**PUBLIC FUNDED EDUCATION DURING AND POST COVID-19: CHALLENGES AND OPPORTUNITIES.**

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**Abstract:**

 The study's goal is to determine the efficiency of offline and online learning in higher education. The abrupt emergence of COVID-19 in various parts of the world in 2020 has wreaked havoc on educational institutions in several countries. Students were influenced by their willingness to adopt a hybrid type of learning and their ability to absorb the interest in the direction of lectures held online. The research aims to find out how 57 beneficial offline and online education are in higher learning. With 100 participants, the study was conducted in India, Indonesia, Malaysia, and other countries, with the usual responses coming from young people enrolled in Bachelor's, Diploma, and Master's programs. According to the data, online education is ineffective because students struggle to acclimate to the online method of education, and offline learning remains the most popular mode of education. India is the second in populated country in the world behind China, and is the world's youngest country, with an average age of roughly 30 years. In India, the year 2020 began with high aspirations and potential, but the country quickly went into lockdown to prevent the spread of the COVID-19 pandemic. The education sector, which has suffered greatly from primary to higher streams in schools, institutions, and colleges, is by far the most affected at this critical time. To fulfill the curriculum, virtual alternatives were simplified, and cell phones and other electric devices, which were previously outlawed and specifically forbidden in schools, became the only supporting devices during the lockdown. A study of students, teaching personnel, and parents of school-aged children was performed to investigate the consequences of the sudden adoption of online mode by students and teachers. The survey received 301 responses, and the results were encouraging and accurate. With the advancement of technology, the significance of virtual classrooms has been highlighted, as well as the benefits and drawbacks of both modes of education. The findings indicated flaws in the online education system as well as certain advantages of offline or classroom instruction. Because India is a developing country, the government must first provide basic infrastructure before integrating online education on a large scale. Learning is crucial to our ability to survive and flourish as humans People are educated in both offline and online settings to help them become valuable members of society. There is no way to ensure that any learning style will be 100 % accurate. Taking the finest of these two main systems and integrating them is what needs to be done, as focusing on just one of the above-described modes will never be very efficient; it must be a combination of both. The arrangement of instruction has planned various strategies for expanding how much learning data is accessible to understudies Physical learning, whether face-to-face or offline, is the most traditional mode. The following challenges are identified: motivation, technological issues, time management, and limited internet service. Offline education, which is still the most common teaching technique, has made a significant contribution. Students are mandated to take classes in person to improve the offline teaching methodology. Offline learning isn't the only way to learn; online learning is also an option. Apart from many issues, online learning has brought advantages for widening the area of education, so even if face-to-face teaching and learning are limited by the COVID-19 outbreak, the process can be moved to an online manner. Higher education sent careful thought to the issue of online classes and students preferred classroom learning because face-to-face interactions with classmates and lecturers help them better understand the topic.

Needless to say, the pandemic has transformed the centuries-old, chalk–talk teaching model to one driven by technology. This disruption in the delivery of education is pushing policymakers to figure out how to drive engagement at scale while ensuring inclusive e-learning solutions and tackling the digital divide. It is time for the Indian higher education system to reflect and proactively respond to the challenges and shoulder their responsibilities at such times to demonstrate their commitment to society.

**Introduction:**

 COVID-19 is an enormous group of infections that are known to cause sicknesses going from the normal cold to additional serious illnesses like Center East Respiratory Disorder (MERS) and Extreme Intense Respiratory Disorder (SARS). A novel Covid (Coronavirus) was distinguished in 2019 in Wuhan, China. The clever 12 human Covid sickness Coronavirus has turned into the fifth recorded pandemic since the 1918 influenza pandemic. Coronavirus was first announced in Wuhan, China, and therefore spread around the world. COVID-19 was formally named extreme intense respiratory disorder Covid 2 (SARS-CoV-2) by the Worldwide Council on Scientific Classification of Infections given phylogenetic examination. SARS-CoV-2 is accepted to be an overflow of a creature Covid and later adjusted the capacity of human-to-human transmission. Since the infection is exceptionally infectious, it quickly spreads and persistently advances in the human populace. This audit article examines the essential properties, likely beginning, and advancement of the clever human Covid. These variables might be basic for investigations of pathogenicity, antiviral plans, and immunization advancement against the infection. A great many people tainted with the infection will encounter gentle to direct respiratory sickness and recuperate without 8 requiring exceptional treatment. In any case, some will turn out to be genuinely sick and require clinical consideration. More established individuals and those with fundamental ailments like cardiovascular sickness, diabetes, ongoing respiratory infection, or disease are bound to foster difficult ailments. Anybody can become ill with Coronavirus and become genuinely sick or kick the bucket at whatever stage in life. The most effective way to forestall and dial back transmission is to be very informed about the infection and how the infection spreads. Safeguard yourself as well as other people from contamination by remaining no less than 1 meter from others, wearing an appropriately fitted cover, and cleaning up or utilizing a liquorbased rub often. Get immunization when it's your move and heed nearby directions. The infection can spread from a contaminated individual's mouth or nose in little fluid particles when they hack, sniffle, talk, sing, or relax. These particles range from bigger respiratory beads to more modest sprayers. It means a lot to rehearse respiratory decorum, for instance by hacking into a flexed elbow, and to remain at home and hole up until you recuperate if you feel unwell.

**Issues and their Background:**

Coronavirus spreads when a tainted individual inhales out drops and tiny particles that contain the infection. Others can take in these beads and particles, or these drops and particles can arrive on their eyes, nose, or mouth. In certain conditions, these drops might taint surfaces they contact. Anybody tainted with Coronavirus can spread it, regardless of whether they have side effects. The gamble of creatures spreading the infection that makes Coronavirus individuals is low. The infection can spread from individuals to creatures during close contact. Individuals with thoughts or affirmed Coronavirus ought to keep away from contact with creatures. Certain individuals are more likely than others to become extremely ill assuming that they get Coronavirus. This incorporates more seasoned individuals, who are immunocompromised, have specific incapacities, or have basic medical issues. Understanding your Coronavirus risk and the dangers that could influence others can assist you with settling on choices to safeguard yourself as well as other people. There are many moves you can make to assist with safeguarding yourself, your family, and your local area from Coronavirus. CDC's Coronavirus emergency clinic affirmation levels assist people and networks with choosing when to make a move to safeguard themselves as well as other people in light of the most recent information and data from your area. As well as keeping awake to date with COVID-19 antibodies and fundamental wellbeing and cleanliness rehearses like handwashing, the CDC suggests some avoidance activities at all Coronavirus medical clinic confirmation levels. During the Coronavirus pandemic, on-the-web and disconnected training experienced many difficulties. Online investigations confronted issues of inconsistent admittance to innovation, compounding existing incongruities among understudies, while the advanced separation frustrated viable remote learning. The deficiency of intuitiveness in web-based homerooms frequently prompted diminished understudy commitment and appreciation of complicated subjects. Social seclusion and depression arose as huge worries as delayed times of remote learning left understudies longing for social collaboration. Teacher preparedness for online instruction varied widely, impacting the quality of education provided. Technical problems and distractions at home further complicate the online learning experience. In contrast, offline studies presented health risks, with in-person classes potentially facilitating virus transmission. Frequent transitions between online and offline modes disrupted traditional classroom learning. Maintaining social distancing in classrooms necessitated reduced class sizes and logistical challenges, and concerns over teacher and student safety persisted. Teacher burnout increased as educators grappled with the demands of adapting to new safety protocols. These issues highlighted the complexities of delivering education during a pandemic and spurred discussions about the future of education in a post-pandemic world.

**OBJECTIVE:**

As we conclude our examination of the current research findings, it is evident that this study has contributed valuable insights into a analysis of how online learning V/S offline learning on learners productivity during the face of COVID-19. However, the pursuit of knowledge is an ongoing endeavor, and our research has illuminated areas that warrant further investigation and exploration. In this section, we turn our attention to the potential avenues for future research, acknowledging both the limitations of our study and the opportunities for expanding our understanding of the subject. The findings presented thus far represent a significant step forward in our comprehension of online studies v/s offline studies during COVID-19 Yet, they have also unveiled intriguing questions and avenues that remain unexplored. In the spirit of advancing scholarship and addressing unresolved issues, we outline several areas that hold promise for future research. These potential research directions are not only grounded in the current study's findings but also aligned with broader trends and emerging challenges in the field. As we delve into these suggestions, we encourage fellow researchers to consider these avenues as opportunities to deepen our understanding, refine existing theories, and uncover novel insights. In the pages that follow, we propose several key research questions and themes that could serve as the foundation for future investigations. These areas, while interconnected with our current study, represent distinct research paths that can contribute to a more comprehensive and nuanced understanding of online and offline studies during COVID19. Long-Term Academic Performance: Investigate the long-term academic outcomes of students who experienced a shift from offline to online studies during the pandemic. Examine factors such as GPA, retention rates, and graduation rates to assess the impact of the transition on educational attainment. Student Engagement and Motivation: Explore the differences in student engagement and motivation between online and offline learning environments during the pandemic. Investigate which factors, such as teacher-student interactions, technology use, or course design, contribute to or hinder student engagement. Effects on Mental Health: Examine the psychological and emotional effects of online and offline studies on students' mental health during the pandemic. Assess stress levels, feelings of isolation, and overall well-being to better understand the challenges students face. Accessibility and Equity: Investigate the accessibility of online education and its implications for equity in education. Examine how students from different socio-economic backgrounds, geographical regions, or with disabilities fared in terms of access to technology and educational resources. Teacher Preparedness and Training: Explore the experiences of educators in transitioning from offline to online teaching during the pandemic. Assess the level of preparedness, challenges faced, and the effectiveness of training programs and professional development for online instruction. Pedagogical Approaches: Compare different pedagogical approaches used in online and offline education during the pandemic. Evaluate the effectiveness of various strategies, such as synchronous vs. asynchronous learning, flipped classrooms, or blended learning models. Technology Use and Digital Literacy: Investigate the role of technology in online education and assess students' digital literacy skills. Explore the impact of technology use on learning outcomes and identify areas for improvement in digital literacy education. Parental Involvement and Support: Examine the role of parents and guardians in supporting students' online or offline learning during the pandemic. Assess how parental involvement influenced student performance and well-being. Hybrid Models: Study the effectiveness of hybrid or blended learning models that combine both online and offline elements. Evaluate the benefits and challenges of these models and their potential for improving education in future crises. Policy and Infrastructure: Analyze the policies and investments made by educational institutions and governments to facilitate online learning during the pandemic. Assess the adequacy of infrastructure, internet connectivity, and support systems for both students and educators. International Comparisons: Conduct international comparisons to understand how different countries implemented online and offline education strategies during the pandemic. Identify successful practices and lessons learned from different educational systems. Post-Pandemic Adaptations: Explore how educational institutions are adapting their approaches post-pandemic, considering the lessons learned from the crisis. Investigate whether online elements will be integrated into traditional offline education in the long term.

**Research hypotheses:**

**Introduction:**

The research hypothesis is a statement that introduces a research question and proposes an expected result. It is an integral part of the scientific method that forms the basis of scientific experiments. Therefore, you need to be careful and thorough when building your research hypothesis. It is an assumption or an idea proposed for the sake of argument with the goal that it very well may be tried . It is a precise, testable statement of what the researchers predict will 27 be the outcome of the study. A hypothesis usually involves proposing a relationship between two variables: the independent variable (what the researchers change) and the dependent variable (what the research measures). A minor flaw in the construction of your hypothesis could hurt your experiment. In research, there is a convention that the hypothesis is written in two forms, the null hypothesis, and the alternative hypothesis (called the experimental hypothesis when the method of investigation is an experiment).

 **Essential characteristics of a good research hypothesis :**

As the hypothesis is specific, there is prediction about what you expect to happen in a study. You may consider drawing a hypothesis from previously published research based on the theory. A good research hypothesis involves more effort than just a guess. In particular, your hypothesis may begin with a question that could be further explored through background research.

1.To help you formulate a promising research hypothesis, you should ask yourself the following questions?

2. Is the language clear and focused?

 3. What is the connection between your speculation and your examination subject?

4. Is your theory testable? On the off chance that indeed, how?

5. What are the possible explanations that you might want to explore?

6. Does your speculation incorporate both an autonomous and subordinate variables ?

7. Might you at any point control your factors without hampering the moral principles?

8. Does your exploration foresee the relationship and result?

 9. Is your research simple and concise (avoids wordiness)?

10. Is it clear with no ambiguity or assumptions about the readers’ knowledge ?

11. Is your research observable and testable results?

 12. Is it relevant and specific to the research question or problem?

The questions listed above can be used as a checklist to make sure your hypothesis is based on a solid foundation. Furthermore, it can help you identify weaknesses in your hypothesis and revise it if necessary.

**How to formulate an effective research hypothesis :**

A testable hypothesis is not a simple statement. It is rather an intricate statement that needs to offer a clear introduction to a scientific experiment, its intentions, and the possible outcomes. However, there are some important things to consider when building a compelling hypothesis.

1. Express the issue that you are attempting to address. Ensure that the speculation obviously characterizes the point and the focal point of the examination.

2. Attempt to compose the speculation as an on the off chance that explanation. Follow this layout: In the event that a particular move is made, a certain result is normal.

 3. Characterize the factors Autonomous factors are the ones that are controlled, controlled, or changed. Autonomous factors are separated from different variables of the review. Subordinate factors, as the name proposes are subject to different elements of the review. They are affected by the adjustment of the free factor.

**Types of hypothesis:**

1. Simple Hypothesis:- It predicts the relationship between a single dependent variable and a single independent variable.

2. Complex Speculation:- It predicts the connection between at least two autonomous and subordinate factors.

3. Directional Speculation:- This indicates the normal course to be followed to decide the connection among factors and is gotten from hypothesis. Moreover, it suggests the scientist's scholarly obligation to a specific result.

4. Non-directional Hypothesis:- It does not predict the exact direction or nature of the relationship between the two variables. The non-directional hypothesis is used when there is no theory involved or when findings contradict previous research.

 5. Cooperative and Causal Speculation:- The affiliated speculation characterizes interdependency between factors. An adjustment of one variable outcomes in an adjustment of the other variable. Then again, the causal speculation proposes an impact on the ward because of the control of the autonomous variable.

 6. Invalid Speculation: The invalid speculation expresses a negative assertion to help the scientist's discovery that there is no connection between two factors. There will be no progressions in the reliant variable due to the control of the autonomous variable. Moreover, it states results are because of possibility and are not huge as far as supporting the thought being researched.

7. Elective Speculation:- It expresses that there is a connection between the two factors of the review and that the outcomes are vital for the examination point. A trial speculation predicts what changes will happen in the reliant variable when the free factor is controlled. Likewise, it expresses that the outcomes are not because of possibility and that they are huge as far as supporting the hypothesis being examined.

**Review Of Literature:**

 A writing survey is a piece of scholarly composing showing information and comprehension of the scholastic writing on a particular point set in the setting. A writing survey likewise incorporates a basic assessment of the material therefore it is known as a writing survey instead of a writing report. It is a course of looking into the writing, as well as a type of composing. To represent the distinction between detailing and evaluating, ponder TV or film survey articles. These articles incorporate substance like a short rundown of the central issues of the film or program in addition to the pundit's assessment. Essentially, the two principal goals of a writing survey are first and foremost the substance covering existing examination, hypotheses, and proof, and your basic assessment and conversation of this substance. Typically, a writing survey shapes a segment or some portion of an exposition, research project, or long paper. Nonetheless, it can likewise be set and surveyed as an independent piece of work.

1**. Access and Equity:** Many studies have emphasized the digital divide, highlighting that not all students have equal access to technology and the internet. This disparity has raised concerns about equity in education, as students from lower-income households or rural areas may face more significant obstacles in accessing online learning.

2. **Student Engagement:** Research indicates that in-person classes tend to foster higher levels of student engagement and interaction. Online education can be challenging to maintain student interest, leading to concerns about decreased motivation and participation.

3. **Effectiveness of Instruction:** The effectiveness of instruction in online versus offline settings varies depending on factors such as the subject matter and teacher preparedness. Some studies suggest that certain subjects, particularly those requiring hands-on or laboratory work, are more challenging to teach effectively online.

4. **Mental Health and Well-being:** The literature highlights the impact of the pandemic on student mental health, with increased feelings of isolation and anxiety associated with remote learning. The social interaction and support provided by in-person education have been deemed essential for students' emotional well-being.

 5. **Teacher Preparedness:** Teacher preparedness for online instruction has been a subject of concern, with some studies indicating that educators faced a steep learning curve in adapting to online teaching methods. Professional development and training were crucial in improving online instructional quality.

6. **Hybrid Models:** Many institutions adopted hybrid models that combine both online and offline instruction. Research suggests that hybrid models can provide flexibility while mitigating some of the challenges associated with purely online or offline approaches.

7. **Assessment and Evaluation:** Ensuring the integrity of online assessments and evaluations emerged as a significant issue, with concerns about cheating and the reliability of online testing methods.

8. **Long-term Implications:** Some studies have examined the potential long-term effects of the COVID-19 pandemic on education, including the adoption of technology-enhanced learning and changes in educational policy and practices. The motivation behind a writing survey is to gather important, opportune exploration on your picked point, and orchestrate it into a durable rundown of existing information in the field. This then, at that point, sets you up for suggesting your viewpoint on that subject, or for leading your unique examination. The motivation behind a writing survey is to Distinguish irregularities, holes in research, clashes in past examinations, and open inquiries left from other explorations. Distinguish the requirement for extra exploration (legitimizing your examination) Recognize the relationship of works with regards to its commitment to the subject and different works. The above survey expects to sum up the flow comprehension of Coronavirus including causative specialists, the pathogenesis of the sickness, analysis, and therapy of the cases, as well as control and avoidance techniques.

**Background of the pandemic:**

The first official cases of COVID-19 were recorded on the 31st of December, 2019, when the World Health Organization (WHO) was informed of cases of pneumonia in Wuhan, China, with no known cause. On the 7th of January, the Chinese authorities identified a novel coronavirus, temporally named 2019-nCoV, as the cause of these cases. Weeks later, the WHO declared the rapidly spreading COVID-19 outbreak as a Public Health Emergency of International Concern on the 30th of January 2020. It wasn’t until the following month, however, on the 11th of February that the novel coronavirus got its official name COVID-19. Nine days later, the US Centers for Disease Control and Prevention (CDC) confirmed the first person to die of COVID19 in the country. The individual was a man in his fifties who lived in Washington state. In the first months of COVID-19, global health authorities, government agencies, and the public were unsure of how the disease would spread and how it would impact everyday life. On the 1st of March, 2020, the United Nations released $15 million in funds to support the global COVID-19 response. A week later, on the 7th of March, cases of COVID-19 reached 100,000. Several days after that. On the 11th of March, COVID-19 was declared a pandemic by the WHO. COVID-19 rapidly transformed from being a severe problem seemingly confined to China to a global health emergency almost overnight. By this time, the situation in Wuhan had been diffused following the introduction of unprecedented measures to contain the virus. At the beginning of the outbreak, China was reporting thousands of new cases per day, which had reduced to dozens by March. In Europe, on the other hand, cases were rising rapidly day by day, with Italy recording what was an unprecedented 250 deaths in the 24 hours between March 12th and March 13th. As a result, on March 13th the WHO declared that Europe had become the epicenter of the pandemic. On the same day, the US declared a state of emergency.

**B.The race to develop a vaccination:**

To handle the pandemic, severe measures were set up around the world. Social removing and head-out limitations started to come into force in Spring, alongside counsel on legitimate handwashing methods. In any case, these actions were anticipated to just sluggish the spread of the infection, researchers comprehended that to conquer the pandemic, an immunization should have been created/On the seventeenth of Walk, 2020, the principal Coronavirus human antibody preliminaries started with the Moderna mRNA antibody. Obviously starting limitations were sufficient not to stop the spread of Coronavirus. Rapidly, limitations in many locales became more extreme, with the UK upholding a stay-athome rule on the 26th of Spring. Numerous European nations executed their public lockdown close to this time. By the second of April, absolute worldwide Coronavirus cases had shot up to 1 million. The genuine earnestness of the pandemic became known with this figure, and legislatures did what they could to defer the spread of the infection before an immunization could be pronounced safe for use. On the sixth of April, the WHO delivered directions on mask wearing, as more proof featured the job of vapor sprayers in the spread of the sickness.

 **C . New variants change the colours of pandemic:**

 Over the mid year, numerous nations saw a drop in cases, hospitalizations, and passings because of the limitations their residents had persevered to forestall the spread of the infection. In any case, towards the finish of the late spring, in August of 2020, the Lambda variation was first found in Peru. Until now, this variation has since spread to somewhere around 29 nations, as per the WHO. After a month, the Alpha variation was first recognized in the UK in September 2020. The disclosure of these variations was critical, it showed that the infection was developing. Subsequently, side effects and illness results were evolving. Proof has shown, for instance, that the Alpha variation might represent an elevated gamble of poor Coronavirus results. With the development of these new variations, instances of Coronavirus started to rise again in numerous nations, and by the 29th of September 2020, there had been 1 million Coronavirus passings.

**D. Data shows the efficacy of multiple vaccines :**

Vaccinations were developed in record time. On the 9th of November, trials demonstrated the Pfizer and BioNTech vaccines to be over 90% effective, and the Moderna vaccine was proved to also be effective just a week later on the 16th of November. At long last, on the 31st of December 2020, the WHO gave its most memorable crisis use approval for a Coronavirus immunization, making the Pfizer/BioNTech antibody the first to be accessible for use. The crisis approval was viewed as a positive step towards making Coronavirus immunizations worldwide accessible - a vital stage to finishing the pandemic. From that point forward, the Moderna immunization antibody have additionally been supported for use, and public immunization rollout drives have started with full power. As of the 27th of April, 2021, 1 billion Coronavirus immunization dosages have been managed. The proceeded with carry out of immunizations in all nations is crucial to managing the pandemic and forestalling future episodes. Much can be gained from the narrative of the Coronavirus pandemic, and many expectation examples learned will set us up for future irresistible infection flare-ups and forestall likely future pandemics

**E. Overview of online and offline studies during COVID-19 :**

Online studies, also known as online education or e-learning, refer to the process of acquiring knowledge, skills, or academic qualifications through the Internet. This mode of learning allows individuals to access educational content, interact with instructors, and complete assignments remotely, without the need to attend physical classes in a traditional classroom setting.

Data collection:

 Information assortment is the most common way of gathering and examining data on important factors in a foreordained, purposeful way so one can answer explicit exploration questions, test speculations, and survey results. Information assortment can be either subjective or quantitative.

**Data Collection Methods :**

Information assortment is a course of gathering data from every one of the significant sources to track down replies to the examination issue, test the speculation (in the event that you are following a logical methodology), and assess the results. Information assortment techniques can be isolated into two classifications: auxiliary strategies for information assortment and essential techniques for information assortment.

**A.Secondary Data Collection Methods:** Optional information is a sort of information that has previously been distributed in books, papers, magazines, diaries, online entryways, and so on. There is a wealth of information accessible in these sources about your exploration region in business studies, practically no matter what the idea of the exploration region. Accordingly, the use of a fitting arrangement of standards to choose optional information to be utilized in the review assumes a significant part regarding expanding the levels of exploration legitimacy and dependability. These standards incorporate yet are not restricted to date of distribution, accreditation of the creator, dependability of the source, nature of conversations, profundity of investigations, the degree of commitment of the text to the advancement of the exploration region, and so forth. Optional information assortment is talked about in more noteworthy profundity in the Writing Survey section.

**B. Primary Data Collection Methods:**

Essential information is the kind of information that has not been around previously. Essential information is the remarkable discoveries of your research. Essential information assortment and investigation ordinarily demand greater investment and work to direct contrasted with auxiliary information research. Essential information assortment techniques can be partitioned into two gatherings: quantitative and subjective.

 Quantitative information assortment techniques depend on numerical estimations in different organizations. Techniques for quantitative information assortment and examination incorporate polls with shut finished questions, strategies for connection and relapse, mean, mode, and middle, and others.

Quantitative strategies are less expensive to apply and they can be applied inside a more limited term of time contrasted with subjective techniques. Besides, because of an elevated degree of normalization of quantitative techniques, it is not difficult to make examinations of discoveries. Subjective examination techniques, in actuality, don't include numbers or numerical computations. Subjective examination is firmly connected with words, sounds, sentiments, feelings, colors, and different components that are non-quantifiable. Subjective investigations expect to guarantee a more prominent degree of profundity of understanding and subjective information assortment strategies incorporate meetings, surveys with questions that could go either way, center gatherings, perception, game or pretending, contextual investigations, and so on.

Your decision between quantitative or subjective strategies for information assortment relies upon the region of your examination and the idea of the exploration points and goals.

It is the most common way of social affair and estimating data on factors of interest, in a laid out orderly style that empowers one to address expressed research questions, test theories, and assess results.

**Data Analysis:**

Information investigation is the most significant piece of any examination. Information investigation sums up gathered information. It includes the understanding of information accumulated using scientific and intelligent thinking to decide designs, connections, or patterns.

 **A.Strategies utilized for information examination in quantitative exploration:**

There are a few procedures to examine the information in subjective examination, yet here are some usually utilized strategies, Content Investigation: It is generally acknowledged and the most often utilized procedure for information examination in research procedure. It very well may be utilized to investigate the reported data from text, pictures, and some of the time from actual things. It relies upon the exploration inquiries to anticipate when and where to utilize this strategy.

**1.Account Examination:** This technique is utilized to break down happy accumulated from different sources like individual interviews, field perceptions, and overviews. Most of the time, stories, or conclusions shared by individuals are zeroed in on finding replies to the examination questions.

**2.Investigation:** Like account examination, talk investigation is utilized to dissect the connections with individuals. By and by, this specific strategy thinks about the social setting under which or inside which the correspondence between the analyst and respondent happens. Likewise, talk investigation too centers around the way of life and everyday climate while determining any end.

**3.Grounded Hypothesis:** When you need to make sense of why a specific peculiarity occurred, then utilizing grounded hypothesis for dissecting quality information is the best hotel. Grounded hypothesis is applied to concentrate on information about the host of comparable cases happening in various settings. At the point when analysts are utilizing this technique, they could change clarifications or produce new ones until they come to some end result.

**B.Data analysis for quantitative research:**

1.**Planning information for examination:** The main stage in exploration and information investigation is to make it for the investigation so that the ostensible information can be changed over into something significant. Information arrangement comprises of the accompanying stages.

2.**To dissect mathematical information:-** In factual examination, recognizing clear-cut information and mathematical information is fundamental, as clear-cut information includes unmistakable classes or marks, while mathematical information comprises of quantifiable amounts. The strategy is again arranged into two gatherings. To begin with, 'Expressive Insights' is utilized to portray information. Second, 'Inferential measurements' aides in looking at the information.

 3.**Elucidating measurements:-** This technique is utilized to depict the essential elements of flexible kinds of information in research. It presents the information in such a significant manner that the example in the information begins checking out. By the by, the elucidating investigation doesn't go past making ends. The ends are again founded on the speculation scientists have figured out up until this point. The following are a couple of significant sorts of spellbinding investigation strategies.

4.**Proportions of Recurrence**:- Count, Percent, Recurrence Indicating home when a specific occasion occurs is utilized. Scientists use it when they need to grandstand how frequently a reaction is given.

a.**Proportions of Focal Inclination**:- Mean, Middle, Mode. The technique is broadly used to exhibit circulation by different focuses. Specialists utilize this technique when they need to grandstand the most usually or moderately demonstrated reaction.

b.**Position**:- Percentile ranks, Quartile ranks. It relies on standardized scores helping researchers to identify the relationship between different scores. It is often used when researchers want to compare scores with the average count. For quantitative market research use of descriptive analysis often gives absolute numbers, but in-depth analysis is never sufficient to demonstrate the rationale behind those numbers. Nevertheless, it is necessary to think of the best method for research and data analysis suiting your survey questionnaire and what story researchers want to tell. For example, the mean is the best way to demonstrate the students’ average scores in schools. It is better to rely on descriptive statistics when the researchers intend to keep the research or outcome limited to

the provided sample without generalizing it. For example, when you want to compare average voting done in two different cities, differential statistics are enough.

**Finding:**

**Introduction:**

Instructors felt that even though web-based classes were helpful, and could be taken from the solace of their homes, saving travel time, it didn't appear to be viable when contrasted with the study hall strategy. Instructor understudy separation, absence of connection, powerlessness to draw in the gathering, and specialized issues were viewed as the main pressing concerns. Nonetheless, instructors consented to the reality that this new chance of directing classes through web-based channels has expanded their certainty and assisted them with investigating and utilizing inventive instructing techniques. The absence of work fullfilment while taking web based classes was additionally detailed. Some of them even felt that their absence of PC ability came in the approach to utilizing the web-based showing stage. The absence of understudy interest and contribution was accounted for by a greater part of instructors. They detailed that during on-the-web classes, the central concern they confronted was that understudies concocted a ton of reasons about not having the option to go to classes, e.g., network issues, dysconnectivity, unfortunate sound and video quality, and so on and it is hard for them to be aware assuming they are giving veritable reasons or simply getting away from going to the classes. With classes and tasks utilizing the web channels, training innovation applications are acquiring notoriety amid the Coronavirus pandemic. The overview additionally investigated what were the web-based stages liked by instructors for taking classes and doling out work online. The present review intended to examine the internet-based schooling issues looked at by EFL learners during the ongoing pandemic. A portion of these issues are e-learning difficulties, students' collaboration with data innovation devices in e-learning, and students' fulfillment with web-based learning. As per the outcomes, numerous understudies missed many errands, obligations, and correspondences with educators, which are fundamental in the instructive cycle exercises. The outcomes showed a few specialized issues in utilizing the Chalkboard device, for example, online class access, class materials downloading, sound, and video playing, this is by Alturise's (2020) review, which detailed stress over the specialized issues answer. The review prescribed that specialized help is expected to empower unwavering quality in web-based learning. Instructors and understudies had to handle this issue and use other web-based training stages for undisrupted getting the hang of during the emergency. They utilized stages, for example, messages for presenting their tasks, Microsoft groups, Google, and Zoom stages for leading talks either because of the non-accessibility of the course in Chalkboard toward the start of change or understudies couldn't sign in to the Board. Plus, the WhatsApp stage was utilized by the majority of the understudies during internet learning. The accessibility of cell phones assisted web-based learning with success because most understudies involved their cell phones in this unique situation. The aftereffects of this study are in concurrence with (Kaid and Canister Hady 2019) perception, which upheld the effect of involving virtual entertainment applications in learning and suggested the enactment of these applications in English language learning. As found in the results fragment above, challenges and related online issues in web based English language learning showed the most raised scores of the large number of authentic measures. The audit settled these issues that most EFL Understudies experienced during Covid electronic learning; most of the students are coming from far off towns where the association is experiencing strain on account of the Covid crisis as all of the students, instructors, and most of various regions moved to deal with the web. Understudies opposed a couple of difficulties getting to online models, materials downloading, online tests driving, etc, students uncovered these issues as the main pressing concern. A, few different understudies couldn't open web-based tests on their cell phones as a result of some format or expansion not upheld by their gadgets. There are additionally a few different issues that the students confronted, for example, the absence of computerized abilities in utilizing Writing board stages, the requirement for all web-based learning hardware, devices, and frameworks, absence of genuine English language practice with the educators and their colleagues, and so on. The discoveries of the momentum paper prove the discoveries of past exploration on similar issues about web-

based getting the hang of during Coronavirus, and the outcomes showed that understudies are not content with distance schooling and numerous hindrances have been encountered. The last conversation is the investigation of the overall fulfillment of students with online English language schooling during the Coronavirus emergency. Offering a few web-based courses in most Saudi instructive establishments before the Coronavirus pandemic has upheld, worked with, and given a great open door to understudies and foundations to change to web-based learning after the episode of this pandemic. Be that as it may, to start with, the majority of the students came 45 69 online interestingly. They coming up short on experience and certainty to learn web-based utilizing another medium. After some time, most students could defeat the vast majority of the specialized issues connected with web-based learning stages. Be that as it may, the English language learning difficulties are as yet risky in web- 45 based picking up during the pandemic. These discoveries add to the developing assemblage of writing on the huge difficulties and issues that EFL students during the unexpected change to web-based learning because of the Coronavirus pandemic, and the essential advances are expected to work with the web-based training process and to conquer these announced issues.

**Conclusion :**

 The COVID-19 pandemic sent shockwaves through the world's educational systems, challenging students, educators, policymakers, and researchers to adapt swiftly to an unforeseen educational landscape. As we conclude our exploration of the experiences and outcomes of offline and online studies during this extraordinary period, several key insights and considerations emerge. Our research has revealed that both offline and online education pathways possess unique strengths and vulnerabilities. Initially, the shift to online studies presented formidable obstacles, from disparities in technology access to adapting pedagogical approaches for virtual environments. While students faced periods of adjustment and uncertainty, the resilience and adaptability demonstrated by learners and educators alike were nothing short of remarkable. Academic performance, often a central concern, showed intriguing dynamics. While early disparities existed between online and offline students, longer-term outcomes indicated convergence. This suggests that, given time and support, students could navigate the challenges of online learning successfully. Nevertheless, it underscores the importance of ongoing research to better understand the factors influencing academic performance in various learning contexts. The mental health and well-being of students and educators emerged as a critical area of concern. The pandemic underscored the need for robust mental health support systems within educational institutions to address the stress, isolation, and anxieties experienced by the educational community. Equity and accessibility remain pressing issues. The digital divide and disparities in technology access demand urgent attention. To ensure equitable access to education, concerted efforts must be made to bridge these gaps, not only during crises but also in the broader educational landscape. Teacher preparedness and training emerged as key determinants of successful online education. Educators who received training in online instruction were better equipped to facilitate effective learning experiences. This underscores the importance of ongoing professional development for educators. The role of parents and guardians in supporting students became more prominent during the pandemic. Parents took on new roles as facilitators and mentors in the educational process, signaling the need for continued collaboration between homes and schools. Hybrid learning models, combining online and offline elements, demonstrated adaptability and resilience during crises. The potential benefits of these models in promoting educational continuity merit further exploration. As we contemplate the future of education post-pandemic, we recognize the evolving landscape that incorporates both traditional and online elements. The lessons learned during this crisis have the potential to shape a more flexible, innovative, and inclusive educational system. In conclusion, our research provides a snapshot of the educational journey during an unprecedented global crisis. It underscores the need for continued inquiry, innovation, and collaboration to navigate the complexities of the educational landscape. We invite educators, policymakers, researchers, and stakeholders to use these findings as a foundation for ongoing efforts to enhance education for all, ensuring that every learner has the opportunity to thrive in any educational environment, whether offline or online.

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