ये शिकून अनैतिक प्रसंगाना सामोरे जाण्यासाठी मानसिकता तयार करणे गरजेचे आहे. शाळेमध्ये विद्यार्थ्यांना बाल लैंगिक शोषणाला प्रतिबंध करण्यासाठी वैयक्तिक सुरक्षा शिक्षणाची पाठयक्रम योजना मार्गदर्शिका अशा माहितीवर व मनोरंजनात्मक पुस्तकातून गोष्टी, कथा व खेळाच्या माध्यमातून वैयक्तिक सुरक्षेचे धडे दिले.

- **बालकां संदर्भातील कायदे**

भारतामध्ये बालकांसंबंधीत अनेक कायदे अस्तित्वात असले तरी त्यापैकी बरेच कायदे आंतरराष्ट्रीय बाल हक्क परिषदेच्या परिणामाची पूर्तता करण्यास अपुरे पडत होते. म्हणून १९७४ साली राष्ट्रीय बालधोरण जाहीर करण्यात आले होते. राष्ट्रीय बालधोरणाच्या अनुषघाने भारतामध्यं आजपर्यत बालकांकरिता खालिल प्रकारचे विविध कायदे तयार करण्यात आले आहे

- ✓ बालन्याय (काळजी व संरक्षण) कायदा . २०००, २००६ व २०११ मध्ये सुधारणा.
- ✓ मोफत व सक्तीचा शिक्षण कायदा २००९
- ✓ बालविवाह प्रतिबंध कायदा २००६
- ✓ बालकामगार प्रतिबंधक कायदा १९८६
- ✓ केंद्रिय दत्तक संसाधन प्राधिकरणाची मार्गदर्शक तत्वे – २०११
- ✓ लैंगिक अत्याचारापासून बालकांचे संरक्षण कायदा (२०१२)
- ✓ बाल न्याय (मुलांची काळजी आणि संरक्षण) अधिनियम २०१५
- ✓ बाल आणि किशोर कामगार प्रतिबंध आणि नियम कायदा . २०१६

- **POCSO पोक्सो अधिनियम २०१२**

(The Protection of Children from Sexual Offences Act 2012)

पोक्सो कायदा २०१२ लैंगिक अपराधापासून बालकांचे संरक्षण कायदा नोव्हेंबर २०१२ मध्ये अंमलात आला. हा कायदा लैंगिक अत्याचार, लैंगिक छळ आणि पोर्नोग्राफीचा समावेश असलेल्या मुलांशि संबंधित गुन्ह्यांचा सामना करण्यासाठी तयार करण्यात आला. वाढत्या अपराधांच्या पार्श्वभूमीवर एप्रिल २०१८ मध्ये ह्या कायदयामध्ये सुधारणा करण्यात आल्या त्यानुसार वय वर्षे १२ खालील बालकांवर अंतर्भेदी लैंगिक हल्ला वा विकोपकारी अंतर्भेदी हल्ला केल्यास अपराध्यास फाशीची शिक्षा फर्माविली आहे. वय वर्ष १६ खालील बालकांवर लैंगिक अत्याचार केल्यास अपराध्यास २० वर्षे वा त्याहुन सक्षम कारावास व द्रव्यदंड अशि शिक्षा वाढविण्यात आली आहे. सदर POCSO अधिनियमाचा उद्देश असा की अधिनियमाची समाजाच्या सर्व घटकांना सविस्तर माहिती देऊन

मुलांना चांगला स्पर्श आणि वाईट स्पर्श याविषयी शिक्षण देणे व मुलांना लैंगिक शोषणाची आणि लैंगिक छळाची माहिती देणे आणि मुलांना चांगल्या साहित्याचा अभ्यास करण्यास प्रवृत करूण लहान मुलांना लैंगिक शोषणाची आणि लैंगिक छळापासुन संरक्षण करधे हा आहे. .

बालगुन्हयांसंबधी प्रमुख फौजदारी कायद्याविषयक माहीती दर्शविणारा तक्ता.

अ.क्र.	कलम	गुन्हयाचे स्वरूप	शिक्षा	गुन्हयाची पात्रता
१	३ पोक्सो	अंतर्भेदी लैंगिक हल्ला	०७ वर्ष कारावास व आजीवन कारावास	दखलपात्र
२	५ पोक्सो	विकोपकारी अंतर्भेदी लैंगिक हल्ला	०७ वर्ष कारावास व आजीवन कारावास व द्रव्यदंड.	दखलपात्र
३	७ पोक्सो	लैंगिक हल्ला	०३ ते ०५ वर्ष कारावास व द्रव्यदंड	दखलपात्र
४	९ पोक्सो	विकोपकारी लैंगिक हल्ला	०५ ते ०७ वर्ष कारावास व द्रव्यदंड	दखलपात्र
५	११ पोक्सो	लैंगिक छळवणुक	०३ वर्ष कारावास व द्रव्यदंड	दखलपात्र
६	१३ पोक्सो	संभोगचित्रणाच्या प्रयोजनार्थ बालकांचा वापर	०३ वर्ष कारावास व द्रव्यदंड	दखलपात्र

- **शिक्षकांची भूमिका**

जो विद्यार्थ्यांच्या मनात शिकण्याची इच्छा जागृत करू शकतात त्यांना शिक्षक म्हणतात. जो शिकवतो त्याला शिक्षक म्हणतात. बालकांचे भवितव्य शिक्षक घडवत असते. प्राचीन भारतीय मान्यतेनुसार शिक्षकाचे स्थान देवापेक्षा उच्च मानले जाते. कारण शिक्षकच आपल्याला योग्य मार्ग निवडण्यास शिकवतो. शिक्षक सामान्यत: समाजाचे वाईटापासून रक्षण करतो आणि बालकांना सर्वोत्तम व्यक्ति बनविण्याचा प्रयत्न करतो. गुरू हाच आपल्या शिष्याचा खरा मार्गदर्शक असतो. शिक्षक हा समाजाला नवी दिशा देतो. त्याची इच्छा असेल तर तो आपल्या समाजात पसरलेल्या अनेक प्रकारच्या कुप्रथा, नष्ट करू शकतो. शिक्षकांच्या विचारातील सकारात्मकता, आशावाद, मुलांना जगण्याचे बळ देतो. भविष्यात येणाऱ्या संकटावर मात करायची असेल तर शिक्षकांना मुळात स्वत:ला घडविण्याची उत्तुंगतेची आंस असली पाहीजे. कठोर वास्तवाला सामोरे जाण्याची जिद्द हवी.

शिक्षकाना प्रशिक्षण देऊन नंतर विद्यार्थ्यामध्ये याची जाणीव जागृती निर्माण करून त्याचे आत्मविश्वास वाढविले पाहीजे. शिक्षकांसाठी रोजचा दिवस हा शिक्षक दिन असला पाहिजे. तरच चांगले विद्यार्थी घडविले जाऊ शकतात. त्यातूनच उदयाचे आदर्श नागरिक घडणार असून देशाचे भवितव्य ठरविणार आहेत. शिक्षकांचे व्यक्तिमत्व जेवढे प्रभावी, परिणामकारक, ज्ञान समृध्द असेल तेवढे ते विद्यार्थ्यासाठी उपयुक्त असते. आजची आव्हाने आणि भविष्यातील समस्या यांना सामोरे जाण्यासाठी विद्यार्थ्यांना सक्षम बनविणे हे शिक्षकांनी आपले ध्येय समजले पाहीजे. स्वत:मधील उणिवा जाणीवपूर्वक दुर करणारा शिक्षकच आपले अध्यापनाचे कार्य अधिक प्रभावी, रोचक आणि सुलभपणे करू शकतो. विद्यार्थ्याच्या व्यक्तिमत्व विकासात शिक्षकांची भूमिका महत्वाची आहे. आई वडील यांच्यानंतर शिक्षक हेच विद्यार्थ्याचे खरे गुरू असतात. ते विद्यार्थ्यांना ज्ञान, माहीती देत असतात. विद्यार्थ्यातील सुप्त कलागुण ओळखून त्यांना प्रोत्साहन देण्याचे कार्यही ते करत असतात. शिक्षकाकडून मिळालेली कौतुकाची थाप विद्यार्थ्याचा आत्मविश्वास वाढवते. त्यामुळे त्यांना शिक्षणाची गोडी लागण्यासही मदत होते.

- **बालकांची वैयक्तीक सुरक्षा**

वैयक्तिक सुरक्षा शिक्षणाचे कौशल्य शाळेमध्ये शिकवणे हे महत्वाचे उद्दीष्टे आहे. बाल लैंगिक शोषण म्हणजे लहान मुलांच्या असहाय्यतेचा आणि दुबळेपणाचा गैरफायदा घेऊन व्यक्तिकडून केले गेलेले शोषण होय. मुलांचे नेतृत्व, गुण, धाडसी वृत्ती ह्या कौशल्यांचा विकास व्हावा आणि ते स्वत:च्या शारीरिक, मानसिक व सामाजिक बाबतीत योग्य निर्णय घेण्यास सक्षम बनावीत याकरीता वैयक्तिक सुरक्षा शिक्षण, समुपदेशन किंवा शिक्षकांद्वारे विविध शाळांमध्ये विद्यार्थ्यासाठी सदर विषयावर घेतली जातात आहे.

- ✓ मुलांसोबत संभाषण कौशल्य वाढवणे.
- ✓ मुलांसोबत सुरक्षित आधार असलेले, पालक, शिक्षक आणि इतर संबंधित अशा घटकांना आवश्यक ज्ञान देणे.
- ✓ मुलांमध्ये स्व.जाणीव, आत्मविश्वास, संवाद.कौशल्य आणि कोणाच्याही दबावाला बळी न पडता आपल्यावरील अन्याय सांगणे अशि कौशल्ये वाढावी यासाठी प्रयत्न केले जातात.
- ✓ मुलांच्या शरीराच्या खाजगी अवयवाना स्पर्श करणे, त्याकडे पाहणे, त्याविषयी बोलणे किंवा मुलांना आपल्या खाजगी अवयवांना स्पर्श करण्यास सांगणे हे चुकीचे प्रकार आहे.
- ✓ मुलांसाबत उपरोक्त गैरव्यवहार होण्याची शक्यता असल्यास किवा तशी स्थीती होत असल्यास किंवा असे प्रकार मुलांसोबत घडत असतील तर मुलांनी नाही म्हणून तिथून निघून जाणे व विश्वासू व्यक्तिची भेट घेऊन त्यास घडलेला प्रकार सांगणे महत्वाचे आहे. (असे मुलांना शिाकविणे व तसे संस्कार त्यांचेवर घडविणे आवश्यक आहे).

निष्कर्ष

बालकांमध्ये संवाद कौशल्य वाढवणे. शाळेच्या वातावरणात लैंगिक शिक्षणाची शिकवण देणे व बालकांमध्ये वैयक्तिक सुरक्षेची कौशल्य निर्माण करणे. बाल लैंगिक अत्याचाराला प्रतिबंध करण्यासाठी शिक्षकांनी बालकांना मार्गदर्शन करणारी शासनाची विविध योजना उपक्रम राबविने व तसेच POCSO अधिनियमाची सविस्तर माहिती देऊन मुलांना चांगला स्पर्श आणि वाईट स्पर्श याविषयी शिक्षण देणे व मुलांना लैंगिक शोषणाची आणि लैंगिक छळाची माहिती देणे आणि मुलांना चांगल्या साहित्याचा अभ्यास करण्यास प्रवृत करणे. लहान मुलांचे प्रश्न फार अवघड असून बालकांच्या वेगवेगळया वाढत्या अत्याचाराबददल केंद्र सरकारच्या महिला व बाल विकास मंत्रालयाने चाइल्ड लाईन — १०९८ ही हेल्पलाईन पूर्ण भारतात स्थापन केलेली आहे.

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संत गाडगेबाबा स्वच्छता अभियान: एक दृष्टीक्षेप

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गोषवारा :

संत गाडगेबाबा स्वच्छता अभियान एक दृष्टीक्षेप हा विषय निवडला आहे. मी नागपूर शहराचा रहीवाशी असल्यामुळे आजूबाजूच्या बऱ्याच गावात फिरत असतांना मला असे लक्षात आले की काही गावात स्वच्छतेविषयी अनेक गंभीर समस्या आहेत गावात अस्वच्छतेचे प्रमाण वाढतांना दिसत आहे त्यामध्ये सांडपाण्याची बरोबर नियोजन नसणे. केरकचरा बऱ्याच ठिकाणी पडून राहतो, आताही काही गावे हागणदारी मुक्त झालेले नाही. अस्वच्छतेमुळे होणारे रोग, खुली गटारे, पाण्याचे अयोग्य व्यवस्थापन, काही लोकांमध्ये स्वच्छतेविषयी जागृकतेचा अभाव अशा असंख्य समस्या दिसून आल्या. यासरख्या समस्या दुर करायच्या असतील तर काय करावे हा प्रश्न निर्माण झाला? म्हणून संत गाडगेबाबा स्वच्छता अभियान हे खुप महत्वाचे अभियान आहे. यावर दृष्टीक्षेप टाकण्याकरीता, ज्या गावात ग्रामस्वच्छता अभियान सुरू आहे तिथे जावून एक दृष्ठीक्षेप टाकण्यात आला त्यामध्ये संशोधनाची उद्दिष्टे, संशोधनाची गृहीतके, अध्ययनाचे क्षेत्र विश्व, संशोधनाचा आराखडा, संशोधन पद्धती, नमुना निवड, माहिती संकलने स्रोत, निरीक्षण पद्धती, तथ्य संकलन इत्यादी माहिती संक्षिप्त स्वरूपात दिली गेली.

प्रस्तावना :

आधुनिक भारतात स्वच्छतेचा अभाव ही समस्या गंभीर स्वरूप धारण करीत असुन यामुळे अनेक संकटे निर्माण होत आहेत. परंतु याबाबत महत्वपुर्ण कार्य एका खुल्या व्यासपिठाने केले हे माहामानव म्हणजे संतशिरोमणी खरे कर्मयोगी गाडगेबाबा यांनी केले होते. शासन सुध्दा स्वच्छता कार्यक्रम राबविण्यासाठी विविध योजनांची आखणी व अंमलबजावणी करत आहे. याचाच एक भाग म्हणुन संत गाडगेबाबा ग्राम स्वच्छता अभियान हा एक कार्यक्रम राबविण्यात येतो. या कार्यक्रमाचे अध्ययन सदर शोधनिबंधातुन केले आहे.

निरोगी आणि निरामय आरोग्यासाठी दैनंदिन जिवनामध्ये शुद्ध हवा, पाणी व स्वच्छता अत्यावश्यक असते. त्यापैकी स्वच्छता हा समाज निर्मितीमधील महत्त्वाचा घटक मानला जातो. भारतातील ग्रामीण तसेच शहरी भागात आजही मोठ्या प्रमाणात अस्वच्छतेने थैमान घातलेले आहे. गावात प्रवेश करताच गावाच्या असभ्यतेचे दर्शन होते. अस्वच्छतेची जाणीव तर करून ग्रामीण भाग आरोग्य व स्वच्छतेबाबत स्वावलंबी बनविणे आवश्यक आहे. भारतीय संस्कृतीत स्वच्छतेला मानाचे व प्रतिष्ठेचे स्थान आले. स्वच्छता हा सु—समाज निर्मितीमधील एक महत्वपुर्ण घटक आहे. कुटूंब, समाज आणि राष्ट्राला आकार देण्याचे कार्य स्वच्छता करते. परंतु भारतीयांनी स्वच्छतेकडे दुर्लक्ष केल्याचे दिसुन येते. ग्रामीण समाज जीवनात आरोग्यदायी वातावरण निर्मिती व समाजाला आरोग्य दृष्ट्या सक्षम करण्यासाठी संत गाडगेबाबा ग्राम स्वच्छता अभियानाने राष्ट्रसंत तुकडोजी महाराज स्वच्छ ग्राम स्पर्धेच्या माध्यमातून नागरिकांना आरोग्यदृष्ट्या सक्षम होण्याची संधी उपलब्ध करून दिली आहे. अनारोग्य कमी होऊन पर्यायाने राहणीमान, जीवनमान, आर्थिक स्तर व सामाजिक प्रतिष्ठा यात स्वावलंबी होण्यास मदत होणार आहे. ग्राम स्वच्छता हे काम एका व्यक्तिचे नाही, त्यात शालेय विद्यार्थी, युवक, युवती, स्वयंसेवी संस्था, सहकारी संस्था, बचत गट, महिला म्हणजे, शाळा, महाविद्यालये महत्त्वाचे म्हणजे ग्रामपंचायती मधील सर्व सदस्यांनी ग्राम स्वच्छता अभियानात सक्षमपणे सहभाग घेण्याची आवश्यकता आहे. ग्राम, घर परिसर वैयक्तिक स्वच्छता यात सर्वाची भुमिका महत्त्वाची ठरणारी आहे.

साधारणपणे खेड्यातील लोक पावसाळयात अधिक प्रमाणात आजारी असतात. पावसाच्या पाण्याचा योग्य निचरा होत नाही. गावातील गटारे, नाल्या तुंबतात. तुंबलेल्या पाण्याला योग्य वाट

करून दिली जात नाही. स्वयंपाक घरातील अन्नकण मिश्रित, स्नानगृहातील साबण मिश्रित पाणी पावसाच्या पाण्यात मिसळते, त्यामुळे दुषित पाणी रोगजतुंना अन्नाचा पुरवठा करते. स्वच्छतेच्या निष्काळजीपणामुळे अशा साठून राहिलेल्या पाण्यात डासोत्पत्ती मोठ्या प्रमाणात होते. चिकन गुनिया हा आजार पसरविणाऱ्या डासाची पैदास साठलेल्या किंवा साठविलेल्या स्वच्छ पाण्यात होते.

उघडयावर शौचास जाणे, थुंकणे हे सार्वजनिक मुताऱ्या व शौचालये यांचे अत्यल्प प्रमाण आहे. जेथे या सुविधा आहेत त्याही नादुरूस्त व पडक्या अवस्थेत असतात हे वास्तव आहे. सार्वजनिक उघडी गटारे व सांडपाणी साचलेली डबके ही बहुसंख्य ग्रामीण भारतातील वस्तुस्थिती आहे. बहुतांश गावात कचरा कुंड्याच नाहीत आणि जिथे आहेत त्याचा वापरही बरोबर केला जात नाही. आपले घर व्यवस्थित झाडून कचरा बाहेर ढकलुन देणे येवढीच मर्यादित 'स्वच्छता' पाळली जाते. महत्त्वाचे म्हणजे सार्वजनिक स्वच्छतेसाठी फार पैशाची गरज नसते तर मुळात इच्छा शक्तीची गरज असते.

जसे आंगण असते तसाच आजुबाजूचा परिसर असतो. संस्कार देणारे मुल्य रूजवणारा जर संत गाडगेबाबा ग्रामस्वच्छता करण्यासाठी पहाटे हातात झाडू घेऊन कुणी न उठायच्या आत काम करू शकतात, तर आपणही आजुबाजूचा परिसर आणि गावातील स्वच्छता करू शकतो अशी प्रेरणा या महान व्यक्तिकडून मिळते. परंतु आजही ग्रामीण भागात स्वच्छतेचा अभाव आपणाला दिसुन येत आहे हे वास्तविक सत्य नाकारता येत नाही.

- **अध्ययनाची उद्दिष्ठे :—**

✓ नागपुर जिल्हयातील ग्रामीण क्षेत्रात गाडगेमहाराजाच्या स्वच्छता अभियानाचा परिणाम जाणून घेणे.

✓ स्वच्छता अभियानापूर्वी व अभियानानंतर ग्रामीण क्षेत्रामध्ये झालेल्या बदलांचा अभ्यास करणे.

- **गृहितके**

✓ ग्राम स्वच्छता अभियान विषयासंदर्भात शासकीय यंत्रणेव्दारा गावागावामधून उद्‌बोधन शिबीर घेण्यात आली असल्यामुळे ग्रामीण जनतेमध्ये स्वच्छतेविषयी जनजागृती झाली आहे.

✓ ग्राम स्वच्छता अभियानांतर्गत राबविण्यात येणाऱ्या उपक्रमामध्ये ग्रामीण जनतेचा सहभाग वाढला असुन उपक्रमाची अंमलबजावणी करतांना गावकऱ्यांचे सहकार्य मिळत आहे.

- **अध्ययन पध्दती**

सदर अध्ययनामध्ये संशोधनकर्ता नागपुर ग्रामीण स्थित माहुरझरी वेडाहरी येथील ग्रामीण भागातील सोयीस्कर नमुन्याव्दारे ५० एकक नागरिकांची निवड करून प्राथमिक तथ्यांचे संकलन केले आहे. सदर तथ्यांना अध्ययनाचे उद्‌देश व उपकल्पनांच्या आधारावर प्रक्रीया व विश्लेषनाव्दारे निष्कर्ष काढलेले आहे.

चर्चा व विश्लेषन

आपण आपल्या सवयीनुसार स्वच्छता केली पाहिजे आणि कचरा नेहमी डस्टबिनमध्ये टाकला पाहिजे, कारण घाण हेच मूळ आहे जे अनेक रोगांना जन्म देते. जे दररोज आंघोळ करत नाहीत, घाणेरडे कपडे घालतात, त्यांचे घर किंवा आसपासचे वातावरण घाणेरडे ठेवतात, असे लोक नेहमी आजारी असतात. घाणीमुळे आजुबाजूच्या परिसरात अनेक प्रकारचे जंतू, जीवाणू, विषाणू आणि बुरशी निर्माण होते जे रोगांना जन्म देतात.

- **ग्राम स्वच्छता अभियानाचे महत्त्व :**

राष्ट्र उभारणीसाठी निरोगी समाज असणे आवश्यक आहे. स्वच्छतेशिवाय व्यक्तिचे मन सुद्धा संकुचित असते. शारीरिक व मानसिक आरोग्यावर अस्वच्छतेचे विपरित परिणाम होतात. म्हणुनच गांधीजी ग्राम स्वच्छतेला महत्त्व देत होते. आदर्श गावाची कल्पना त्यांनी हयातभर लोकांपुढे माडली, इतकेच नव्हे तर त्यांनी प्रत्यक्ष हातात झाडू घेऊन लोकांना ग्राम सफाई, वैयक्तिक स्वच्छतेचे महत्त्व पटवून देण्याचे प्रयत्न केले. आदर्श गावाच्या कल्पनेमागे केवळ गावाची आर्थिक स्वयंपुर्णता अभिप्रेत

नव्हती तर स्वच्छ व सुंदर परिसर असलेल्या आरोग्यसंपन्न गावाची कल्पना त्यांना अभिप्रेत होती, हे विचार आजही ग्रामीण भागात रुजविणे आवश्यक आहे. जनजागृती झाली तरच ग्रामीण समाज स्वत:च्या घरात शौचालय बांधण्यासाठी पुढे येईल. शौचविधी व कचरा टाकण्यासाठी सार्वजनिक परिसराचा वापर करणे, गावाचे आरोग्य बिघडविणे हा सामाजिक अपराध आहे. ही जाणीव ग्रामीण समाजात जो पर्यंत निर्माण होत नाही तोपर्यंत ग्रामीण स्वच्छता दुर्लक्षित राहील.

- **ग्राम स्वच्छता अभियान कृति कार्यक्रम :**

सन २०००,०१ पासून महाराष्ट्र शासनातर्फे राबविल्या जाणाऱ्या स्वच्छता विषयक कार्यक्रमास महाराष्ट्रातील थोर असे संत की ज्यांनी गावोगावी फिरून स्वच्छताविषयक लोक जागृती केली त्यांच्या कार्याचे स्मरण म्हणुन अभियानास संत गाडबेबाबा स्वच्छता असे नाव दिले. ग्राम स्वच्छता अभियान म्हणजे ग्रामीण भागात राबविले जाणारे अभियान आहे. ज्या गावात ग्रामपंचायत आहे अथवा जी गावे ग्रामपंचायतीच्या अधिपत्याखाली आहे अशा गावात राबविले जाणारे अभियान म्हणजे संत गाडगेबाबा अभियान होय.

''तुम्ही हातात झाडू आणि बादली घेतल्याशिवाय तुम्ही तुमचे गाव आणि शहर निरोगी ठेऊ शकत नाही'' — **संत गाडगेबाबा**

शासनाव्दारे राबविले जाणारे संत गाडगेबाबा स्वच्छता अभियान अभियान तक्ता.

अ. क्र	कालावधी	कार्यक्रम
१	दरवर्षी दि. ३ व ४ ऑक्टोंबेर	स्वच्छता विषयक साहित्याचे प्रदर्शन, प्रचार—प्रसिध्दी व प्रात्यक्षिके याबाबतच्या तांत्रिक ज्ञानाबाबतची प्रात्यक्षिके गवंडी मेळावा
२	दरवर्षी दि. ५ ते ७ ऑक्टोंबर	ग्राम सफाई, घनकचरा व्यवस्थापन, कचरा मुक्ती जागृती मोहिम
३	दरवर्षी दि. ८ ते ९ ऑक्टोंबर	वैयक्तिक स्वच्छता जागृती (नखे काढणे, स्वच्छ आंघोळ, केस धुणे, उवा निर्मुलन) मोहीम
४	दरवर्षी दि. १० ते १४ ऑक्टोंबर	घर व परिसर स्वच्छता व सजावट मोहीम
५	दरवर्षी दि. १५ ऑक्टोंबर	हात धुवा मोहीम
६	दरवर्षी दि. १६ ते १८ ऑक्टोंबर	शाळा व अंगणवाडी स्वच्छता जागृती मोहीम
७	दरवर्षी दि. १९ व २० ऑक्टोंबर	सार्वजनिक इमारती स्वच्छता जागृती मोहीम
८	दरवर्षी दि. २१ व २२ ऑक्टोंबर	जनावरे स्वच्छता मोहीम, आदर्श मोठा व स्वच्छ जनावर स्पर्धा
९	दरवर्षी दि. २३ ते २८ ऑक्टोंबर	रस्ते दुरूस्ती, सफाई व श्रमदान मोहीम
१०	दरवर्षी दि. २९ ते ३१ ऑक्टोंबर	पाणी शुध्दता, प्रात्याक्षिक व प्रशिक्षण मोहीम
११	दरवर्षी दि. १ ते ५ नोव्हेंबर	गटारे सांडपाणी व्यवस्थापन, सांडपाणी पुनर्वापर मोहीम
१२	दरवर्षी दि. ६ नोव्हेंबर	गावात स्लोगन (घोषवाक्य) स्पर्धा, निबंध स्पर्धा इ. विविध स्पर्धा, व्यसनमुक्ती मोहीम
१३	दरवर्षी दि. ७ व ८ नोव्हेंबर	सुदृढ बालक स्पर्धा, माता बाल संगोपन, बचत गटाचा सहभाग
१४	दरवर्षी दि. ९ नोव्हेंबर	रोगनिदान व साथरोग प्रतिबध मोहिम, पाणी गुणवत्ता
१५	दरवर्षी दि. १० नोव्हेंबर ते ३० डिसेंबर	शौचालय बांधकाम, दुरूस्ती व शौचालय वापराबाबत जनजागृती करणे, स्वच्छतेचा इतर सर्व घटकांवर भर देणे.
१६	दरवर्षी दि.३१ डिसेंबर	संकल्प दिवस

*(**स्त्रोत** : महाराष्ट्र शासन निर्णय क्र. स.गा.गा.२०१६ पाणी पुरवठा व स्वच्छता विभाग मंत्रालय मुंबई दिनांक ०४ जुलै २०१६)*

- **ग्राम स्वच्छता अभियानाअंतर्गत यशस्वी कार्यक्रम**

✓ पिण्याच्या पाण्याचे व्यवस्थापन आणी वाया गेलेल्या पाण्याचे व्यवस्थापन
✓ घरघुती शौचालय आणी सॉलिड वेस्ट डिस्पोजल
✓ पर्यावरण संरक्षण आणी व्यक्तिगत स्वच्छता
✓ माहिती आणि शिक्षण आणी सामाजिक संशोधन कृती
✓ कुटूंबनियोजन आणी लोकांचा सहभाग
✓ अपरंपरागत उर्जा स्त्रोत

या सगळया बाबींचा विचार करता ग्राम स्वच्छता अभियान हे ग्रामीण भागाला आरोग्य सुदृढ ठेवण्यास मदत करते. तसेच स्वच्छतेतून समृद्धीकडे जाण्यास मदत होईल त्याचबरोबर ग्रामीण भागातील नदी, नाले, तलाव, ही जर स्वच्छ राहिलीत तर ग्राम समृद्ध होण्यास मदत होईल, या कार्यक्रमामुळे गावामध्ये पर्यावरण संरक्षण, विचाराची स्वच्छता झाली तर सामाजिक स्वच्छता पण दिसुन येईल, गावात एकोपा राहील, जनावरांचे आरोग्य ही सदृढ राहील, ग्राम समृद्धतेकडे जाईल, शिक्षणातून स्वच्छतेचे धडे जातील, आरोग्य, पर्यावरण, कचऱ्याचे योग्य व्यवस्थापन करून कचऱ्याचा वापर करून त्यावर प्रक्रिया करून बरेच काही करता येईल. लोकांमध्ये ऐक्य व एकात्मता, भांडण तंटे निर्माण होणार नाही व एकमेकांच्या सहकार्याने ग्रामीण समाजाचा विकास साधण्यास मदत होईल.

- **ग्राम स्वच्छता अभियानाअंतर्गत आवश्यक सुचना व शिफारशी**

✓ ग्रामपंचायतीकडुन कोणतेही प्रमाणपत्र व कागदपत्र देत असताना संबंधित व्यक्तिच्या घरी शौचालय आहे किंवा नाही याची खातरजमा करूनच प्रमाणपत्र देण्यात यावे तसेच गावातील निवडणुकीत उभे राहणाऱ्या उमेदवाराच्या कुटूंबात शौचालय आहे किंवा नाही याची खातरजमा करुनच उमेदवारी वैध ठरविण्यात यावी व त्यात पारदर्शकता ठेवावी.
✓ जिल्हा स्तरावर जिल्हा परिषदेअंतर्गत संत गाडगेबाबा ग्राम स्वच्छता अभियान संदर्भात स्वतंत्र कक्ष स्थापन करण्यात यावा जर गावातील नागरीक कचरा कुठेही टाकत असेल तर त्याला ग्रामपंचायती व्दारे दंड करावा.
✓ शौचालय बांधकामाकरिता दिले जाणारे अनुदान व शौचालय बांधकाम साहित्याच्या किंमती यात तफावत दिसुन येते तसेच शौचालय बांधकाम अनुदानात वाढ व वाटपात सुधारणा करणे आवश्यक आहे. ग्रामीण भागात अभियानाच्या अंमलबजावणीसाठी केवळ शासकीय यंत्रणा पुरेशी नाही त्यासाठी सेवाभावी व सामाजिक संघटनांनी पुढे येऊन लोकसहभाग वृध्दी, ग्राम स्वच्छता, सांडपाणी, पिण्याचे पाणी इ. चे व्यवस्थापन करणे आवश्यक आहे.
✓ ग्राम स्वच्छतेबाबत गाव स्तरावर प्रबोधनात्मक परिसंवाद, कार्यशाळा व प्रशिक्षण वर्ग आयोजित करण्यात यावे तसेच शहराप्रमाणे प्रत्येक गावात कचरा उचलणाऱ्या गाडयांची व्यवस्था करावी आणि कचरा नियमितपणे उचलावा यावर देखरेख ठेवावी. जर त्याची व्यवस्था नसेल तर प्रत्येक गावातील महिला बचत गटांना हे काम देण्यात यावे व त्यावर त्यांना बक्षीस व काही रक्कम देण्यात यावी.
✓ उघड्यावर शौचविधी करणाऱ्या व्यक्तीच्या शासकीय सवलती बंद कराव्यात व शौचालय नसलेल्या कुटूंबांना स्वस्त धान्य दुकानातील वस्तु न देण्याचा निर्णय संबंधीत गावाच्या ग्रामपंचायतीने घ्यावा.जसे स्वस्त धान्याचा पुरवठा, जेष्ठ नागरिकांच्या सेवासुविधा, आर्थिक दंड आकारणी इ. उपाययोजना कराव्यात.
✓ ग्रामसेवकांची संख्या कमी असल्याकारणाने ग्राम स्वच्छता अभियानाच्या अंमलबजावणीत अडचणी निर्माण होत आहेत त्यामुळे एक गाव एक ग्रामसेवक ही योजना राबविण्यात येउन

ग्रामसेवक पदाची भरती करण्यात आाणी हागणदारी मुक्त गावांनाच शासकीय योजनांचा लाभ देण्यात यावा.

निष्कर्ष :

वरून असे दिसुन येते की, स्वच्छता अभियानापुर्वी आणि अभियानानंतर बरीच, तफावत दिसुन येत आहे. अस्वच्छता, आजारपण, पाणी टंचाई ,घरगुती शौचालय, हे प्रत्यक्ष नमुना यामध्ये बरीच सुधारणा दिसुन येत आहे. संत गाडगेबाबा स्वच्छता अभियानाचा सकारात्मक परिणाम दिसुन असे ८५ टक्के लोक मान्य करतात. असे दिसुन येते की, ग्राम स्वच्छता अभियानामुळे ग्रामिण जनतेमध्ये स्वच्छतेविषयी जनजागृती दिसुन येत आहे. की संत गाडगेबाबा स्वच्छता अभियानात ग्रामीण जनतेचा सहभाग व गावकऱ्यांचे सहकार्य मिळत नाही असे दिसुन आले. स्वच्छता अभियानापुर्वी आणि अभियानानंतर बरिच तफावत दिसुन येत आहे. अस्वच्छता, आजारपण, पाणी टंचाई, घरगुती शौचालय, हे प्रत्यक्ष नमुना यामध्ये बरिच सुधारणा दिसुन येते आहे. संत गाडगेबाबा स्वच्छता अभियानाचे सकारात्मक परिणाम दिसुन येत आहे असे १७ म्हणजे ८५ टक्के ग्राम स्वच्छता अभियानामुळे ग्रामीण जनतेमध्ये स्वच्छतेविषयी जनजागृती दिसुन येत आहे. संत गाडगेबाबा स्वच्छता अभियानात ग्रामीण जनतेचा सहभाग व गावकऱ्यांचे सहकार्य मिळत नाही असे दिसुन आले.

संदर्भ

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डिजीटल शिक्षणाच्या दिव्यांगांचा आरोग्यावर परिणाम

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सारांश :

वर्ष2020 चा सुरवातीला कोविड 19-या संसर्गजन्य रोगाची लागण संपूर्ण जगात पसरायला लागली आणि त्यामुळे समाज व्यवस्थेत मोठ-मोठे बदल पाहायला मिळाले. दैनंदिन जीवनात आमुलाग्र बदल आपण पाहिलेत. डिजीटल म्हणजेच ऑनलाईन शिक्षण त्यापैकी एक. डीजीटल शिक्षणाला आपण सोप्या व सरळ भाषेत इंटरनेट आधारीत शिक्षण पद्धती असे म्हणू शकतो संपूर्ण जगात कोरोगामुळे सर्व शैक्षणीक संस्था आणि शाळा .अनिश्चित कालावधीकरीता बंद ठेवल्या गेल्या, त्यामुळे भारतासोबतच अनेक देशात डिजिटल शिक्षणाला प्रोत्साहन देण्यात आले आहे संगणक ,मोबाईल .किव्हा टॅब, इत्यादी इलेक्ट्रॉनिक उपकरणांचा वापर करून आत्ताचे सामान्य तसेच दिव्यांग विद्यार्थी घरबसल्या ऑनलाइन शिक्षणाचा निमित्ताने शिक्षण घेऊ लागले आहेत. पण, ऑनलाईन शिक्षणाचे जसे फायदे आहेत त्याचप्रमाणे त्याचे तोटे पण आहेत असे आपल्याला दिसून येते.

प्रस्तावना-

डिजीटल शिक्षण म्हणजे काय हे सांगायचे झाल्यास ?, विद्यार्थी घरी बसून इंटरनेटच्या माध्यमातून संगणक, लॅपटॉपव , टॅब्लेट सारख्या उपकरणा ,स्मार्ट फोनद्वारे शिक्षण घेऊ शकतात. या नविन शैक्षणीक पद्धतीमुळे विद्यार्थ्यांचे शाळेत जाण्याचे अंतर व वेळ या सारख्या येणाऱ्या अडचणी नष्ट झाल्याचे आपल्याला पाहायला मिळाले. विद्यार्थी आता हवे तिथे बसुन ऑनलाइन क्लास किव्हा ,रेकॉर्डिंग करून ठेवलेल्या क्लिप ऐकून अभ्यास करू शकतातआ .ज प्रत्येक विध्यार्थी मोबाइल फोन व संगणकावर ऑनलाईन शिकवणीचा माध्यमातून शिकू लागला आहे. शिक्षक व्हिडीओ कॉन्फरसी द्वारे इंटरनेटच्या वापर करून विद्यार्थ्यांशी जोडले जातात. ज्याप्रमाणे शाळा विद्यालयात शिकवले ,जाते, त्याचप्रमाणे ऑनलाईन शिकवने सुद्धा शक्य आहे . याचा परिचयसर्वाना झालेला आहे.

भारतात एक काळ असा होता, जेव्हा पालक मुलांना उत्तम शिक्षण व चांगले संस्कार देण्यासाठी आश्रमामध्ये पाठवत होतेती .थे पुस्तकी ज्ञानासोबतच अध्यात्मिक संस्कार व शस्त्र चालवण्याचे प्रशिक्षण दिले जात होते. त्यानंतरच्या काळात आधुनिक प्रगती झाली ,आणि शिक्षणाचा पध्दतीमध्ये बदल होऊन इंग्रजी शाळा व मोठ-मोठी महाविद्यालये देशात आली. परंतु आत्ताचा शैक्षणिक व्यवस्थेकडे पाहीले तर आपनास असे दिसते कीमा ,गच्या पाच वर्षामध्ये इंटरनेट क्रांतीमुळे देशात डिजीटल शिक्षणाची सुरवात झालीडिजीटल शिक्षणाला आधुनिक शिक्षणाचे स्व .रुप म्हणू शकतो ज्यात शाळेत न जाता इंटरनेटद्वारे लॅपटॉपसंगणक ,, मोबाइलद्वारे घरिच शिक्षण घेता येते. कोविड- या 19महामारीमुळे ऑनलाईन शिक्षण घाईत घेतलेल्या अनियोजित निर्णयामूळे डिजीटल उपलब्धता नसलेला एक मोठा वर्ग अवास्तविक कल्पनेच्या वर्गाबाहेर फेकला गेलाडिजीटल . शिक्षण मुठभर सुदैवी)इंटरनेट व डिजिटल संसाधन संपन्न(अश्यांनाच मिळाले .

कोविड मुळे 19 शाळेचे स्वरूप बदलून ऑफलाईन वरून ऑनलाईन (डिजीटल)स्वरूपात आले. ऑनलाइन शिक्षण पद्धतीमुळे दुर शाळा असणाऱ्या विध्यार्थीना खुप फायदा झाला कारण, त्यांचा प्रवासभाडा व त्यांना लागणारा खोलीभाड्याचा खर्च व वेळ वाचला आहे. ऑनलाइन शिक्षणामध्ये वेळ आणि आर्थीक बाबीचा विचार केला तर आपल्याला फायद्याचे दिसेल.पण म्हणतात ना प्रत्येक नाण्याचा दोन बाजू असतात तर .डिजिटल शिक्षणाचे सुद्धा असेच आहे. एका दृष्टीने बघीतले तर या पद्धतीचे खुप फायदे आहेततर याच शिक्षण प .द्धतीमुळे अनेक नुकसान व दुष्परिणाम सुहद्धा पहायला मिळतात. ऑनलाईन शिक्षणाला विध्यार्थी गांभीर्याणे घेत नाही त्यामुळे विद्यार्थ्यांचे शैक्षणीक नुकसान होत आहे.

आज भारत इंटरनेट वापरात जगात चिन देशानंतर दुसऱ्या नंबरचा देश आहे)स्टॅटिस्टॅ चा 2022चा जाणेवारी रिपोर्ट नुसार ओकला स्पीड टेस्ट) आणि (ग्लोबल इंडेक्स जुलै भारत इंटरनेट स्पीड (नुसार 2022 19च्या संदर्भात जगात या नंबर 118 व .वर आहे तरी सुद्धा अजूनही भारतात अनेक खेड्यात इंटरनेट ची सुविधा उपलब्ध नाहीज्या लहान व अप्रगत शहरामध्ये इंटरनेट आहे तीथे त्याची गुणवत्ता स्पिडचा बाबतीत कमकुवत आहे. मुख्यतः डिजिटल शिक्षणाला योग्य इंटरनेट नेटवर्कची गरज असते खेडे गावात उत्तम नेटवर्क .नसल्याने विडीयो अडकणे व्हिडीयो ,व्यवस्थीत आवाज न येणे ,थांबणे यासारख्या अनेक समस्यांना सामोरे जावे लागते. डिजीटल शिक्षण घेत असताना विद्यार्थ्यांमध्ये शिष्तीची कमतरता जाणवते. शाळेत विद्याथी शिक्षकाच्या भयाने शिक्षकांचे लक्षपूर्वक ऐकतात .

चर्चा व विश्लेषण

ऑनलाइन शिक्षण पद्धतीमुळे सतत स्मार्टफोन, संगणक व लॅपटॉप वरील स्क्रीन टाईम वाढल्यामुळे दिव्यांगांचा आरोग्यावर परिणाम होत आहे. आधीच दिव्यांगमध्ये शारीरिक कमतरता असते त्यामुळे त्यांना एक जागेत जास्त वेळ बसल्यामुळे, व संगणक व

इतर इलेक्ट्रॉनिक गॅजेट स्क्रीन मुळे डोळ्याचा त्रास होतो. बऱ्याच दिव्यांगांना डोके दुःखी,डोळ्यात आग होणे, थकवा येणे यासारख्या शारीरिक समस्या निर्माण होतात.

- दिव्यांग व डिजीटल शिक्षण:

शारीरिक किंवा मानसीक बिघाडामुळे सामान्य व्यक्तीप्रमाणे स्वत:ची दैनंदीन कामे करताना ज्यांना अडचण जाणवतेअ ,श्या व्यक्तींना 'दिव्यांग 'म्हणतात. समाजाच्या दुर्बल व दुर्लक्षित घटकामध्ये दिव्यांगांचा समावेश होतो. दिव्यांगामध्ये शारीरिक कमतरता असल्यामुळे त्यांच्या शारीरीक व मानसिक विकास सामान्य व्यक्तिप्रमाणे होत नाही. त्यांना सामान्याप्रमाणे खेळणे, धावने, बोलणे, ऐकणे या सर्व किया प्रभावी पणे करता येत नाही. त्यामुळेच दिव्यांग वैयक्तीक, कौटुंबिक, वैवाहिक, सामाजीक , ,आर्थीकशैक्षणिकरित्या मागे पडला आहे. त्यामुळे घटनेचा 42व्या कलमानुसार दुर्बल घटकाकडे विषेण लक्ष पुरवण्याचे अधिकार शासनाला दिले गेले आहेत .दिव्यांग सुद्धा दुर्लक्ष गटात बसतातया जाणीवे ,तुन केंद्र शासनाने "अपंग व्यक्ती समान संधी संपूर्ण सहभाग व हक्काचे संरक्षण अधिनियअस्तीत्वात आ 2016 व सोबतच 1995 "णला गेला.या कायदयानुसार दिव्यांगांचे 2016 प्र 21 एकूणकारात विभाजन केले आहे .समावेशित शिक्षण संकल्पना 1960 मध्ये अनेक देशातुन अस्तीत्वात आली 1981 .च्या आंतरराष्ट्रीय"अपंग वर्षांपासून "या संकल्पनेस चालना मिळाली. या मध्ये विशेषतः विशेष गरजा असणाऱ्यांनादिव्यां) ग (विध्यार्थ्यांना समावेशीत शिक्षणाची सुविधा पुरविणे या विश्वावर आधारीत आहे.

समावेशीत शिक्षणामुळे दिव्यांगांना सामान्य शाळेत सुद्धा जाता येत आहे. राष्ट्रीय शिक्षण धोरण 2020 च्या6 .2. 5 नुसार खासगरजा असलेल्या)CUSN) किंवा दिव्यांग मुलांच्या सक्षमीकरणासाठी त्यांना इतर कोणत्याही मुलांप्रमाणे दर्जेदार शिक्षण मिळवण्यासाठी समान संधी पुरवणारी यंत्रणा तयार करण्याचे महत्व मुद्धा हे धोरण मान्य करते. अपंग व्यक्ती अधिकार अधिनियम 2016नूसार 'कलम '16 मध्ये दिव्यांगांना शिक्षणात सोई सुविधा मिळवण्याचे हक्क,' कलम'17 मध्ये दिव्यांगाना मोफत शिक्षण' तर ,शिक्षण संस्था ,कलम '19 मध्ये दिव्यांगांना व्यावसायिक शिक्षण व स्वयंरोजगारासंदर्भात तरतुदी आहेत.

कोविड मुळे 19 शाळेचे स्वरूप बदलून ऑफलाईन वरून ऑनलाईन (डिजीटल)स्वरूपात आले. त्यामुळे दिव्यांगांना घरी बसुनच शिक्षणाची सोय झालीसर्व .च प्रकारच्या दिव्यांगांना लांबचा प्रवास करावा लागत नाही ,दिव्यांगांला नेहमी एका मदतनीसची आवश्यकता भासते त्यांना शाळेत ,जाण्यासाठी कुनाची-ना-कुणाची मदत घ्यावी लागते या पद्धतीने ते ,कुनावर अवलंबून राहत नाही. त्यांना हव्या त्या जागी आणि त्यांचा सोईस्कर वेळेनुसार शिक्षण घेता येते .इत्यादी प्रकारचे कायदे जरी असले तरी त्याचे अनेक नुकसान आपण बघेतो. दिव्यांग समाजीकरित्या दुर्बल घटकात मोडतात ते .जेव्हापर्यंत शाळेत ,किव्हा सामाजिक व्यवहारात येतिल नाही तेव्हापर्यंत, त्यांचाकडे पाहण्याचा सामाजीक दृष्टिकोन बदलणार नाही .शाळांमध्ये सामान्य मुलांबरोबर दिव्यांग सुध्दा शिक्षण आणि सोबतच सामाजिक वर्तन शिकत असतात. कोणत्याही व्यक्तीच्या जडणघडणीत जो जिथे शिकतो त्या शैक्षणिक वातावरणाचा सोबतीचाचा आणि सामाजीक कृतीचा महत्वाचा वाटा असतो. पूर्णपणे ऑनलाईन असलेल्या शिक्षन पद्धतीमुळे दिव्यांगांना आपल्या समवयीन मुलांमध्ये एकत्र सोबत राहता येत नाही, एकमेकांशी मैत्री करता येत नाही, कुणाकडे व्यक्त होता येत नाही, यामुळे दिव्यांगात न्यूनगंड येण्याची दाट शक्यता असते.

2020 डिसेंबर 3 च्या सकाळ बातमीपत्रात मंगेश गोमासे यांचा लेख जा –गतिक दिव्यांग दिन: नऊ महिन्यापासून दिव्यांग शिक्षणापासून वंचीत ;मोजक्यांनाच ऑनलाईन शिक्षण.. त्यात ते म्हणतात की ,जगातील %10 लोकसंख्या म्हणजेच 65 कोटी विविध अंगाने अपंग आहेत. त्यांचा विकासासाठी विविध अभियान आणि उपक्रम राबविण्यात येतात. राज्यात दिव्यांगांच्या शिक्षनाकरिता विशेष शाळा सुरू करण्यात आल्या आहेत. यामध्ये अस्थिव्यंग, कर्णबधिर, अंध, बोद्धीक अक्षमता, वाचा दोष इत्यादी 21 प्रकारचे अपंगत्व असलेल्या विद्यार्थ्यांचा समावेश करण्यात येतो. यामधील बहुतांश विध्यार्थी आर्थिकदृष्ट्या मागासलेल्या कुटुंबातील असतात, त्यामुळे दिव्यांगाकडे सोयीसुविधांचा अभाव असतो. कोरून काळात शाळा बंद झाल्याने काही शाळांनी दिव्यांगांना सामान्याप्रामाणे ऑनलाईन शिक्षणाची सोय करून दिली. पण सोइ सुविधा नसलेले दिव्यांग मागे पडले आहेत. नागपूर विभागात 21 दिव्यांग प्रकारातील 2000 चा वर विध्यार्थी आहेत. यांना शाळेने ऑनलाईन शिक्षण देण्याचा प्रयत्न केला पण त्यानंतरही दिव्यांग शिक्षणापासून वंचित असल्याचे चित्र आहे त्यामुळे सामान्य विद्यार्थ्यांपेक्षा दिव्यांगांना अनेक समस्यांना सामोरे जावे लागले, व त्याचा परिणाम त्यांचा मानसिक व शारीरिक आरोग्यावर झाला असे आपल्याला दिसून येते.

- डिजीटल शिक्षण पद्धतीमुळे दिव्यांगांचा मानसिक-शारीरिक आरोग्यावर झालेले परिणाम :

ऑनलाइन शिक्षण पद्धतीमुळे दिव्यांगाना सतत स्मार्टफोन, संगणक व लॅपटॉप वरील स्क्रीन कार्य व अध्ययन करीत असल्यामुळे त्यांच्या आरोग्यावर परिणाम होत आहे. शारीरिक दृष्ट्या कमकुवत असल्याने त्यांना एक जागेत जास्त वेळ बसल्यामुळे, व संगणक व इतर इलेक्ट्रॉनिक गॅजेट स्क्रीन मुळे शारीरिक व मानसिक समस्या व आजार निर्माण होतात.

➢ आरोग्यावर झालेले परिणाम :-

- ✓ तासनतास मोबाइल, संगणक, लॅपटॉप वर बसल्यामुळे दिव्यांगांना मान, खांदा, मनगट दुखीचा तसेच डोळ्यांचा त्रास होतो तसेच प्रमाणापेक्षा मान खाली घातल्याने मानेचा हाडाची झीज होऊन मानदुखीचा त्रास वाढण्याची शक्यता असते मानेचा ताण वाढल्याने त्याचा पाठीचा कण्यावर परिणाम होतो. व पाठीचे दुखणे वाढते.
- ✓ ऑनलाईन शिक्षण पद्धतीमुळे दिव्यांग घरच्या घरीच राहून सामाजिक रित्या एकटा पडतो, त्यामुळे त्यांची मानसिक चिडचिड वाढते तसेच थॅलेसिमियाच्या दिव्यांगांना हिमोग्लोबिन चा कमतरतेमुळे..शरीराची हालचाल न झाल्याने हातपाय व सम्पूर्ण शरीरावर सुजन येते.
- ✓ अंध दिव्यांगांना दिसत नसल्यामुळे स्पष्ट आवाजाची आवश्यकता असते.कधी कधी नेटवर्क च्या समस्येमुळे आवाज अडखळतो, त्यामुळे त्यांचे मानसिक दडपण वाढते व ते चिडचिड करतात
- ✓ कर्णवधीर व वाचदोष असणाऱ्या दिव्यांगांना विशिष्ट खुणा असलेल्या भाषेचा वापर करून) हातवारे करून (शिकवल्या जाते, पण स्क्रीन चा आकार लहान असल्यामुळे त्यांना तेवढे समजत नाही, त्यामुळे त्यांची चिडचिड वाढते.
- ✓ मतिमंद दिव्यांगांना कृतीद्वारे शिक्षनाकारीत विशेष शिक्षक आवश्यक असून ऑनलाईन पद्धतीत ते वंचित असल्याने त्यांची मनोदुर्लबता वाढते तसेच मानसिक आजार असलेल्या दिव्यांगांना मोबाईल, संगणकाच्या स्क्रीनमुळे ताण पडतो व त्यामुळे डोकेदुखी व चिचिडपणा वाढतो.
- ✓ मेंदूचा पक्षघात असलेल्या दिव्यांगांना स्क्रीनच त्रास होऊन त्यांची डोकेदुखी वाढते डोळे दुखणे,डोळे जड पडणे, डोळ्यातून पाणी येणे, डोळे लाल होणे. इत्यादी समस्या डोळ्यासंदर्भात वाढल्या आहेत.
- ✓ अविकसित मांसपेशी असलेले दिव्यांग एकाच जागेवर जास्त वेळ बसल्याने अवयवातील स्नायूंचे तंतू कमजोर होऊ लागतात तसेच कंपवात रोग असलेल्या दिव्यांगांना सरळ बसत येत नाही, त्यामुळे ते एकाग्रतेने गॅझेटकडे लक्ष देऊ शकत नाही त्यामुळे ते नैराश्यात जातात

अश्याप्रकारे डिजिटल शिक्षणामुळे दिव्यांगांचा शरीरीक व मानसिक आरोग्यावर इत्यादी अनेक प्रकारचे परिणाम होऊ शकतात.

- डिजीटल शिक्षणाचे फायदे व तोटे:

आजच्या डिलीटल युगात लहण्यापासून तर मोठयापर्यंत सगळेच टेक्नोसॅव्ही झाले आहेत आज प्रत्येक व्यक्ती डीजीटल ,पेमेंट पासून तर डिजीटल मार्केटिंग व इतर तत्सम प्रकारचा ऑनलाईन सेवांचा वापर करत आहे. त्याच प्रमाणे शिक्षण सुद्धा बऱ्याच प्रमाणात डिजिटल स्वरूपाचे झाले आहेत तरीपण डिजीटल शिक्षण .विद्यार्थ्यासाठी फायद्याचे आहे की तोट्याचे हा विषय वादविवादाचा ठरतो आहे कारण, आपण सर्वांना माहीती आहे की ,नाण्याचा प्रत्येकी दोन बाजू असतात .एक फायद्याची तर दुसरी तोट्याची. तर डिजीटल शिक्षणाला सुद्धा अनेक फायदे व तोटे आहेत ते आपण पाहूयात.

- ➢ डिजीटल शिक्षणाचे फायदे
- ✓ डिजीटल शिक्षणामूळे शिक्षक व विद्याथी टेक्नोलॉजीसोबत जोडले जातात त्यामुळे डिजीटल शिक्षण पद्धती सोईस्कर व आरामदायक आहे, शाळेत न जाता जिथे आहोत तीथून शिक्षण व घेता येते वेळ पैसा व उर्जेची बचत ,होते.
- ✓ विषय शिक्षकांनी तयार केलेले शैक्षणिक साहीत्य)Notes, pdf, Question Paper, Video format) हवे तेव्हा प्राप्त होते.
- ✓ डिजीटल शिक्षण पद्धती ही गॅजेट फ्रेंडली शिक्षक व विद्यार्थ्यांना उपयुक्त अशी शिक्षण पद्धती. विशेष गरजा असलेल्या)दिव्यांगांना.उपयुक्त अशी पद्धती आहे (
  - ➢ डिजीटल शिक्षणाचे तोटे ;
- ✓ डिजीटल शिक्षणामुळे विद्यार्थी व शिक्षकांमध्ये शेअरींग व केअरींगचा अभाव जाणवत असून त्यांच्यात नाते दुरावले आहेत..
- ✓ डिजीटल उपकरणांची अति सवय लागण्याची भीती व महत्वाचा माहितीपासून वंचीत राहण्याचा धोका.
- ✓ डिजीटल शिक्षण व्यवस्येमुळे विद्यार्थ्यांच्या आत्मविश्वास कमी होऊ शकतो तसेच स्क्रीनचा अति वापरामुळे डोळ्यांचे विकार होण्याचा धोका संभवतो.
- ✓ डिजिटल शिक्षणामुळे विद्यार्थीमध्ये शिस्त जाणवत नाही. त्यांचे लक्ष्य भटकण्याचा धोका असून मानसीक व शारीरिक आरोग्यात बिघाड होण्याची शक्यता वाढते.

निष्कर्ष :-

दिव्यांगांना व्यावहारीक अनुभव आणि प्रात्यक्षिके ही शिक्षणाचा दृष्टीने खुप महत्वाची आहेतऑनला शिक्षणात प्रात्यक्षिकांचा , अभाव दिसुन येतो. शाळेत विद्यार्थी भौतिक वस्तूंचा निरीक्षण करुण अभ्यास करतात हा प्रात्यक्षिक स्पर्श सामान्य

विद्यार्थ्यांसोबत दिव्यांगांना अभ्यासविषयी आवड निर्माण करतो. परंतु ऑनलाइन शिक्षणात याची कमी असतेको ,विड नंतरच्या काळामध्ये)आताचा काळ (शालेय शिक्षणाचा नव्याने शोध घेताना विशेषतः दिव्यांगांचा शारीरिक व मानसिक स्वास्थही उत्तम राहील याचा विचार व्हायला हवा. त्यासाठी वेगळे धोरण आणि निधीची उपलबद्धता पण हवी. पालक शिक्षक व दिव्यंग मुलांशी संबंधित इतर सामानांनासंख्या ,यांना दिव्यांगाच्या मानसीक गरजा समजावून सांगातल्या पाहिजेत.आणि त्यांच्याशी वागण्याची, बोलण्याची, त्यांना शिकवण्याची नविन पध्दतही अवलंबली पाहीजे. मुळात मानसीक व शारीरीक स्वास्थ गरजेच आहे याची जनजागृती महत्वाची आहे. शाळेबरले शाळेमध्ये दिव्यांगकरिता विशेष शिक्षक असायला पाहिजे, दिव्यांग विद्यार्थ्यांशी मोकळा संवाद साधायला पाहिजे, थोडा अभ्यास कमी झाला तरी चालेल, पण दिव्यांगांचा मानसिक व शारीरिक आरोग्याकडे दुर्लक्ष करून चालणार नाही. दिव्यांगांना अभ्यासाबरोबर मोकळा श्वास घेऊ द्या व मुक्तपणे वावरू द्या, या बाबीला प्राधान्य देणे ही काळाची गरज आहे.

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विद्यार्थी आणि व्याख्यातांवर डीजीटल शिक्षणाचा शारीरिक आणि मानसिक आरोग्यावर होणारा परिणाम

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गोषवारा

कोविड-१९ चा प्रसार रोखण्यासाठी देशव्यापी प्रयत्नांच्या अनुषंगाने, युनिव्हर्सिटी ब्रुनेई दारुसलाम ने संपूर्ण शैक्षणिक वितरण ऑनलाइन मोडमध्ये रूपांतरित केले, जिथे आम्ही शिक्षण आणि शिकण्याच्या अनुभवांची, पदवीपूर्व विद्यार्थ्यांची शारीरिक आणि मानसिक आरोग्य आणि व्याख्याता यांची तपासणी केलीऑनलाइन अध्यापनाकडे या अचानक बदलामध्ये ., आमच्या अभ्यासातील विद्यार्थी आणि व्याख्यात्यांनी त्यांच्या शारीरिक आणि मानसिक आरोग्यावर होणाऱ्या परिणामांसह सकारात्मक आणि नकारात्मक असे दोन्ही अनुभव ओळखले. ऑनलाइन अध्यापनशास्त्रीय फायद्यांसाठी पुरावे देण्यासाठी आमचे निष्कर्ष महत्त्वाचे आहेत आणि शिक्षणामध्ये डिजिटल तंत्रज्ञानाच्या सुधारणा आणि अनुकूलनाला प्रोत्साहन देण्यासाठी सेवा देऊ शकतात. भावनिक आणि मानसिक आरोग्य समर्थन आणि योग्य कार्यक्रमांच्या तरतुदीद्वारे विद्यापीठ समुदायाच्या कल्याणासाठी शारीरिक आणि मानसिक आरोग्य समस्यांचे निराकरण करण्याचे महत्त्व वाढवणे देखील आहे. कोविड-१९ महामारीआम्ही निनावी ऑनलाइन डेटा संकलन पद्धतीद्वारे स्वयंत प्रीटेस्टेड विकसि-प्रश्नावली वापरून आरोग्य विज्ञान विद्याशाखेतील पदवीपूर्व विद्यार्थी आणि व्याख्याता यांच्यावर क्रॉसविभागीय अभ्यास केला-.

परिचय

जगभरातील उच्च शिक्षण व्यवस्थेत वेगवान डिजिटलायझेशनसह, साथीच्या रोगाच्या प्रभावाने मूलगामी तांत्रिक परिवर्तनाचे युग आणले आहे. अशा प्रकारे, विद्यार्थी आणि व्याख्यात्यांनी त्यांच्या फायद्यासाठी डिजिटल तंत्रज्ञानाचा वापर करणे महत्त्वाचे आहे कारण साहित्याने असे सुचवले आहे की ऑनलाइन शिक्षण हे एक प्रभावी आणि कार्यक्षम शिक्षण वातावरण आहे, ज्यामध्ये प्रवेशयोग्यता, आयुष्यभर शिकण्याच्या संधी, सुधारित गुणवत्ता आणि खर्चशैक्षणिक संसाधनांची प्रभावीता .यासारखे फायदे आहेत -. दरम्यान, व्याख्याते या डिजिटल ट्रान्सफॉर्मेशन कालावधीचा उपयोग नवीन विषयांच्या क्षेत्रात क्षमता वाढवताना आणि काम आणि कुटुंब यांच्यात निरोगी समतोल राखून त्यांची कौशल्ये अपग्रेड करण्याचा एक मार्ग म्हणून करू शकतात. समोरासमोर संवाद साधण्याची गरज न पडता कोविड-१९ चा समुदाय पसरू नये यासाठी ऑनलाइन शिक्षण केवळ सुरक्षित दृष्टीकोनच देत नाही, तर ते विद्यार्थीकेंद्रितता वाढवते-, शिक्षकांना अध्यापन वितरणात लवचिकता प्रदान करताना विद्यार्थ्यांच्या गरजा सानुकूलित करण्यास सक्षम करतेदोन्ही पक्षांसाठी वेळ आणि . स्थानाच्या दृष्टीने. नवीन तंत्रज्ञानाचा अवलंब करण्यासाठी आणि त्यांच्या शैक्षणिक वितरणामध्ये अधिक नाविन्यपूर्ण होण्यासाठी व्याख्यातांसाठी विविध ऑनलाइन साधने आणि डिजिटल तंत्रज्ञान उपलब्ध आहेत. महत्त्वाचे म्हणजे, ऑनलाइन शिक्षण एक सहयोगी आणि परस्परसंवादी शिक्षण वातावरणास अनुमती देते जेथे शिक्षक त्यांच्या विद्यार्थ्यांपर्यंत पोहोचण्यासाठी आणि त्यांच्या विद्यार्थ्यांची प्रतिबद्धता राखण्यासाठी ऑडिओ, व्हिडिओ आणि मजकूर यांचे संयोजन वापरू शकतात.

विद्यार्थी शिक्षण आणि कल्याणावर कोविड-१९ च्या परिणामाचा अहवाल देणाऱ्या संशोधनात असे आढळून आले आहे की शैक्षणिक व्यत्यय विद्यापीठाच्या अध्यापन वितरणावर परिणाम करू शकतो आणि त्याचा परिणाम त्याच्या विद्यापीठ समुदायावर मानसिक सामाजिक परिणाम होऊ शकतो. साथीच्या आजारादरम्यान विद्यार्थ्यांना अनेकदा वाढत्या चिंतेचा सामना करावा लागतो, ज्यामुळे अभ्यासाची प्रेरणा कमी होऊ शकते आणि याचा संबंध शैक्षणिक, सामाजिक आणि आर्थिक कल्याणाबाबत वाढलेल्या चिंतेशी असू शकतो. महाविद्यालयीन विद्यार्थी केवळ मित्रांपासून संपर्क तोडल्यामुळेच नाही तर एकाकीपणा आणि एकटेपणाचा सामना करू शकतात, परंतु सेमेस्टरच्या अचानक व्यत्ययामुळे त्यांचे संशोधन प्रकल्प आणि इंटर्नशिप बंद होऊ शकतात, ज्यामुळे पदवी आणि नोकरीच्या बाजारपेठेतील उपलब्धतेमध्ये अनिश्चितता निर्माण होते. हॉस्पिटल किंवा क्लिनिकल आधारित संशोधन कार्य सोडून दिल्याने विद्यार्थ्यांचे संशोधन उत्पादन देखील लक्षणीयरीत्या कमी होऊ शकते.

कोविड-१९ हा मानवतेला धोका असताना ऑनलाइन शिक्षणात गुंतवणूक करण्यासाठी संस्था विकसित झाल्या आहेत. व्याख्यात्यांनी कॅनव्हास, मायक्रोसॉफ्ट टीम्स, गुगल मीट, स्काईप आणि झूम सारख्या अनेक ऑनलाइन लर्निंग प्लॅटफॉर्मचा वापर करून अध्यापन आणि मूल्यमापन केले. आरोग्य मार्गदर्शक तत्त्वे. लवकरच, ऑनलाइन शिक्षण प्रणालीचे फायदे स्पष्ट झाले. ऑनलाइन लर्निंग मॅनेजमेंट सिस्टम, टेलिकॉन्फरन्सिंग ऍप्लिकेशन्स आणि उपकरणांचा वापर करून व्याख्याने आणि समस्याआधा-रित शिक्षण)PBL) सुरू ठेवता येऊ शकते. महामारीच्या काळात UBD मधील शिकवण्याचे आणि शिकण्याचे कार्य अखंडपणे चालू राहिले. महामारीच्या काळात ऑनलाइन शिक्षणाच्या अंमलबजावणीमुळे, विद्यार्थ्यांच्या शिक्षणातील अनुभव तसेच व्याख्यात्यांच्या अध्यापनाचा आणि मूल्यांकनाचा तपास करून त्यांच्या शारीरिक आणि मानसिक आरोग्यावर कसा परिणाम झाला हे शोधून आम्ही त्यांच्या प्रभावाचे मूल्यांकन करू इच्छितो, कारण या दोन पैलूंचा देखील परिणाम होईल.ऑनलाइन शिक्षण पद्धतीमुळे प्रभावित होईल . आमचा अभ्यास सकारात्मक आणि नकारात्मक अशा दोन्ही अनुभवांचा शोध घेतो जेणेकरून विद्यापीठ समुदायासाठी ऑनलाइन शिक्षण अंमलबजावणीसाठी आवश्यक प्रक्रिया विकसित करण्याचे मार्ग ओळखता येतील.

या अभ्यासाचे परिणाम विद्यापीठाला त्यांच्या शैक्षणिक वितरणामध्ये ऑनलाइन शिक्षण एक आवश्यक साधन म्हणून अंमलात आणण्यासाठी मार्गदर्शन करू शकतात, महामारी कितीही संपली असली तरी, ऑनलाइन शिक्षणामुळे एक प्रभावी आणि कार्यक्षम शिक्षण वातावरण आणण्यात येते या पुराव्याचे समर्थन करण्यासाठी. अध्यापनशास्त्रीय विद्यार्थीकेंद्रित दृष्टिकोनाच्या मूलभूत गोष्टींवर प्रकाश - टाकताना, डिजिटल तंत्रज्ञानाच्या दिशेने केलेली एक अभिनव वाटचाल आणि गुंतवणूक म्हणूनही याकडे पाहिले जाते या व्यतिरिक्त, विद्यार्थी आणि व्याख्यात्यांच्या सकारात्मक आणि नकारात्मक अनुभवांचा विचार करून सर्व शाळा आणि संस्थांमध्ये ऑनलाइन शिक्षणाचे सर्वोत्तम समर्थन कसे करावे याबद्दल स्थानिक सरकारी अधिकायांना याचा फायदा होऊ शकतो-, तसेच याचा त्यांच्या शारीरिक आणि मानसिक आरोग्यावर कसा परिणाम होऊ शकतो याची तयारी केली जात आहे .

साहित्य आणि पद्धती

ऑनलाइन शिक्षण आणि अध्यापन अनुभव, डिझाइनिंग आणि मूल्यांकन प्रदान करणे आणि विद्यार्थी आणि व्याख्यात्यांच्या मानसिक आरोग्यावर होणारा परिणाम यासह लोकसंख्याशास्त्रीय वैशिष्ट्ये आणि अभ्यास घटकांचे वर्णन करण्यासाठी गणना आणि टक्केवारी वापरून वर्णनात्मक आकडेवारी वापरली गेली. संबंधित अभ्यास घटक स्पष्ट करण्यासाठी बार आलेख देखील वापरले गेले. लोकसंख्याशास्त्रीय वैशिष्ट्ये आणि अभ्यास घटक यांच्यातील संबंध तपासण्यासाठी केला गेला, विश्लेषण लागू करण्यापूर्वी किमान अपेक्षित गणना यासारख्या गृहितकांची पूर्तता सुनिश्चित करण्यासाठी सांख्यिकी पध्दती सर्व विश्लेषणासाठी वापरली गेली.

चर्चा, विश्लेषण व परिणाम

- **विद्यार्थी व लेक्चरर्सचे ऑनलाइन शिकण्याचे सकारात्मक आणि नकारात्मक अनुभव**

बहुसंख्य विद्यार्थ्यांनी सकारात्मक अहवाल दिला की ऑनलाइन शिक्षणामुळे ते अधिक स्वतंत्र झाले आहेत आणि ते ऑनलाइन शिक्षण आणि त्यात अचानक झालेल्या बदलांशी जुळवून घेऊ शकतात. तथापि, घरी बसून अभ्यास केल्यानेही बहुसंख्य विद्यार्थी अधिक विचलित झाले आणि ऑनलाइन मोडमुळे त्यांना त्यांच्या व्याख्यात्यांसोबत उत्स्फूर्त संवाद नसताना मूल्यांकन आणि परीक्षेबद्दल अनिश्चित वाटू लागले. कोविड-19 महामारी दरम्यान विद्यार्थ्यांच्या शिकण्याच्या सकारात्मक आणि नकारात्मक अनुभव आहेत. बहुसंख्य व्याख्यात्यांनी नवीन शिकवण्याचे तंत्र शिकण्याचा आणि नवीन आणि चांगली साधने शिकून अधिक सर्जनशील बनण्याचा एक मार्ग म्हणून ऑनलाइन शिकवण्याचा त्यांचा अनुभव ओळखला. तथापि, नकारात्मक बाजूने, व्याख्यात्यांना असे वाटले की विद्यार्थ्यांच्या प्रयोगशाळेतील कौशल्यांशी तडजोड झाली असावी आणि ते विद्यार्थ्यांच्या उपस्थितीवर नियंत्रण ठेवू शकत नाहीत. विद्यार्थ्यांच्या शिकण्याच्या यशाबद्दलही ते अनिश्चित होते. अभ्यासादरम्यान इतर शैक्षणिक क्रियाकलापांसह अध्यापनातील व्याख्यात्यांच्या सकारात्मक आणि नकारात्मक अनुभव आहेत.

- **विद्यार्थी व व्याख्यात्यांवरील शारीरिक आणि मानसिक आरोग्यावर परिणाम**

बहुसंख्य विद्यार्थ्यांनी नोंदवले की त्यांनी बाहेरचे खाणे चुकवले आणि त्यांना अभ्यासेतर क्रियाकलापांचा अभाव जाणवला, त्यांच्यापैकी केवळ 35.8% घरी व्यायाम करत आहेत. त्यांनी पाठीच्या अधिक समस्या आणि डोळ्यांचा ताण किंवा कोरडे डोळे देखील नोंदवले. त्यांच्या मानसिक आरोग्याच्या बाबतीत, त्यांनी अधिक ताणतणाव, त्यानंतर चिंता, एकाकीपणा आणि नैराश्याचा अहवाल दिला, परंतु यावेळी विद्यापीठापासून दूर राहिल्याने आत्म विद्यार्थ्यांचे .चिंतनासाठी अधिक वेळ मिळाला-शारीरिक आणि मानसिक आरोग्य अनुभव दर्शवते. दरम्यान, व्याख्यात्यांकडे व्यायामासाठी जास्त वेळ होता परंतु तरीही स्क्रीनच्या वाढलेल्या वेळेमुळे संगणकाशी संबंधित शारीरिक ताण वाढला. व्याख्यात्यांनी कुटुंबाशी जवळचे नातेसंबंध नोंदवले असले तरी, त्यांनी काम, कुटुंब आणि स्वतशी संबंधित : चिंतेसह, मुदती, अनपेक्षित व्यत्यय आणि जास्त कामाचा ताण यांमुळे तणावग्रस्त असल्याचे कबूल केले. सुदैवाने, उदासीनतेची कमी टक्केवारी नोंदवली गेली. व्याख्यात्यांनी त्यांच्या शारीरिक आणि मानसिक आरोग्यावर साथीच्या रोगाच्या प्रभावावरून नोंदवलेले प्रतिसाद दर्शविते. ऑनलाइन डिझाइन आणि मूल्यमापन वितरणामुळे अर्ध्या व्याख्याता सर्जनशील आणि नाविन्यपूर्ण बनत असताना सर्व पर्याय शोधण्यात सक्षम झाले, परंतु त्यांना विद्यार्थ्यांसाठी योग्य प्रश्न आणि न्याय्य मूल्यमापन राखणे कठीण झाले. या अभ्यासात व्याख्यानांचे डिझाइन आणि मूल्यांकन प्रदान करतानाचे सकारात्मक आणि नकारात्मक अनुभव स्पष्ट करते.

- **ऑनलाइन शिक्षणातून विद्यार्थ्यांचे अनुभव**

सदर अभ्यास महामारीच्या काळात विद्यार्थ्यांमध्ये ऑनलाइन शिक्षणाचा अनुकूल पुरावा प्रदान करतो ज्याने बहुसंख्य अहवाल दिला आहे की ते स्वतंत्र झाले, ऑनलाइन शिक्षणाशी जुळवून घेतले आणि अधिक स्वयंप्रेरित झाले-, ऑनलाइन अध्यापनशास्त्राचे निश्चितच फायदे विद्यार्थ्यांना स्वतंत्रपणे काम करण्यास प्रोत्साहित करण्यात आणि त्यांची वाढ वाढवण्यामध्ये आहेतची :स्वत . .कार्यक्षमता पुराव्यांवरून असे सुचवण्यात आले आहे की जे विद्यार्थी स्वतंत्र शिकणारे आहेत, उच्च दर्जासाठी काम करतात, त्यांच्या शिकण्यात अनेक प्रकारच्या धोरणांचा वापर करतात, त्यांच्या समस्या सोडवण्याच्या कौशल्यांमध्ये सक्षम असतात, अधिक प्रेरित असतात आणि त्यांचा स्वाभिमान जास्त असतो. याव्यतिरिक्त, अशा शैक्षणिक पद्धती विद्यार्थ्यांना स्वयंनिर्देशित शिकणारे बनण्यास सक्षम बनवू - शकतात, जी आयुष्यभर शिकण्यासाठी आवश्यक असलेली एक महत्त्वाची क्षमता आहे. याउलट, आमच्या अभ्यासात विद्यार्थ्यांनी नोंदवलेला तोटा म्हणजे घरून अभ्यास करताना विचलित होणे, जसे की थेट व्हिडिओ लेक्चर्स दरम्यान गोंगाटाची पार्श्वभूमी. यामुळे घरातील शिक्षणाच्या कोंडीवरील वर्तमान ज्ञानात भर पडते. दैनंदिन घरगुती कामे आणि कौटुंबिक किंवा घरातील वैयक्तिक बांधिलकी यासह कार्यांमध्ये संघर्षामुळे घरातील पर्यावरणीय घटक अपरिहार्य असू शकतात. याव्यतिरिक्त, ऑनलाइन शिक्षण घेत असताना विद्यार्थ्यांनी ज्या गोपनीयता आणि शांततेवर लक्ष केंद्रित करणे आवश्यक आहे त्याबद्दल विद्यार्थ्यांचे कुटुंब किंवा घरातील सदस्यांनी कौतुक केले नसेल तर विद्यार्थी म्हणून त्यांच्या शैक्षणिक भूमिकेमुळे विद्यार्थ्यांनाही आव्हान दिले जाऊ शकते.

ऑनलाइन शिक्षण हे तंत्रज्ञानातील आश्वासक प्रगती दर्शवत असले तरी, अशा प्लॅटफॉर्ममुळे त्यांच्यातील प्रतिबद्धता मर्यादित होऊ शकते आणि शिकण्याच्या प्रक्रियेचे शक्य तितके मानवीकरण करण्यासाठी प्रयत्न केले पाहिजेत. अशा प्रकारे, अभिप्राय सुलभ करण्यासाठी आणि विद्यार्थ्यांना प्रश्न विचारण्यास प्रोत्साहित करण्यासाठी व्याख्यातांनी ऑनलाइन सूचना देण्यासाठी प्रभावी धोरण आखले पाहिजे, जसे की त्यांच्या विद्यार्थ्यांना ऑनलाइन चर्चा आणि क्विझमध्ये सहभागी होण्यासाठी सतत आठवण करून देणे आणि त्यांना सूचित करणे आणि ऑनलाइन सत्रे गतिमान, मनोरंजक आणि परस्परसंवादी बनवणे. इतर सूचनांमध्ये विद्यार्थ्यांशी वैयक्तिकरित्या संवाद साधण्यासाठी सोशल मीडिया, टेक्स्ट मेसेज आणि विविध मेसेजिंग ॲप्लिकेशन्सचा वापर करून विद्यार्थ्यांना सतर्क आणि लक्ष देण्याकरिता नियमित स्मरणपत्रांचा समावेश आहे. विद्यार्थ्यांच्या शैक्षणिक क्रियाकलापांची योजना आखण्यासाठी, स्वमूल्यांकन करण्यात मदत - करण्यासाठी आणि समस्या सोडवण्यात त्यांचा आत:मविश्वास वाढवण्यासाठी त्यांच्याशी संवाद साधणे महत्त्वाचे आहे कारण संशोधनाने असे दस्तऐवजीकरण केले आहे की विद्यार्थी आणि व्याख्याते यांच्यातील परस्परसंवाद तसेच विद्यापीठाच्या भावनात्मक आणि सामाजिक समर्थन हे प्रभावी शिक्षणासाठी आवश्यक घटक आहेत. निश्चितपणे, जे व्याख्याते विद्यार्थ्यांमध्ये अस्सल वैयक्तिक आणि शैक्षणिक स्वारस्य दाखवतात ते अधिक मजबूत विद्यार्थी परिणामांची नोंद करतात.

- **ऑनलाइन शिक्षण आणि मूल्यमापनातून व्याख्यातांचे अनुभव**

व्याख्यात्यांकडील निष्कर्षांनी विद्यार्थ्यांच्या समान भावनांवर प्रकाश टाकला की ऑनलाइन शिक्षण पद्धती हे अध्यापन आणि शिकण्याचे एक प्रभावी स्त्रोत होते, व्याख्यात्यांनी अहवाल दिला की ते सर्जनशील आणि नाविन्यपूर्ण बनत असताना नवीन अध्यापन तंत्र शिकत आहेत. युनिव्हर्सिटी बंद झाल्यामुळे, क्लिनिकल स्किल्स अध्यापन आणि प्लेसमेंटमध्ये बदल करावे लागले, जेथे क्लिनिकल सेटिंग्जमध्ये विद्यार्थ्यांची नियुक्ती ही एक महत्त्वाची हालचाल म्हणून थांबवण्यास भाग पाडले गेले ज्यामुळे डॉक्टरांना साथीच्या रोगामुळे प्रभावित झालेल्या रूग्णांचे व्यवस्थापन करण्यावर लक्ष केंद्रित करणे आणि विद्यार्थ्यांच्या आरोग्याशी संपर्क मर्यादित करणे.रुग्णालयांमध्ये धोके . हे विद्यार्थ्यांसाठी गैरसोयीचे होते कारण त्यांच्या अभ्यासासाठी आणि मूल्यांकनासाठी रुग्ण संपर्क आवश्यक आहे. लंडनस्थित मेडिकल स्कूलमध्ये. अशा पद्धतीमुळे विद्यार्थी आणि व्याख्याता दोघांच्या परस्परसंवादात मोठ्या प्रयत्नांची आवश्यकता असेल आणि तडजोड केल्यास, यामुळे चर्चांचे प्रमाण आणि गुणवत्ता कमी होऊ शकते. प्रयोगशाळा आणि नैदानिक कौशल्य अध्यापन यासारख्या हँड्स-ऑन सत्र ऑनलाइन शिक्षणाच्या मर्यादा आहेत हे आमच्या अभ्यासाने ओळखले असल्याने, व्याख्यात्यांनी ऑनलाइन सिम्युलेटेड पेशंट, रोल-प्ले, प्रयोगशाळेचे रेकॉर्ड केलेले व्हिडिओ सामायिक करणे आणि क्लिनिकल कौशल्यांचे प्रात्यक्षिक इतिहास शिकविणे, क्लिनिकल तर्क आणि संभाषण कौशल्य. असे प्रयत्न करूनही, आमच्या निष्कर्षांनी व्याख्यात्यांची चिंता दर्शविली की विद्यार्थ्यांच्या व्यावहारिक कौशल्यांशी तडजोड झाली आहे. व्याख्यात्यांना ऑनलाइन क्लिनिकल अध्यापनात संक्रमण करण्यावर मर्यादित आत्मविश्वास तसेच डिजिटल तंत्रज्ञानाचा वापर करून परस्परसंवादी पद्धतींचा मर्यादित अनुभव असू शकतो; त्यामुळे विद्यार्थ्यांच्या शैक्षणिक परिणामांबद्दल त्यांना अनिश्चित वाटते.

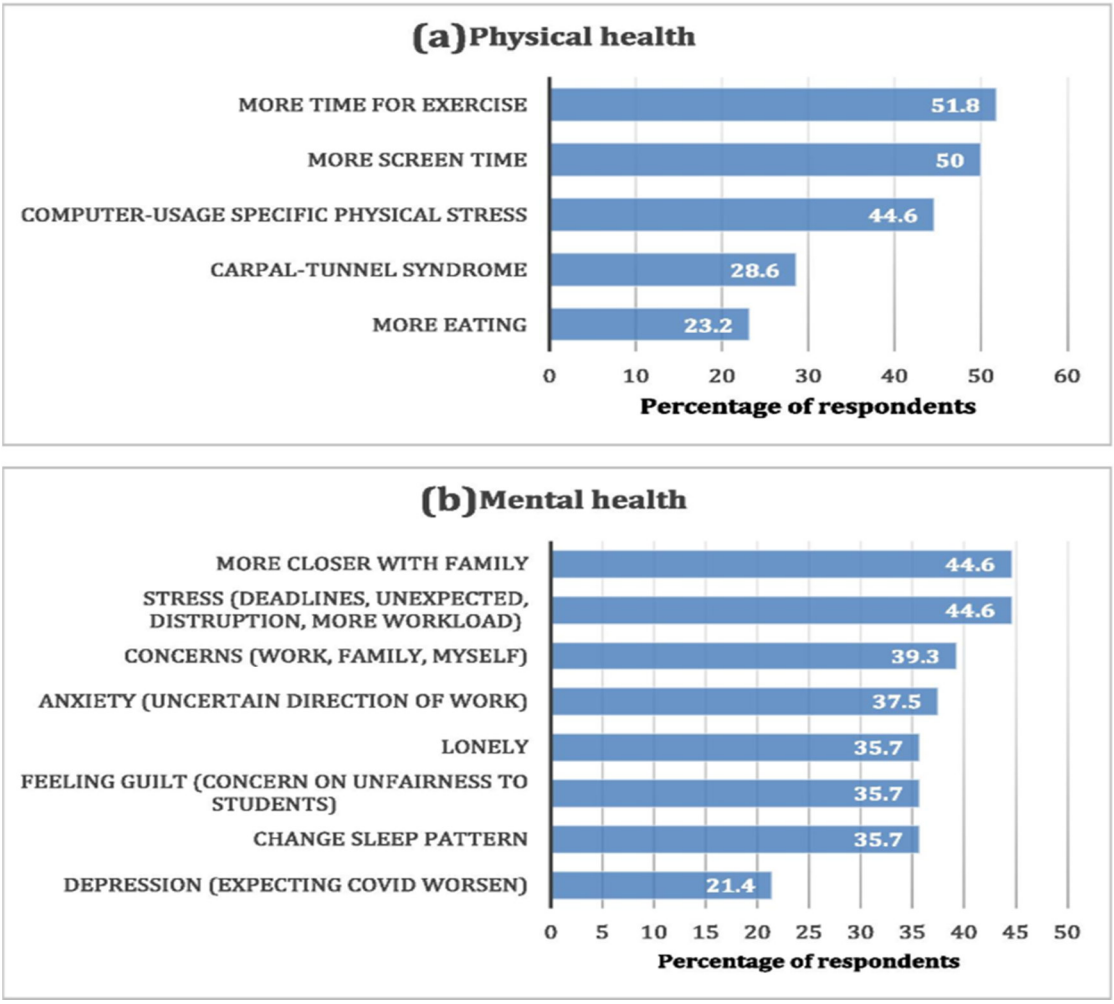
जगभरातील इतर विद्यापीठांप्रमाणेच, साथीच्या आजाराच्या वेळी विद्यार्थ्यांच्या मूल्यांकनात अचानक बदल करावे लागले. लेखी असाइनमेंट, मौखिक सादरीकरणे आणि जीवनासाठी ऑनलाइन लर्निंग मॅनेजमेंट सिस्टीमचा वापर करून मुल्यांकन देखील ऑनलाइन पद्धतींमध्ये रूपांतरित केले गेले. आमच्या अभ्यासातील अर्ध्या व्याख्यात्यांनी सकारात्मक अहवाल दिला की या संक्रमणामुळे त्यांना ऑनलाइन परीक्षांचे पर्याय शोधण्याची परवानगी मिळाली, ज्यात त्यांच्या दृष्टीकोनांमध्ये अधिक नाविन्यपूर्ण बनण्याच्या संधीचा समावेश होता, त्यांच्यासाठी एक सकारात्मक परंतु तीव्र शिक्षण वक्र म्हणून पाहिले गेले. लर्निंग मॅनेजमेंट सिस्टीमशी परिचित होण्यासाठी आणि प्रश्न सेटिंग आणि मार्किंग किंवा ग्रेडिंग स्ट्रॅटेजीजसाठी ऑफर केलेल्या विविध पद्धती शिकण्यासाठी कार्यशाळांच्या मालिकेद्वारे व्याख्यात्यांना परीक्षेच्या ऑनलाइन पद्धतीसाठी देखील तयार केले गेले. तथापि, व्याख्यात्यांनी योग्य प्रश्न राखण्यात आणि न्याय्य मूल्यमापन सुनिश्चित करण्यात अडचण देखील नोंदवली, तर बहुसंख्य विद्यार्थ्यांना त्यांच्या मूल्यांकनांबद्दल अनिश्चित वाटले. या संक्रमणादरम्यान, महामारीमुळे काही शैक्षणिक उद्दिष्टे अकाली वगळल्याच्या प्रतिसादात मूल्यांकनांची रुंदी आणि खोली कमी करण्याची गरज होती. मॉडेल, रूग्ण, उपकरणे किंवा सिम्युलेशन नसताना कौशल्यांचे वर्णन करणाऱ्या ऑनलाइन व्हिवासह क्लिनिकल मूल्यांकन बदलणे आवश्यक होते. या व्यतिरिक्त, शैक्षणिक अखंडतेमध्ये संभाव्य तडजोड वाढवून, परीक्षा ऑनलाइन प्रॉक्टोर केल्या गेलेल्या निष्पक्ष मूल्यांकन साध्य करण्याबद्दल व्याख्याते चिंतेत होते. ऑनलाइन परीक्षांदरम्यान इंटरनेट कनेक्टिव्हिटी गमावून बसलेली आणखी एक चिंता म्हणजे विद्यार्थ्यांचे निरीक्षण न करणे तसेच या ऑनलाइन प्रॉक्टोरिंगद्वारे परीक्षेचा प्रयत्न करण्यासाठी कालावधी योग्यरित्या वाटला गेला की नाही.

- **ऑनलाइन शिक्षणाचा विद्यार्थी आणि व्याख्यातांवर शारीरिक आरोग्यावर होणारा परिणाम**

COVID-19 च्या जागतिक उद्रेकामुळे क्रीडा संकुले आणि ठिकाणे बंद झाली, क्रीडा क्रियाकलापांमध्ये सक्रिय सहभाग मर्यादित झाला ज्यामुळे व्यक्ती अधिक स्क्रीन वेळेसह शारीरिकदृष्ट्या कमी सक्रिय होते आणि अस्वास्थ्यकर आहाराचे सेवन करते ज्यामुळे आरोग्य समस्या उद्भवू शकते. आमच्या अभ्यासातील विद्यार्थी प्रतिसादकर्त्यांनी 'बाहेरचे खाणे गहाळ' आणि 'पाठाच्या अधिक समस्या' आणि 'डोळ्यांचा ताणकोरडे डोळे/' यासह 'अभ्यास्येतर क्रियाकलापांमध्ये सहभाग नसणे' नोंदवले. दरम्यान, अर्ध्याहून अधिक व्याख्यात्यांनी 'व्यायामासाठी अधिक वेळ' असल्याचे नोंदवले, जरी त्यांच्याकडे 'जास्त स्क्रीन वेळ' होता, ज्यामुळे पाठीच्या समस्या, डोळे कोरडे किंवा ताण आणि कार्पल टनेल सिंड्रोम यासारखे 'संगणक संबंधित शारीरिक ताण' होते. हे निष्कर्ष ब्रुनेई दारुस्सलाममध्ये महामारीच्या काळात लागू केलेल्या सामाजिक अंतराच्या उपायांशी सहमत आहेत, जिथे जेवणाच्या आवारात जेवणाची सेवा पुरवण्याची परवानगी

नव्हती. अभ्यास कालावधीत विद्यापीठाचे कार्यक्रम आणि अभ्यासक्रमाबाहेरील उपक्रमही रद्द करण्यात आले. ऑनलाइन शिक्षणासाठी संगणक किंवा उपकरणांच्या वाढत्या गरजेमुळे आमच्या अभ्यासात नमूद केल्याप्रमाणे शारीरिक परिणाम होतात, जसे की पाठीच्या समस्या, डोळ्यांचा ताण, कोरडे डोळे, संगणकाशी संबंधित शारीरिक ताण, बहुधा दीर्घकाळ स्क्रीन वेळेसह वाढण्याची शक्यता असते.

आकृती १. विध्यार्थी व व्याख्यातांच्या शारीरक व मानसिक आरोग्यावरील परिणाम



सदर अभ्यासातील व्याख्यात्यांबद्दल हे संभाव्य स्पष्टीकरण असू शकते ज्यांना आरोग्य समस्यांबद्दल अधिक आत्मजागरूकता -.आणि जबाबदारी असू शकते आणि म्हणून व्यायाम किंवा घरकामाद्वारे घरी शारीरिकरित्या सक्रिय राहण्याची गरज आहे ऑनलाइन व्यायाम संसाधने जसे की शारीरिक सामर्थ्य प्रशिक्षण वृद्ध सहभागींसाठी अधिक व्यवहार्य असू शकते, तर तरुण लोक सामाजिक किंवा गट खेळांमध्ये भाग घेण्यास प्राधान्य देऊ शकतात, जे त्या वेळी प्रतिबंधित होते. असे निष्कर्ष या अहवालाशी सुसंगत आहेत की साथीच्या आजारादरम्यान शारीरिक क्रियाकलाप कमी करणे आणि स्क्रीन टाइममध्ये वाढ झाल्याने व्यक्तीच्या शारीरिक आणि मानसिक आरोग्यावर नकारात्मक परिणाम होतो.

- **ऑनलाइन शिक्षणाचा विद्यार्थी आणि व्याख्यातांवर मानसिक आरोग्यावर होणारा परिणाम**

शाळा बंद झाल्यानंतर सामाजिक अंतरामुळे मानसिक आरोग्य समस्या अशा वेळी वाढू शकतात जेव्हा ते साथीच्या रोगाबद्दल चिंता अनुभवत असतात. भविष्यातील रोजगार, परस्पर संवादाची अनुपस्थिती आणि समजूतदारपणाच्या अभावामुळे बिघडू शकते. अज्ञात भीती व्यतिरिक्त व्हायरस प्रसार. आमच्या अभ्यासात, विद्यार्थ्यांनी तणाव, चिंता, एकाकीपणा आणि नैराश्याच्या भावनांना साथीच्या आजाराचे मानसिक आरोग्यावर परिणाम म्हणून ओळखले. स्वतंत्र शिक्षण घेण्याच्या वाढत्या दबावामुळे आणि त्यांच्या नेहमीच्या नित्यक्रमांचा त्याग केल्यामुळे विद्यार्थ्यांना तणावाचा अनुभव येऊ शकतो, ज्यामुळे चिंता, नैराश्य, झोपेची अडचण आणि ताणतणाव यासारखे मानसिक परिणाम होऊ शकतात. क्लिनिकल प्लेसमेंट्स रद्द कराव्या लागल्याने, यामुळे विद्यार्थ्यांच्या एकाकीपणा वाढू शकतो,

शाळा किंवा महाविद्यालयांमध्ये त्यांच्या नेहमीच्या सामाजिक संपर्कांपासून वेगळे होण्याव्यतिरिक्त आढळलेले असे निष्कर्ष इतर अभ्यासांपेक्षा वेगळे नाहीत. सदर अभ्यासात असे दिसून आले आहे की विद्यापीठातील विद्यार्थ्यांनी उच्च चिंतेची पातळी दर्शविली कारण विद्यार्थ्यांनी पूर्णपणे ऑनलाइन शिक्षणासह नवीन शब्दाचा सामना केला तर सामाजिक अलगाव दरम्यान चिंता आणि तणाव अनुभवला. वेळ व्यवस्थापन, एकाग्रता, अभ्यासाची प्रेरणा आणि शिकण्याच्या पद्धती यांसारख्या शिकण्याच्या कौशल्यांवर चिंता आणि तणावामुळे परिणाम होत असल्याचे दिसून आले आहे आणि यामुळे विद्यार्थ्यांच्या कामगिरीवर परिणाम होऊ शकतो. त्याचप्रमाणे, व्याख्यात्यांमध्येही मानसिक आरोग्यावर परिणाम दिसून आला जेथे आमच्या अभ्यासातील जवळपास निम्म्या लोकांना डेडलाइन पूर्ण केल्यामुळे आणि अनपेक्षित विचलित होल्यामुळे अधिक तणाव जाणवला. काम, कुटुंब आणि स्वतशी संबंधित चिंतांमुळेही मानसिक : .आरोग्याशी तडजोड होऊ शकते

विशेष म्हणजे, विद्यार्थ्यांच्या तुलनेत, व्याख्यात्यांना कमी ताण, चिंता आणि एकाकीपणाचा अनुभव आला. आमच्या निष्कर्षांची तुलना स्पेनमधील एका अभ्यासाशी केली जाऊ शकते जिथे विद्यापीठातील कर्मचाऱ्यांनी विद्यार्थ्यांच्या तुलनेत DASS-21 साधनाचा वापर करून उदासीनता, चिंता आणि तणाव कमी गुण नोंदवले आहेत. कुटुंबाशी जवळीक साधणे आणि घरी त्यांचा पाठिंबा मिळवणे ही व्याख्यात्यांमधील ताणतणाव कमी करण्यासाठी महत्त्वाची भूमिका बजावते. UBD मधील PAPRSB-IHS आरोग्यासाठी वकील म्हणून विद्यापीठाची भूमिका विकसित करण्यासाठी वचनबद्ध आहे. यामध्ये आरोग्य विज्ञान आणि वैद्यकीय, दंतचिकित्सा, फार्मसी, नर्सिंग आणि मिडवाइफरी आचरण या आरोग्य विज्ञान कार्यक्रमातील विद्यार्थ्यांसाठी आरोग्यविज्ञान विद्याशाखेतील विद्यार्थ्यांसाठी अनेक - आरोग्य शिक्षण मॉड्यूल ऑफर करून त्यांच्या अध्यापन आणि संशोधन अभ्यासक्रमात आरोग्य प्रचार आणि शिक्षण सामग्री वाढवणे अनेक आरोग्य एज .माविष्ट आहेसन्सींसोबत युती करून आरोग्याशी संबंधित समुदाय पोहोच प्रकल्प. संस्था युनिव्हर्सिटी क्लिनिकची स्थापना करण्याच्या प्रक्रियेत आहे, ज्याचा उद्देश प्राथमिक आरोग्य सेवेला प्रोत्साहन देणे आणि विद्यापीठ आणि सार्वजनिक समुदाय या दोन्हींच्या विशिष्ट आरोग्य समस्यांचे व्यवस्थापन करणे आहे. तसेच विद्यापीठाच्या आत आणि बाहेरील प्राथमिक आरोग्य सेवा आणि कल्याणकारी एजन्सीसह भागीदारी तयार करून समुदायातील आरोग्यासाठी एक वकील आहे. हे समाजातील आरोग्य विकासाला समर्थन देण्यासाठी आरोग्य संवर्धन दुवे विकसित करून आणि आरोग्य, आरोग्य संवर्धन आणि अध्यापन आणि संशोधनामध्ये सार्वजनिक आरोग्य समस्यांचे प्रोफाइल वाढवून देखील प्राप्त केले जाऊ शकते.

विद्यार्थी आणि कर्मचाऱ्यांसाठी निरोगी कार्य, शिकणे आणि राहण्याचे वातावरण तयार करून विद्यापीठाच्या संस्कृती, संरचना आणि प्रक्रियांमध्ये आरोग्य समाकलित करून विद्यापीठ समुदायाच्या कल्याणास प्रोत्साहन देणे महत्वाचे आहे, विशेषतमहामारीच्या : .म्हणजे सामाजिक अलगाव .काळात जिथे सामाजिक अंतर पाळले जाऊ नये आरोग्यप्रोत्साहन करणारे विद्यापीठ होण्यासाठी-, शाश्वत आरोग्य धोरणांचा प्रचार आणि संपूर्ण विद्यापीठात आरोग्यदायी कार्य आणि आश्वासक सामाजिक वातावरण प्रदान करणे आवश्यक आहे. यामध्ये सामाजिक, विरंगुळा, क्रीडा आणि सांस्कृतिक सुविधांच्या भौतिक वापरावर परिणाम होत असताना महामारीच्या काळात विद्यार्थी आणि कर्मचाऱ्यांच्या गरजा लक्षात घेऊन कल्याणकारी, वैद्यकीय आणि आरोग्यसंब-ंधित सहाय्य सेवा प्रदान करणे समाविष्ट आहे. सुरक्षितता, आरोग्य आणि पर्यावरण कार्यालयाच्या माध्यमातून विद्यापीठाने या काळात संसाधनांची देवाणघेवाण आणि कामाच्या वेळापत्रकाशी संबंधित सतत संप्रेषण, सर्वांना जोडलेले आणि ॲपद्वारे सक्रिय राहणे याद्वारे शारीरिक आणि मानसिक आरोग्य जागरूकता वाढवण्यासाठी पावले उचलली आहेत .

- **निष्कर्ष**

आमच्या अभ्यासातील बहुसंख्य विद्यार्थ्यांनी सकारात्मक अहवाल दिला की ऑनलाइन शिक्षणाने त्यांना अधिक स्वतंत्र बनवले आहे आणि ते अचानक झालेल्या बदलांमुळे ऑनलाइन शिक्षणाशी जुळवून घेऊ शकतात, तर व्याख्यात्यांनी ऑनलाइन अध्यापनाचा अनुभव नवीन शिकवण्याचे तंत्र शिकण्याचा आणि अधिक सर्जनशील बनण्याचा एक मार्ग म्हणून ओळखलानवीन आणि चांगली साधने . .शिकणे तथापि, घरी अभ्यास केल्याने विद्यार्थ्यांना अधिक विचलित वाटू लागले आणि त्यांनी त्यांच्या व्याख्यात्यांसोबत उत्स्फूर्त संवादाची कमतरता ओळखली. व्याख्यात्यांना असे वाटले की विद्यार्थ्यांच्या प्रयोगशाळेतील कौशल्यांशी तडजोड झाली असावी आणि ते

विद्यार्थ्यांच्या शिकण्याच्या यशाबद्दल अनिश्चित होते. मुल्यांकनांच्या ऑनलाइन वितरणामुळे व्याख्यात्यांना सर्जनशील आणि नाविन्यपूर्ण बनताना पर्याय शोधता आले, परंतु त्यांना योग्य आणि न्याय्य मूल्यमापन राखणे कठीण वाटले, ज्याबद्दल विद्यार्थी देखील अनिश्चित होते. बहुसंख्य विद्यार्थ्यांनी 'बाहेर खाणे' चुकवले आणि त्यांना पाठीच्या आणि डोळ्यांच्या समस्यांसह अतिरिक्त क्रियाकलापांमध्ये सहभागाची कमतरता जाणवली. जरी व्याख्यातांनी सांगितले की त्यांच्याकडे व्यायामासाठी जास्त वेळ आहे, स्क्रीनच्या वाढलेल्या वेळेमुळे संगणकाशी संबंधित शारीरिक ताण, जसे की पाठीच्या समस्या, डोळे कोरडे किंवा डोळ्यांचे ताण आणि कार्पल टनल सिंड्रोम आहेत. अधिक परस्परसंवाद आणि उत्तम मूल्यांकनासाठी अनुमती देणाऱ्या साधनांना प्रतिसाद देणाऱ्या डिजिटल तंत्रज्ञानाचा वापर करण्यासाठी विद्यापीठ समुदायाची तयारी आणि आत्मविश्वास सुधारण्यासाठी अशा पध्दतींसाठी विद्याशाखा विकास आवश्यक आहे, तसेच अध्यापन आणि मूल्यमापन वितरीत करण्यासाठी ऑनलाइन किंवा मिश्रित तंत्रज्ञानाच्या वापरास प्रोत्साहन देणारी धोरणे आवश्यक आहेत.

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शिक्षक व आधुनिक शिकविण्याच्या पद्धती

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सारांश :

शिक्षणाच्या सर्वच स्तरावर गुणवत्ता प्रस्थापित करण्यासाठी प्रयत्न केले जात आहेत. सामाजिक परिवर्तन घडवुन आणण्यात शिक्षकाची अत्यंत महत्वपुर्ण भुमिका असते. पिढी धडविण्याचे कार्य शिक्षक करित असतो. शिक्षणाची गुणवत्ता ठरविण्याचे परिणाम त्यातुन होणारी गुणवान पिढी होय. नवीन स्पर्धेच्या युगात विद्यार्थ्यांना सृजाण व समृध्द घडविण्यासाठी प्रत्येक शिक्षकाने आपला जीव ओतुन काम करित आहे. शिक्षकांमधील संशोधनवृती त्याला सर्जनशिल कार्य करण्यास तसेच नवोपक्रम हाती घेण्यास प्रेरक ठरते. म्हणुन शिक्षक कोणत्याही स्तरांवर कार्य करणारा असो शिक्षकाला अवगत असणे गरजेचे आहे.

मुख्य शब्द: शिक्षण, गुणवत्ता, शिक्षक, विद्यार्थी, पिढी

प्रस्ताावणा :

शिक्षकांच्या व्यावसायिक क्षमता निश्चित करणे व त्या विकसित करण्याच्या दृष्टीने प्रयत्न करणे असा प्रवाह नव्याने शिक्षण क्षेत्रात येत आहे. या बाबतीत आंतरराष्ट्रीय शिक्षण आयोगाचे (डेलार आयोग) यांच्या मते "In any event , no reform can succeed without the co-operation & active participation of teachers. - Delor's Commission. आधुनिक शिक्षण प्रणालीमध्ये आधुनिक तंत्रज्ञाणाचा उपयोग करून शिक्षकांनी विद्यार्थ्यांना शिविले पाहिजे आणी त्याकरिता विविध ॲप्सच्या माध्यमातुन ऑनलाईन शिक्षण यांवर भर दिसत आहे. वास्तवीक हे बदल परिस्थितीनुसार नवीन बदल स्वीकारण्याची मानसिकता देखील शिक्षकांची असली पाहीजे.

शैक्षणिक गुणवत्ता वाढविण्याच्या प्रक्रियेतील सर्वात प्रभावी घटक हा म्हणुन शिक्षकाला मानला जातो. त्यामुळे शिक्षकांमधील विषय ज्ञान अध्यापन कौशल्य, आधुनिक तंत्रज्ञानाचा वापर क्षमतेत वाढ करणे आवश्यक आहे. पारंपारिक शिक्षण पध्दती घेत आहे. बदलत्या तंत्रज्ञानानुसार आधुनिक शिक्षण पध्दतीत खडु—फळा ऐवजी प्रोजेक्टर, स्मार्ट बोर्ड, एल सी डी ने घेतली आहे. विविध ॲप्सच्या माध्यमातुन ऑनलाईन शिक्षण यांवर भर दिसत आहे. वास्तवीक हे बदल परिस्थितीनुसार नवीन बदल स्वीकारण्याची मानसिकता देखील शिक्षकांची असली पाहीजे.बदलत्या काळात राष्ट्रनिर्माण व राष्ट्रविकासाचे कार्य करतांना शिक्षकाला विविध भुमिका पार पाडाव्या लागतील व त्यासाठी विविध क्षमता स्वत:च्या वाढवाव्या लागतील.

- **आधुनिक काळामध्ये शिक्षकांची बदलती भुमिका:**
  १) समाजोपयोगी व राष्ट्रनिर्मानास सहायक
  २) सामाजिक व मानवी मुल्य संवर्धन करणारा
  ३) व्यक्ती स्वातंत्र्याचा उपासक
  ४) विविध ज्ञानशाखांकडे समन्वय साधणारा
  ५) समाज परिवर्तन करणारा
  ६) व्यवसाय मार्गदर्शक व समुपदेशक
  ७) संशोधन व संशोधक
  ८) वैज्ञानिक दृष्टीकोनाचा पुरस्कर्ता
  ९) उपचारात्मक अध्यापनकर्ता
  १०) लोकशाहीचा पुरस्कर्ता

व्यक्तीचा विकास समाजातुन होतो. समाज व्यक्तीच्या विकासाला पोषक वातावरण निर्माण करतो. प्रत्येक समाजाचा सांस्कृतीक वारसा जपणा—या समाजासाठी समाजवादी नागरिक निर्माण करून मानवी संबंधाना महत्व देणारा नागरिक घडविण्याचे कार्य शिक्षकाला करावे लागते. शिक्षण व समाज हे परंपरा हा सांस्कृतीक वारसा एका पिढीतुन दुस—या पिढीकडे पाठविण्याचे (रूजविण्याचे) सामर्थ्य शिक्षकामध्ये आहे. हे समजुन घेऊन मानवी संबंध जोपासण्याचे कार्य शिक्षकाला करावे लागते.

चर्चा व विश्लेषन

आधुनिक शिक्षण पध्दतीमध्ये तंत्रज्ञानाचा उपयोग मानवि क्षमतेत वाढ व विकास करणे असुन आधुनिक काळात राष्ट्रनिर्माण व राष्ट्रविकास व समाजविकासाचे कार्य करतांना शिक्षण प्रणाली व शिक्षकाला विविध भुमिका व कार्य पार पाडाव्या लागतील व त्यासाठी विविध क्षमता कौषल्य आत्मसात करून ते विद्यार्थ्यांमध्ये रूजविने आवश्यक आाहे. आधुनिक शिक्षण प्रणाली मधिल व शिक्षकांना पार पाडावयाचच्या विविध भुमिका व कार्यावर पुढिल प्रमाणे चर्चा व विश्लेषन केले आहे.

- **मुल्य संवर्धन करणारा:**

शिक्षकाच्या आचार संहितेनुसार शिक्षकाने प्राथमिक स्तरापासुन ते महाविद्यालयीन स्तरांपर्यंत मुल्य सवर्धकाची भुमिका यशस्वीरित्या पार पाडणे अनिवार्य असते. शिक्षकाच्या आचरणात नैतिक मुल्यांचे अधिष्ठान असेल तर चारित्र्य संपन्न विद्यार्थी निश्चित घडतील केवळ भौतिक प्रगतीने जीवनातील सर्वच सुखसमाधान मिळवता येत नाही. म्हणुनच विद्यार्थ्यामध्ये वैज्ञानिक दृटिकोनाबरोबर नैतिक मुल्य रूजविणे व त्यांचे संवर्धन शिक्षकाला करावे लागते. हे करतांनी आधुनिक तंत्रज्ञानांच्या संशोधनाचाही आधार घ्यावा लागतो.

- **व्यक्तीस्वातंत्र्याचा उपासक:**

प्रत्येक अध्ययनकर्ता हा महत्वपुर्ण व्यक्ती आहे. ही व्यक्तिमत्वाची संकल्पना शिक्षकाने नेहमी लक्षात ठेवावी. प्रत्येकाला व्यक्तिस्वातंत्र्य असल्यामुळे प्रत्येक विद्यार्थ्याचा प्रथम व्यक्ती म्हणुन आदर करून त्यांच्या विकासासाठी आवश्यक त्या कृती करतांना प्रत्येक अध्ययनकर्त्याला सहभागी होण्याची संधी उपलब्ध करून घावी.अशा प्रकारे शिक्षकाने व्यक्तिस्वातंत्र्याचा आदर करून त्याचे उपासक बनावे.

- **विविध ज्ञानशाखांकडे समन्वय साधणारा:**

अध्यापन उत्कृष्ट होवुन ते चिरकाल टिकण्यासाठी शिक्षकाला आधुनिक ज्ञानशाखांतील ज्ञानाचा समन्वय साधता आला पाहीजे. तरच आपल्या विद्यार्थ्यांना प्रगत ज्ञान देण्यास पात्र ठरेल. विविध ज्ञानशाखा त्यातील अद्यावत ज्ञान यांची माहिती असण्याबरोबर तिचा वापर करण्याचे कौशल्यही शिक्षकाला अवगत असणे गरजेचे आहे.

- **समाज परिवर्तन करणारा:**

शिक्षण हे सामाजिक विकास व परिवर्तनाचे साधन आहे. शिक्षणाची उद्दिष्टये ही राष्ट्राच्या गरजा लक्षात घेऊन ठरविली जातात. ही उद्दिष्टे शिक्षणातुन प्रत्येक स्तरानुसार शिक्षकाला साध्य करावी लागतात. यासाठी प्रत्येक स्तरावर शिक्षकाची भुमिका महत्वपुर्ण ठरते. अर्थात ही समाज परिवर्तनाची जबाबदारी शिक्षकाला सांभाळावी लागते.

- **व्यवसाय मार्गदर्शक व समुपदेशक:**

अध्यापना बरोबर शिक्षणातुन मनुष्यबळ निर्माण व्हावे याकरिता शिक्षणाच्या प्रत्येक स्तरावर शिक्षकाला व्यवसाय मार्गदर्शक म्हणुनही महत्वपुर्ण भुमीका पार पाडावी लागते. विद्यार्थ्याच्या क्षमता आणि अभिरूची घेऊन त्यांना मार्गदर्शन करावे लागते. विद्यार्थ्यानी रिकाम्या वेळेचा सदुपयोग कसा करावा तसेच कुमारवस्थेतील अध्ययनाध्यांनी पालकाशी कसे जुळवुन घेणे यासंदर्भात वैयक्तिक समुपदेशन करावे लागते.

- **संशोधक:**

संशोधन ही ज्ञानाची जननी आहे. विविध समस्यांचे निराकरण संशोधनाद्वारे करता येते. शिक्षणाच्या विविध स्तरावर कार्य करतांना उद्भवणा—या समस्यांची उकल करण्यासाठी शिक्षक संशोधन कार्य हाती घेतात व अशा पद्धतीने समास्यांचे समाधान करून घेतात. शिक्षकांमधील संशोधनवृती

त्याला सर्जनशिल कार्य करण्यास तसेच नवोपक्रम हाती घेण्यास प्रेरक ठरते. म्हणुन शिक्षक कोणत्याही स्तरांवर कार्य करणारा असो, त्याच्या ठिकाणी संशोधन वृत्ती असणे आवश्यक असते.

- **वैज्ञानिक दृष्टीकोनाचा पुरस्कर्ता:**

२१वे शतक हे विज्ञान तंत्रज्ञानाचे आहे. यासाठी प्रथमत: शिक्षक वैज्ञानिक दृष्टीकोनाचा अधिकार करणारा असला पाहीजे. राष्ट्र निर्माण करण्याचे साधन शिक्षण असल्यामुळे विकासात अडसर ठरणा—या अंधश्रध्दांना वैज्ञानिक दृष्टीकोनाच्या विचारधारेतुन बंद करता येते. म्हणुन शिक्षकाची वैज्ञानिक दृष्टीकोनाची भुमिका महत्वपुर्ण बदल समाजात घडवुन आणु शकेल.

- **उपचारात्मक अध्यापनकर्ता:**

अपेक्षीत उद्दिष्टांपर्यंत पोहचु न शकलेल्या विद्यार्थ्यासाठी केले जाणारे अध्यापन म्हणजे उपचारात्मक अध्यापन होय. एका वर्गात एकाच वयोगटाचे विद्यार्थी सारख्याच पध्दतीने अध्ययन करतील असे नाही. काही विद्यार्थी अभ्यासात अग्रेसर असतात तर काही तुलनेने मागे पडणा—या विद्यार्थ्याना अध्ययन मागासलेपणाचे निदान शिक्षकाला करावे लागते. यासाठी निदानात्मक कसोटया शिक्षकाच्या मदतीला येतात.

- **लोकशाहीचा पुरस्कर्ता:**

अब्राहम लिंकन यांचा मते " लोकांनी लोकांचे आणि लोकांसाठी केलेले राज्य म्हणजे लोकशाही राज्य होय." लोकशाहीमध्ये जात, धर्म, पंथ, वर्ण,गरीब, श्रीमंत हा भेद केला जात नाही. भारतीय राज्यघटनेत नमुद केलेली समता, न्याय, स्वातंत्र्य, बंधुता या तत्वाचा अंगिकार आपल्या देशाने केलेला आहे. लोकशाहीतील ही शाश्वत मुल्ये शिक्षणातुन कोणत्याही स्तरावरील शिक्षकाने विद्यार्थ्याच्या मनावर बिंवली पाहीजे.

नवीन स्पर्धेच्या युगात विद्यार्थ्याना सृजाण व समृध्द घडविण्यासाठी प्रत्येक शिक्षकाने आपला जीव ओतुन काम करित आहे. त्यामुळे शिक्षकांचे महत्व समाजाने लक्षात घेतले पाहीजे. शिक्षकांचा आदर केला पाहीजे. ज्या देशात शिक्षकांचा आदर केला जातो. त्या देशातील भावी पिढी ही सुजाण व सुसंस्कृत घडत असते हे सत्य आहे.

निश्कर्ष

आधुनिक काळामध्ये ही भुमिका शिक्षकाची बदलत चालली आहे. शिक्षण प्रक्रिया ही निरंतर चालणारी प्रक्रिया असुन काळानुसार शिक्षण प्रक्रियेत देखिल बदल होत असतात. पारंपारिक शिक्षण पध्दती घेत आहे. बदलत्या तंत्रज्ञानानुसार आधुनिक शिक्षण पध्दतीत खडु—फळा ऐवजी प्रोजेक्टर, स्मार्ट बोर्ड, एल सी डी ने घेतली आहे. विविध ॲप्सच्या माध्यमातुन ऑनलाईन शिक्षण यांवर भर दिसत आहे. वास्तवीक हे बदल परिस्थितीनुसार नवीन बदल स्वीकारण्याची मानसिकता देखील शिक्षकांची असली पाहीजे. उदा. सध्याची परिस्थिती पाहता कोरोणा प्रादुर्भावामुळे अनेक शाळा बंद होत्या. अश्या वेळी शिक्षकवर्ग विद्यार्थ्यापर्यंत पोहचू शकत नव्हते. अशावेळी ऑनलाईन शिक्षणाचा पर्याय वापरून प्रत्येक शिक्षकाने आपली मानसिकता बदलुन ऑनलाईन शिक्षण कसे घ्यावे, विद्यार्थ्याशी कसे कनेक्ट रहावे. ॲप्सचा वापर कसा करावा. विडीओ निर्मिती कशी करावी. या सर्व गोष्टी प्रत्यक्ष अनुभवल्या व करूनही दाखविल्या. काही नवीन बदल स्विकारले.

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ज्येष्ठ नागरिक महिलांच्या डिजीटल साक्षरतेमधील समस्या व समाजकार्य मध्यस्थी

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सारांश (Abstract):

प्रस्तुत अध्ययनामध्ये २० ज्येष्ठ नागरिक उत्तरदात्यांचे दक्षिण नागपूरातील अलंकार नगर ह्या क्षेत्रातुन गैरसंभाव्यता नमुना निवड पद्धतीतील सोयीस्कर नमुना निवड या पद्धतीचा वापर करून अध्ययन करण्यात आले. ज्येष्ठ नागरिकांना डिजीटल साक्षर होतांना समस्या निर्माण होतात. डिजीटल साक्षर होण्यामध्ये उत्सुकता आहे. डिजीटल साक्षर होतांना मनामध्ये भिती आहे. वापर करतांना काही चुकल्यास अडचण निर्माण होईल. डिजीटल साक्षरतेमुळे जीवन काही प्रमाणात सुसहय होईल असा विश्वास आहे. डिजीटल साक्षरतेमुळे नवनविन गोष्टी शिकण्याची ज्येष्ठ नागरिकांची तयारी आहे. डिजीटल उपकरणांचा ज्येष्ठांच्या आनंददायी जीवनासाठी उपयोग होतो. मानसिक आरोग्य डिजीटल उपकारांचा वापर करून सुदृढ राहण्यास मदत होते. कुटुंबातील सदस्यांना ज्येष्ठ नागरिकांना डिजीटलचे कौशल्य शिकविण्यास वेळ मिळत नाही.

सूचक शब्द (Key Words) : ज्येष्ठ नागरिक महिला, डिजीटल, साक्षरता, समाजकार्य मध्यस्थी.

- **प्रस्तावना (Introduction):**

जन्म आणि मृत्यू यामधील काळ म्हणजे आपले आयुष्य हे तीन अवस्थेत विभागलेले असते. बालपण, तारुण्य व वार्धक्य. आज जगात ६०+ ज्येष्ठ नागरिकांची संख्या अंदाजे ७५ कोटी आहे. यापैकी ११.५० कोटी भारतात आणि १४ कोटी चीनमध्ये आहेत. इतर सर्व देशात मिळून बाकीचे ४९.५० कोटी आहेत. २०२५ मध्ये जगातील ज्येष्ठ नागरिकांची संख्या १२० कोटी असेल. त्यापैकी ८२ कोटी भारताची तर ३८ कोटी विकसित देशातील जपान, अमेरिका, ऑस्ट्रेलिया, युरोपिय देश असतील. २०५० मध्ये जगातील ज्येष्ठांची संख्या २०० कोटीवर जाईल. त्यापैकी विकसनशिल देशात १६० कोटी आणि विकसित देशात ४० कोटी असतील.

जन्मदर आणि मृत्यूदर कमी होणे, सुधारलेल्या आरोग्य सेवा, वैद्यकीय शास्त्रातील संशोधन, लोकांची सुधारलेली जीवनशैली, सुधारलेले पोषण यामुळे व्यक्तीचे आयुर्मान (Life Expectancy) वाढत आहे. भारतातील ११.५० कोटी ज्येष्ठांपैकी १ कोटी १५ लाख महाराष्ट्रात आहेत. महाराष्ट्रात प्रतिवर्षी ३ लाख ज्येष्ठ नागरिकांची वाढ होते, तर भारतात प्रतिवर्षी ३० लाखांची वाढ होते. भारतीय संविधानाच्या कलम ३९, ३९—अ व ४१ अनुसार ज्येष्ठ नागरिकांना उतारवयात मानाने जगण्यासाठी आवश्यक अशा तरतुदी शासनाने कराव्यात असे सांगितले आहे.

आज सर्वांचेच जीवन अतिशय धावपळीचे झाले आहे. पूर्वी एकत्र कुटुंब पद्धती होती. स्नेह, प्रेम, जिव्हाळा, आदर यांनी समृद्ध जीवनमान होतं. नात्यानात्यात उबदारपणा होता. जीवनामध्ये आज ताणतणावही फार वाढलेत. आज भारतात वृद्ध आणि तरूण यांच्यातील दरी वाढते आहे. त्यांच्यातील सुसंवाद कमी होत आहे. परिणामी वैचारिक संघर्ष वाढतो आहे. सध्याच्या तरूण पिढीची जीवनपद्धती, जीवनमूल्ये, कार्यशैली खूप बदलली आहे. त्याचे कारण औद्योगिकीकरण, शहरीकरण, मुक्त अर्थव्यवस्था, उदारीकरण आहे. आज सर्वत्र डिजीटल साधनांचा इंटरनेट, फेसबुक, गुगल, ट्विटर, इंस्टाग्राम, व्हॉटस्अप अशाप्रकारच्या वेगवेगळया ॲपचा वापर करून आर्थिक व्यवहार, एकमेकांशी घरी बसुनच व्हिडीओ कॉन्फरन्सींगद्वारे संपर्क साधता येतो.

डिजीटल साक्षरता म्हणजे माध्यम साक्षरता आणि माहिती साक्षरता. डिजीटल साक्षरता म्हणजे विविध डिजीटल प्लॅटफॉर्मवर टायपिंग आणि इतर माध्यमांद्वारे माहिती शोधणे, संप्रेवण करण्याची

व्यक्तीची क्षमता. एक डिजीटल साक्षर व्यक्ती जागरूकता पसरवुन आणि इतरांना घरी, कामावर किंवा राष्ट्रीय व्यासपिठावर डिजीटल उपाय शोधण्यात मदत करून त्यांच्या समुदायाचा सामाजिकदृष्टया जबाबदार सदस्य बनते. इतर शक्तींचे उत्पादन करण्याचे ज्ञानदेखील समाविष्ट आहे. डिजीटलतेमुळे व्यक्तींना नविन आणि वेगवेगळया मार्गानी एकमेकांशी संवाद साधण्याचा आणि जोडण्याचा मार्ग मोकळा झाला आहे. डिजीटल साक्षरता लोकांना इतरांच्या संपर्कात राहण्यास, वेळेवर माहिती देण्यास आणि वस्तू, सेवांची खरेदी आणि विक्री करण्यास मदत करते. डिजीटल साक्षरांमध्ये गट संवाद वाढतो.

फोटो हाताळणी, ई—मेल फसवणूक डिजीटल निरक्षर लोकांना फसवु शकतात. पिडीतांचे पैसे खर्च करू शकतात आणि त्यांना ओळख चोरीला बळी पडू शकतात. डिजीटल जगाचा वापर करतांना नेहेमी एक पाऊल पुढे जाण्याचा विचार करण्यासाठी डिजीटल साक्षर असणे महत्वाचे आहे. डिजीटल कनेक्टिव्हीटी वाढल्याने डिजीटल सुरक्षिततेची चिंता आहे. भारत सरकारचे राष्ट्रीय डिजीटल साक्षरता अभियान (NDLM) प्रत्येक कुटुंबातील किमान एक व्यक्ती डिजीटल कौशल्यासह साक्षर करण्याचे उद्दिष्ट आहे. ज्येष्ठ नागरिकांना दुर्बल (vulnerable) गटामये येत असल्यामुळे त्यांना डिजीटल साक्षर करणे आवश्यक आहे.

ऐजवेल फाऊंडेशन हया एनजीओ ने २०१८ मध्ये दिल्ली—एनसीआर येथे सर्वेक्षण केले असता पाच हजार ज्येष्ठ नागरिक डिजीटल निरीक्षर आहेत असे आढळून आले. २०१५ मध्ये भारत सरकारने डिजीटल इंडिया ही मोहिम राबविली. ज्याचा उद्देश भारतातील जोडणे आणि वंचितांना डिजीटल सेवा प्रदान करणे आहे. २०२१ मध्ये हेल्प एज इंडिया च्या रिपोर्ट नुसार केवळ चार टक्के भारतीय ज्येष्ठ नागरिक इंटरनेटचा वापर करतात.

- **अध्ययनाचे उद्देश (Objectives) :**

१. उत्तरदात्यांची वैयक्तिक व कौटुंबिक पार्श्वभूमी जाणून घेणे.
२. उत्तरदात्यांना डिजीटल साक्षरतेमध्ये येणाऱ्या समस्यांचे अध्ययन करणे.
३. उत्तरदात्यांचे डिजीटल साक्षरतेबाबत मत जाणून घेणे.

- **अध्ययनाचे क्षेत्र व विश्व (Univers & Area of Study) :**

नागपूर शहरातील दक्षिण नागपूर येथील अलंकार नगर हया क्षेत्राची अध्ययनासाठी निवड करण्यात आली.

➢ **नमुना निवड व तथ्य संकलन (Sampling & Data Collection) :**

प्रस्तुत अध्ययनासाठी २० ज्येष्ठ स्त्री नागरीकांची निवड करण्यात आली. गैरसंभाव्यता नमुना निवड पद्धतीतील सोयीस्कर नमुना निवड पद्धतीचा वापर करण्यात आला. प्रस्तुत अध्ययनासाठी प्राथमिक तथ्य संकलन पद्धतीमधील मुलाखत अनुसूची व दुय्यम तथ्य संकलन पद्धतीमधील इंटरनेट, वर्तमानपत्रे, लेख, मासिके, पुस्तके यांचा वापर करण्यात आला.

तथ्य विश्लेषण व चर्चा Data Analysis & Discussion):

ज्येष्ठ नागरिक महिला हयांना डिजीटल साक्षरतेचे महत्व कोव्हीड—१९ च्या काळात जास्त वाटले. सदर विषयावर ज्येष्ठ नागरिक महिलांकडुन मुलाखत अनुसूची या पद्धतीचा वापर करतांना उत्तरदात्यांकंडुन मिळालेले तथ्यों विश्लेषन व त्यावरिल शास्त्रोक्त चर्चा पुढीलप्रमाणे :

➢ **ज्येष्ठ नागरिक महिलांमध्ये डिजीटल साक्षरतेचे वाढते महत्व:**

डिजीटल साक्षरतेचे महत्व हयांना कोव्हीड—१९ लॉकडाऊनच्या काळामध्ये डिजीटल तंत्रज्ञाणचा उपयोग व महत्व घरातच राहण्याच्या अपरिहार्यतेमुळे अनेक पटिने वाढलेले आहे. घरातच राहून वस्तू मागवायच्या हयासाठी ऑनलाईन पेमेंट कसे करावे, पेटीएम नाही, एटीएम कार्ढ नाही, त्यामुळे ज्येष्ठ महिलांची आणि त्यांच्या कुटुंबियांना अनेक समस्यांना सामोरे जावे लागले. आतापर्यंत ऑनलाईन वस्तूंची खरेदी केली नाही कारण ऑनलाईन पेमेंटमुळे बँक खात्यातील आपले पैसे पूर्ण जातील ही मनामध्ये भिती असल्यामुळे एटीएम कार्ड तयार केले नाही. आता एटीएम कार्ड ज्येष्ठ नागरिक महिलांनी तयार केले परंतु त्याचा वापर आजही खूप कमी केला जातो. प्रतयक्ष बँकेतून पैसे

काढण्यावर भर आहे. डिजीटलायझेशनचा व्यक्तीच्या दैनंदिन जीवनात फार मोठया प्रमाणात वाटा आहे.

➢ **ज्येष्ठ नागरिक महिलांमध्ये वाढते डिजीटल सामाजिक संबंध:**

डिजीटलायझेशनमुळे ज्येष्ठ नागरिक महिला आपल्या नातेवाईक, मित्र मैत्रिणींच्या संपर्कात जास्त असतात. डिजीटल साधनांच्या वापरामुळे व्यक्तीच्या जतीवनाची गुणवत्ता वाढलेली आहे. डिजीटल मध्ये व्हॉटस्अप, व्हिडीओ कॉल यांचा वापर करून ज्येष्ठ नारिकांचे सामाजिक संबंध (social connectivity) वाढले. युटयूब द्वारे आपल्याला हवे ते पदार्थ कसे करावे याबद्दल माहिती मिळाली. व्हॉटस्अप द्वारे अनेक ग्रुपमध्ये सदस्य असल्यमुळे आपल्या आजुबाजुला घडलेल्या सर्व गोष्टींची माहिती मिळते. डिजीटल मध्ये आलेले ई—मेल चेक करणे, प्रत्येक वेळी त्याचा पासवर्ड लक्षात ठेवणे कठीण होते. नविन गोष्ट स्विकारणे कठीण जाते. हया वयापर्यंत डिजीटल साधनांचे महत्व आणि कधी त्याचा स्वत:साठी उपयोग करून घेतला नाही. त्यामुळे हे सर्व नविन स्विकारणे अवघड जाते. डिजीटल साधनांचे जास्तीत जास्त उपयोग व्हॉटस्अप मेसेजेस, व्हिडीओ कॉल, कॉन्फरन्स कॉलचा केला जातो.

➢ **ज्येष्ठ नागरिक महिलांमध्ये वाढते डिजीटल व्यवहार:**

बँकींग व्यवहार (Transaction), औषध ऑनलाईन मागविणे, भाजी ऑनलाईन मागविणे हे सर्व शिकण्यासाठी ज्येष्ठ नागरिक महिलांना समस्या आल्या. कुटुंबामध्ये राहणाऱ्या ज्येष्ठ नागरिकांना डिजीटल साधनांचा वापर करण्यास शिकविण्यासाठी कुटुंबातील सदस्यांना वेळ नसतो. महागातले मोबाईल स्मार्ट फोन ज्येष्ठ नागरिकांकडे आहे पण त्यातील ॲपचा वापर करतांना समस्या येतात. कुटुंबातील सदस्यांना ज्येष्ठ नागरिकांच्या समस्या सोडविण्यासाठी त्यांच्याकडे वेळ नसतो. त्यामुळे कॅब बुक करतांना समस्या येतात. डिजीटल कौशल्य शिकविण्यास मुलांना ज्येष्ठ नागरिकांसाठी वेळही नाही आणि धीर (patience) ही नाही. ज्येष्ठ नागरिकांना हया टेक्नॉलॉजीचा वापर करण्यास वेळ लागतो.

➢ **डिजीटल साधनांमुळे ज्येष्ठ नागरिक महिलांच्या जिवनाची वाढती गुणवत्ता:**

ज्येष्ठ नागरिकांना कोरोना काळात कळले की, डिजीटल साधन हे खूप शक्तीशाली (Powerful device) व व्यक्तीचे जीवन सुसहय करण्याचे महत्वपुर्ण साधन आहे. डिजीटल साधनांचा उपयोग माहिती, मनोरंजन, ऑनलाईन व्यवहार आणि कुटुंबिय, नातेवाईक व मित्र मैत्रिणींच्या संपर्कात राहण्यास होतो. युटयूब मध्ये गाणे व सिनेमा देखिल घरी बसूनच बघायला मिळतात. वेगवेगळया गोष्टींसाठी अलार्म लावता येतात. डिजीटल साधनांचा वापर वारंवार करीत नसल्यामुळे ज्येष्ठ नागरिकांना समजावून सांगतांना वारंवार समजावून सांगावे अशी अपेक्षा असते कारण त्यांना समजण्यास वेळ लागतो. डिजीटल उपकरणांचा ज्येष्ठांच्या आनंददायी जीवनासाठी उपयोग होतो. मानसिक आरोग्य डिजीटल उपकारांचा वापर करून सुदृढ राहण्यास मदत होते.

- **सूचना व शिफारशी (Suggestions & Recommendations) :**

✓ ज्येष्ठ नागरिकांना डिजीटल कौशल्य येणे ही आजच्या काळाची गरज आहे. हयासाठी समुदायात पथनाटय, रॅलीच्या माध्यमातूनही जनजागृतीपर कार्यक्रम राबविता येईल तसेच त्यांना डिजीटल साक्षर होण्यासाठी समाज कार्यकर्त्यांनी वर्कशॉप, क्लासेस घेवून त्यांना डिजीटल साक्षर करावे.

✓ डिजीटल साधनांच्या वापराद्वारे ज्येष्ठ नागरिक आपली सर्जनशिलता चांगल्या पद्धतीने दाखवु शकतात व दैनंदिन जीवन अधिक सुखकारकरित्या घालविण्यासठी डिजीटल साधनांचा वापर करावा हे गटकार्याच्या माध्यमातून सांगता येईल.

✓ डिजीटल साधनांच्या वापरामुळे जीवनाची गुणवत्ता सुधारण्यास मदत होते व त्यांचे आयुष्य बदलू शकते हे तंज्ञाच्या व्याख्यानाद्वारे सांगावे तसेच शासनाने सर्व ज्येष्ठ नागरिकांना आर्थिकदृष्टया परवडेल अशी इंटरनेट सुविधा द्यावी.

- **निश्कर्ष**

स्वतंत्रपणे आपण डिजीटल साधनांचा वापर करावा, कुणाचीही मदत न घेता करावा असे ज्येष्ठ नागरिक महिलांना वाटते. युटयूब द्वारे आपल्याला हवे ते पदार्थ कसे करावे याबद्दल माहिती मिळाली. व्हॉटस्अप द्वारे अनेक ग्रुपमध्ये सदस्य असल्यमुळे आपल्या आजुबाजुला घडलेल्या सर्व गोष्टींची माहिती मिळते. इंटरनेटसाठी लागणारे पैसे प्रत्येकवेळी रिचार्ज करणे परवडणारे नसते. ज्येष्ठ नागरिकांना नेटवर्क नसणे हया समस्यालाही सामोरे जावे लागते. मानसिक आरोग्यही डिजीटल साधनांच्या

वापरामुळे सुदृढ राहण्यास मदत होते. कारण हयाचा करण्यामध्ये वेळ जातो, आनंद मिळतो. त्यामुळे ज्येष्ठ नागरिक महिलांचे मानसिक आरोग्य चांगले आहे.

निष्कर्ष (Conclusion):

- ज्येष्ठ नागरिकांना डिजीटल साक्षर होण्यास वेळ लागतो.
- ज्येष्ठ नागरिकांची डिजीटल साक्षरतेसाठी मनाची तयारी करणे गरजेचे आहे.
- ज्येष्ठ नागरिकांना मनामध्ये भिती आहे, हया साधनांचा वापर केल्यास आपल्यासोबत काही वाईट (Fraud) घडेल.
- ज्येष्ठ नागरिक डिजीटल साक्षर होण्यास उत्सुक आहे.
- आरोग्य व नविन गोष्टींचे ज्ञान डिजीटल मायमातून घेण्यास ज्येष्ठ नागरिकांची तयारी आहे.
- ज्येष्ठ नागरिकांनी डिजीटल साधनांचा वापर आत्मविश्वासपूर्णरित्या करावा अशी त्यांची अपेक्षा आहे.
- ज्येष्ठ नागरिकांच्या डिजीटल सक्षमीकरणासाठी (Digital empowerment) कोरोना महामारी ही प्रेरक ठरली.
- ज्येष्ठ नागरिकांना स्वत:च्या सुरक्षिततेसाठी डिजीटल कौशल्ये आत्मसात करणे अधिक चांगले वाटते.
- डिजीटल तंत्रज्ञानामुळे इतरांशी कनेक्ट, शेअर, संवाद आणि सहयोग (Connect, Share, Communicate & Collaborate) वाढण्यास मदत होते. हया गोष्टींचे ज्ञान ज्येष्ठ नागरिकांना झाले.
- डिजीटल कौशल्य ज्येष्ठ नागरिकांनी अंगिकारणे हे स्वत:साठी आवश्यक आहे, हे त्यांच्या लक्षात आले.

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