

Exploring Learning Gaps in Online Education: A Case Study at Navy Children School, Port Blair during COVID-19

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Abstract

The focus of this study is to explore the learning gaps that have arisen from the transition to online classes during the COVID-19 pandemic at Navy Children School in Port Blair. To gather data, a Google form with 15 intriguing questions was utilized, making it convenient for students in grades 9 through 12 to participate. The goal of this research is to thoroughly uncover the specific difficulties and limitations students experienced in their learning. The results of the study reveal a significant and substantial influence of the switch to online classes on both academic achievement and emotional welfare of students.

Keywords: Learning Gap, Online Class, Spelling Error, Speed of Writing, Attention Span, Interaction with Teacher, Creativity, Tolerance Level

Introduction

The COVID-19 pandemic significantly disrupted the education landscape, forcing widespread closures of schools globally. The shift to online learning posed challenges due to varying access to technology and the digital divide. Students faced learning gaps, and educators grappled with adapting teaching methods. The closure of schools also impacted socio-emotional development and created inequalities in education. Remote learning, while a necessity, highlighted the importance of resilient education systems. Schools worldwide implemented innovative solutions to mitigate disruptions, emphasizing the need for adaptable and inclusive educational approaches in the face of unforeseen challenges like those presented by the COVID-19 pandemic. This research effort aimed to uncover insights into the subtle characteristics of learning disparities within the online education system, specifically within the distinctive context of Navy Children School, Port Blair.

Background

While online classes have made education more accessible, some challenges have emerged such as internet connectivity issues, digital fatigue, and a potential lack of face-to-face interaction. Additionally, the shift to online learning may not suit all learning styles, undoubtedly affecting the overall educational experience for some individuals. Navy Children School in Andaman and Nicobar Islands emerged as a trailblazer by swiftly adopting online classes for all grade levels (1 to 12) during the COVID-19

pandemic. This study focuses on assessing the impact of online classes, particularly for classes 9 to 12. Various aspects such as writing speed, spelling accuracy, creativity and attention span was scrutinized. Understanding the nuanced effects of virtual education on these key elements is crucial for comprehending the broader implications on students' academic and cognitive development. Through purposive sampling, a survey utilizing a questionnaire was carried out to thoroughly pinpoint the specific challenges and deficiencies encountered by students in the learning process. The findings are expected to provide insights into optimizing the online learning experience and adapting teaching strategies for enhanced effectiveness in the digital educational paradigm and adapting teaching strategies for enhanced effectiveness in the digital educational paradigm.

Literature Review

The widespread implementation of online classes amid the COVID-19 pandemic resulted in notable learning disparities in school education, adversely affecting students' academic advancements.

The study aimed to conduct an online survey to explore the perceptions and experiences of teachers and students in relation to online classes. The introduction of online education in India was a recent adaptation prompted by the prevailing pandemic. The survey explores into the perspectives and apprehensions of college and university educators and students regarding the mandatory shift to online learning amid the COVID-19 crisis. Employing an online survey method for data collection, the research revealed that certain key factors contribute significantly to the satisfaction of both teachers and students in the online learning environment. These factors include the quality and timely nature of interactions between students and professors, the availability of technical support, well-structured online class modules, and adjustments to facilitate the conduct of practical classes.[1]

While online teaching has been crucial amid the pandemic, its implications cannot be overlooked. The accessibility of online classes is hindered for some students, particularly those from economically disadvantaged backgrounds or remote areas, due to the lack of smartphones, laptops, and mobile network access. This situation results in a disparity between students from affluent and impoverished backgrounds, as well as those in urban and rural areas. Additionally, students below the age of 14 may be unaware of the adverse effects of prolonged screen exposure, leading to potential addiction to mobile devices and contributing to mental and eye-related issues. Consequently, online teaching cannot replace traditional classroom instruction over the long term, and a return to conventional teaching methods will be necessary once the pandemic subsides.[2]

Online learning has become an important tool in education during the pandemic. However, it is not without challenges. One of the main challenges is lack of technology and resources for students. This creates a digital divide, where students from low-income families or remote areas may not have access to reliable internet connections or essential devices such as laptops or smartphones and consequently so these students may have difficulty accessing online courses entirely and accessing instructional materials and wrote. In addition, younger students may struggle to adapt to online learning environments because they may lack the necessary digital literacy skills or the self-discipline to focus on online learning. Another major challenge is the lack of humanitarian networks for students in low socioeconomic schools. Without physical contact with teachers and peers, students may feel isolated and lack the personal support they receive in traditional classrooms.[3]

The COVID-19 outbreak drastically impacted many areas of society, including education. To maintain education, schools worldwide had to adopt remote learning methods. This study examines the effects of online learning on student achievement and well-being during COVID-19. In the face of the pandemic, online learning platforms have become invaluable for continuing education despite the absence of traditional classroom interactions. However, research has highlighted that students face challenges in this new learning environment, including unreliable internet, platform proficiency, communication difficulties, low motivation, and social isolation. Addressing these barriers is crucial for improving student satisfaction and academic performance in online courses. To this end, educators and institutions must embrace adaptable and innovative approaches to meet the unique demands of online learning.[4]

The transition to virtual learning amidst the COVID-19 pandemic has sparked worries about how it may affect students' overall well-being. Studies have shown that the extended use of digital tools for online classes can trigger stress, anxiety, sleep disruptions, eye strain, and physical discomfort. Although technology provides convenient access to educational resources, excessive reliance on laptops and smartphones can expose students' health. To tackle these concerns, it is crucial to implement preventative measures such as integrating physical and mental activities into daily schedules, moderating screen time, and ensuring ergonomic setups for students' safety and wellness while learning online.[5]

The investigation on online learning in India amidst the COVID-19 pandemic paints a complex picture. While those with privilege have readily embraced online platforms for enhanced educational opportunities, marginalized communities are facing obstacles due to limited access to technology and conducive learning environments. This transition to virtual learning has further exacerbated the existing divide among different segments of society, ultimately impacting teachers' satisfaction levels and impeding the cognitive and non-cognitive growth of at-risk students. These findings underscore the urgency for policymakers to address the infrastructure disparities and explore a hybrid learning model, in order to promote equal access and provide a well-rounded educational experience for all students.[6]

This study aims to discern the learning gaps arising from online teaching at NCS, with a focus on understanding the specific challenges students face in the digital learning environment. By identifying these gaps, the research seeks to inform and guide the implementation of targeted remedial measures. Analysing factors such as student engagement, technology accessibility, and the effectiveness of virtual teaching methods will contribute to a comprehensive understanding of the educational landscape during this unprecedented shift to online instruction. The ultimate goal is to facilitate the development and implementation of strategies that address and rectify the identified learning gaps, ensuring a more inclusive and effective educational experience at NCS.

This study probed deeply into the impact of online learning on high school students, with a particular focus on those in grades 9 to 12. Utilizing a multifaceted approach, examined key factors such as attention span, handwriting speed, and spelling errors, while also identifying subjects that were significantly affected and enjoyed by the students. This investigation aimed to reveal the nuanced consequences of the shift to virtual education, shedding light on both cognitive and practical aspects of learning. By thoroughly exploring attention span, handwriting speed, and subject preferences, this study aimed to provide a comprehensive understanding of the challenges and benefits that accompany online learning.

Research Methodology

This study investigates into the experiences of students at NCS, an innovative institution that bravely embraced the use of virtual classes for all grade levels (1-12) amidst the pandemic. Known for its progressive methodology, NCS was one of the first to adopt online learning, aided by their students' access to internet and provision of laptops or smartphones. With this exceptional backdrop, NCS presents the ideal setting for a comprehensive exploration of the impact of online classes on students' education. By honing in on a school at the forefront of the technological revolution in education, this study strives to uncover valuable insights on the effectiveness, challenges, and overall repercussions of virtual learning.

Data for this study was gathered using a Google Form, consisting of 15 questions – 13 with multiple-choice options and 2 open-ended queries. The form was distributed to students via the class WhatsApp group, allowing them a three-day window to complete the survey. The utilization of a digital platform like Google Form facilitated efficient data collection and enabled a diverse set of responses, offering valuable insights into the perspectives and preferences of the student population within the specified time frame.

In this study, 182 responses were gathered from students in grades 9 to 12, resulting in a comprehensive data set. With an array of perspectives from different academic levels, the analysis was enriched and provided a thorough understanding of the topic. To enhance clarity, each response was carefully converted into percentages for standardized comparison. This method illuminated key trends and patterns across the differing class levels. Additionally, pie charts were utilized to visually depict the distribution of responses for each question. This not only helped to simplify the interpretation of the findings but also offered a deeper insight into the preferences and views of the students involved.

1. There is an adverse change in your attention span compared to pre-COVID days.

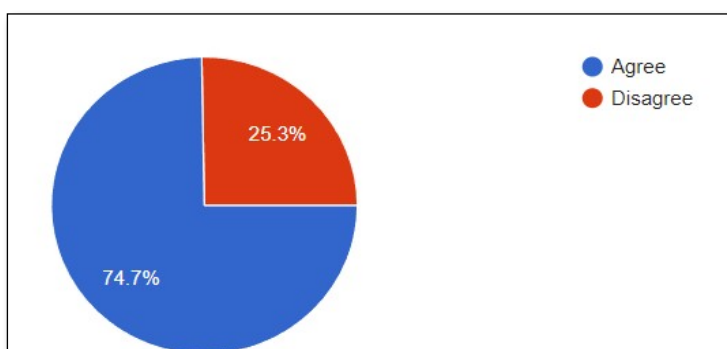


Figure 1: Attention Span

A striking evolution in attention span has been observed when comparing the current post-COVID era to the pre-COVID days. A significant 74.7% of students have reported experiencing a decrease in their ability to focus, indicating a widespread concern among the majority. These findings suggest that a considerable portion of the student population is facing challenges in maintaining sustained attention, likely influenced by the ongoing pandemic. However, it is worth noting that 25.3% of students did not perceive such a decline, highlighting a smaller yet noteworthy percentage whose attention span may not have been significantly affected. This contrast in perspectives highlights the diverse impact of external factors on students' cognitive abilities.

2. There is reduction in your writing speed due to online classes.

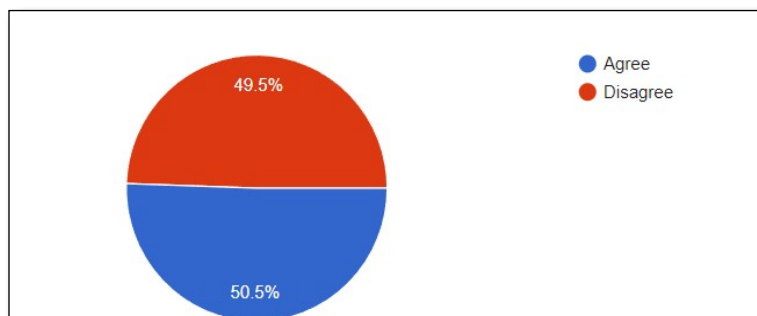


Figure 2: Reduction in Writing Speed

The observation that 50.5% of students reported a decline in handwriting speed as a result of online classes underscores the multifaceted impact of digital education. Several factors contribute to this phenomenon. Firstly, the transition to virtual learning has prompted an increased reliance on typing and digital note-taking, diminishing the need for traditional handwriting. Additionally, the absence of in-person instruction may lead to a lack of emphasis on penmanship skills, as educators may prioritize other aspects of remote teaching. Furthermore, the often fast-paced nature of online classes may discourage students from dedicating time to refining their handwriting. The decrease in handwriting proficiency is not just a result of changing educational practices; it also sparks worries about the possible loss of an important skill. With technology increasingly shaping the way we learn, it is crucial to find a middle ground that maintains key abilities, such as the art of proficient handwriting.

3. The spelling errors increased as compared to pre-COVID era.

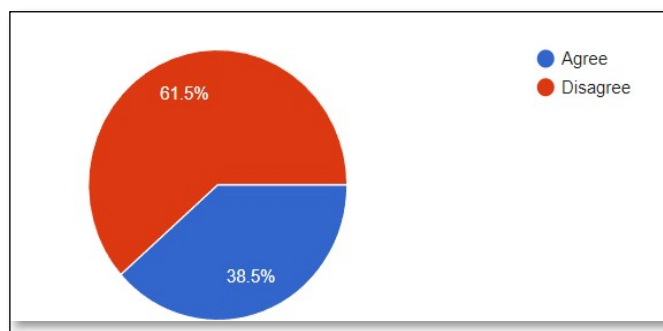


Figure 3: Spelling Error Increased

The results of our survey paint a complex picture of the impact of remote learning on students' spelling abilities. A significant 61.5% expressed disagreement with the notion that there has been a rise in spelling mistakes in online classrooms, while 38.5% agreed. This statistic warrants further examination, as the reasons behind the majority's perspective are multifaceted. One possible explanation is the use of autocorrect features in digital tools and word processors, which instantaneously correct errors. Additionally, online learning platforms often provide students with grammar and spell checkers, making it easier to maintain accuracy. However, the remaining 38.5% who reported an increase in spelling mistakes may be facing challenges such as disruptions, decreased teacher-student interaction, or technological delays. It is imperative to conduct a comprehensive evaluation of the digital learning environment, as this contrast heavily underlines the significance of such an analysis. While technology offers valuable tools for enhancing language proficiency, it also presents challenges that may hinder fundamental skills, such as spelling. Consequently, it is vital to find a harmonious balance between

utilizing technology for language instruction and addressing any potential drawbacks in order to ensure that students continue to develop and retain essential abilities in the rapidly evolving field of education.

4. The quality of hand writing deteriorated due to online classes.

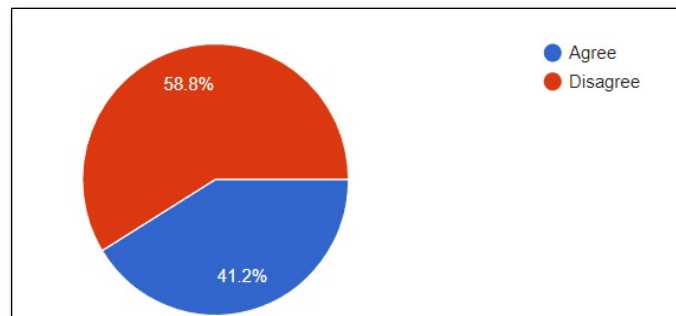


Figure 4: Quality of Hand Writing Deteriorated

According to research, remote learning has had a varied impact on handwriting skills, with a majority of students (58.8%) disagreeing and a notable minority (41.2%) agreeing that their handwriting quality has decreased during online classes. This suggests that even traditional writing abilities have not been immune to the digital shift. There could be several factors contributing to this decline. The prevalence of keyboards and other electronic devices in online learning may have diminished the importance of handwriting, causing students to neglect practicing their penmanship. Moreover, the absence of face-to-face guidance from teachers could also be a contributing factor, as students may not have the necessary feedback and instruction to improve their handwriting skills.

On the other hand, most of the dissenters may have successfully adapted to the digital sphere without sacrificing their handwriting prowess. Perhaps they purposefully struck a harmony between traditional and technological writing methods, recognizing the strengths of both. This contrast highlights the importance for educators to embrace diverse learning styles and devise effective strategies for fostering well-rounded skills that combine both manual and electronic forms of expression.

5. You have developed a lethargic behaviour towards your lifestyle which often effect your discipline.

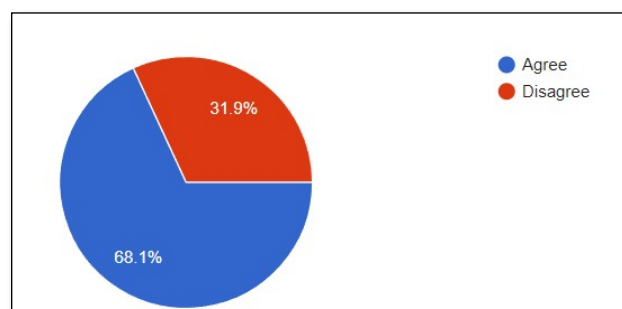


Figure 5: Developed a Lethargic Behaviour towards Your Lifestyle

It is undeniable that the current shift to online learning has had far-reaching consequences on students' lives. Judging from the statistic that 68.01% of students feel their daily routines have become slowed and this has possibly affected their self-discipline, it is evident that the impact of this educational transition is significant. This consensus among the majority of students suggests that the shift to virtual classrooms has presented challenges beyond just academic performance, affecting students' overall perspective on

life. It's possible that this lacklustre behaviour can be attributed to the non-traditional schedule of online learning, where students may struggle to uphold a sense of structure in their daily lives.

6. There is a reduction in your learning abilities due to the online classes.

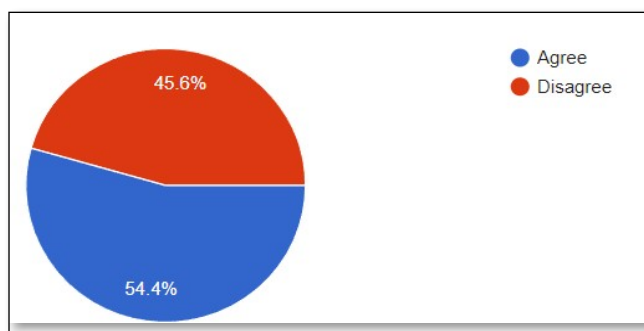


Figure 6: Reduction in Your Learning Abilities

The statistics reveal an interesting divide among students regarding the impact of online classes on their learning. While 54.4% acknowledge a negative effect, 45.6% hold a different perspective. This highlights how virtual learning can have a complex and unique effect on academic success. Those who fall into the first group may encounter challenges such as difficulty concentrating, a lack of personal interaction with teachers, and technical difficulties that hinder their progress. As a result, they may struggle with comprehension and retention, especially without the ability to ask questions and receive immediate clarification that in-person classes offer.

Conversely, it is plausible that the 45.6% of individuals who expressed disapproval had seamlessly adapted to the virtual platform by effectively utilizing technological tools and resources to enhance their educational journey. They may have even devised efficient study strategies specifically tailored for the online environment, showcasing their ability to adjust to different instructional methods. This disparity in perspectives highlights the importance of approaching online learning in a nuanced manner, recognizing that its impact on students' learning abilities can vary significantly. In order to ensure the efficacy of online education for a diverse range of students, it is beneficial to address the concerns raised by the majority while also drawing insights from the experiences of others.

7. Did the online class affect your reading skills?

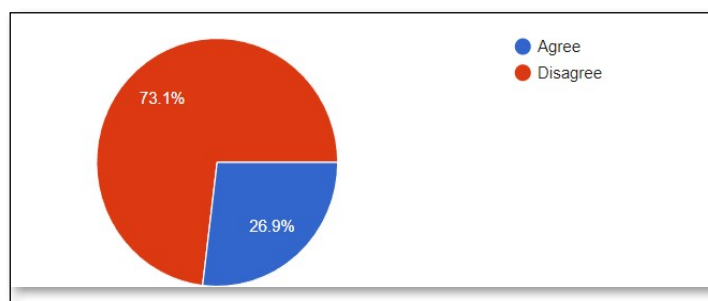


Figure 7: Online Class affects Your Reading Skills

In the ever-evolving landscape of digital education, the impact of online classes on students' reading abilities has sparked a considerable debate. A notable 73.1% of students express disagreement, a noteworthy finding. This disparity in perception can be attributed to a multitude of factors. Some students who reject the notion may have effectively adapted to the virtual setting by utilizing a variety of

digital resources, such as interactive courses and e-books, to enhance their reading comprehension. With the dynamic nature of virtual learning, students have access to a diverse range of online materials tailored to their individual interests and learning styles, resulting in personalized approaches to reading.

Conversely, it is plausible that the 26.9% of participants who reported a change in their reading abilities after shifting to online classes were facing challenges such as eye strain, distractions, or a lack of exposure to physical materials. For certain learners, the shift from a traditional classroom environment to a virtual one could impact their ability to fully engage in the reading process, leading to a perceived decline in their reading skills. This disparity highlights the significance of educators and institutions acknowledging the diverse experiences of students in online learning. By addressing the concerns of the minority and leveraging the successes of the majority, we can effectively cater to the needs of all students

8. Increased screen time has adversely affected Eyes, Eating Habits and Weight.

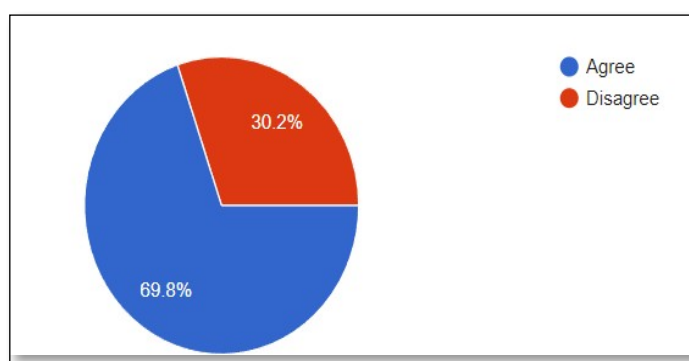


Figure 8: Increased Screen Time has Adversely Affected Eyes, Eating Habits and Weight

A whopping 69.8% of students are well aware of the negative consequences that increased screen time can have on their overall well-being. These harmful effects are most commonly seen in eye health, eating habits, and weight management. With the sharp rise in virtual learning during the COVID-19 pandemic, students are understandably worried about the impact on their vision. Reports of eye strain, exhaustion, and discomfort have become widespread, clearly pointing to a direct link between extended screen time and visual health.

The survey findings indicate that the modified learning setting has negatively impacted students' dietary practices and weight management. The blend of study and leisure areas has muddled the distinction between meal times and study breaks, leading to irregular eating schedules and a decline in proper nutrition. Moreover, the rise of sedentary behaviour during online learning and increased recreational screen usage has further compounded the issue, potentially resulting in weight-related issues amongst students.

It is crucial that we grasp the full extent of the consequences that heightened screen time can have on students' well-being. To address this issue, we must implement a multifaceted approach that includes regularly scheduled breaks, encouraging outdoor activities, and educating students about healthy screen habits. These measures are necessary to counteract the negative impacts we have observed on students' eye health, eating habits, and weight management.

9. There is an increase interest towards mobile, laptops and other digital devices even after getting back to normal classes.

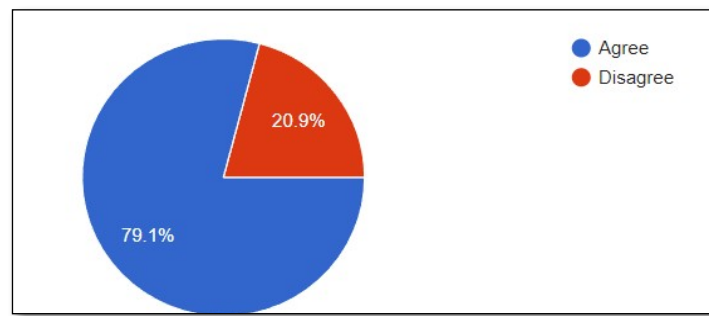


Figure 9: Interest towards Mobile, Laptops and Other Digital Devices

After the return to traditional, face-to-face classes, an impressive 79.1% of students have reported a significant increase in their fascination with mobile phones, laptops, and other digital devices. This surge in technological interest signifies a profound change in both academic and recreational preferences. It seems that the incorporation of technology during the pandemic-induced period of remote learning has made a lasting impression on students, shaping their everyday communication and leisure pursuits.

The continued fascination with digital devices can be traced back to the comfort and ease acquired during the prolonged experience of remote learning. It's possible that students have formed a dependency on these tools, utilizing them for not only educational purposes but also as indispensable sidekicks for leisure, socializing, and gathering information. With the seamless shift between virtual and physical worlds, the boundaries between conventional and digital realities have become increasingly blurred.

The increasing popularity of technology in education and society as a whole poses interesting inquiries about its changing role. Further research could delve into the psychological and sociological implications of this trend, investigating how students' heightened reliance on digital gadgets impacts their cognitive processes, social interactions, and overall wellness in the after-pandemic world of education.

10. Do you like to make actual friends or online friends?

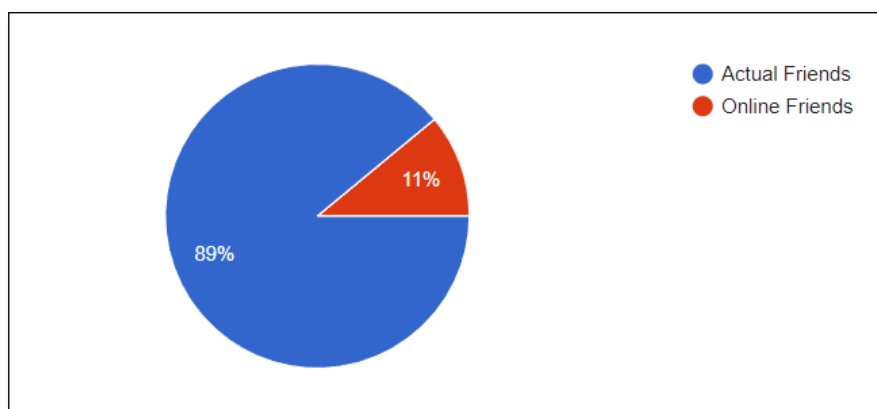


Figure 10: Like to Make Actual Friends or Online Friends

A resounding 89% of those surveyed express a deep desire for forging genuine connections and nurturing genuine friendships. This reveals the innate human craving for meaningful social interactions, breaking through the superficial veil of virtual acquaintances. The yearning for authentic friendships

signifies a longing for sincere emotional ties, shared moments, and in-person connections that surpass the surface level of the digital world.

Our natural inclination towards true friendships may stem from a desire for meaningful and enriching connections, highlighting the significance of personal bonds in a world where online communication reigns supreme. This alludes to the awareness that while digital channels offer convenience, they may lack the depth and genuineness found in face-to-face relationships.

The discovery also encourages further investigation into how social media and online interactions influence the fulfilment and happiness found in friendships. As technology continues to progress, it is vital to comprehend the relationship between virtual and physical connections in order to navigate the intricacies of societal bonding. The strong affirmation of the yearning for authentic bonds serves as a persuasive reminder to prioritize and cultivate genuine relationships, recognizing the incomparable worth of in-person interactions in establishing a sense of camaraderie, upliftment and inclusion in the lives of those surveyed.

11. Which subject was difficult to understand during online classes and why?

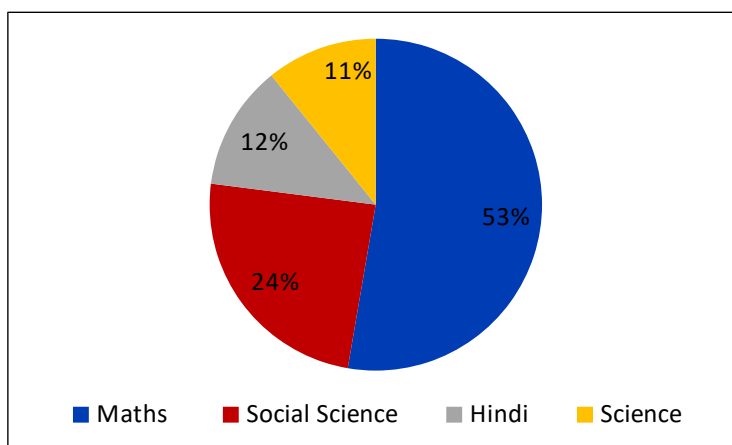


Figure 11: Subject Difficult to Understand during Online Classes

Based on the survey results, it is apparent that students hold differing views on the difficulty levels of different subjects. Specifically, an overwhelming 53% majority of respondents found mathematics to be particularly challenging in terms of comprehension. This reinforces the widely held belief that mathematics is a complex subject, often characterized by abstract concepts and logical reasoning. It comes as no surprise that more than half of the students expressed difficulty in grasping the intricacies of this subject.

Interestingly, nearly a quarter of students expressed difficulty with the subject of social science. This indicates that a sizable group of participants struggle to grasp the various components of this broad discipline, including history, geography, economics, and political science.

The subject of Hindi proved to be challenging for a considerable number of students, receiving a rating of 12%. This may be attributed to the complexities of its linguistic and literary components, which can be daunting for students with diverse linguistic backgrounds and varying levels of skill. Similarly, science received a rating of 11%, placing it at the other end of the spectrum of challenging subjects. This

suggests that some students struggle with understanding scientific concepts, conducting experiments, and applying theoretical knowledge. These students may find this subject particularly demanding.

By recognizing and addressing the unique challenges that students face in different subjects, we can better understand the significance of using individualized teaching approaches, personalized assistance, and specialized materials to meet the diverse needs of all students. This not only fosters a more inclusive learning environment, but also leads to a more successful and fulfilling educational experience for everyone involved.

12. Which subject you enjoyed the most during online classes and why?

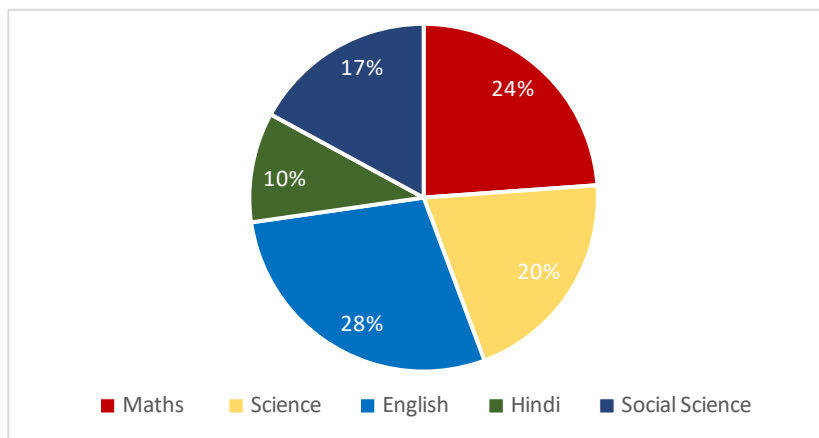


Figure 12: Subjects Easy to Understand during Online Classes

According to the survey, there exists a variety of opinions among students when it comes to the ease of understanding different subjects. It is worth noting that 37% of participants reported English as being particularly understandable, highlighting a considerable level of ease with the language. This positive feedback could be attributed to successful teaching methods, engaging curriculum, or personal abilities and enthusiasm for the subject. Additionally, 25% of students expressed a favourable perception of science's comprehensibility. This could be due to the subject's practical and experiential nature, or the quality of instructional resources available during the learning experience.

According to the data, it seems that a solid number of respondents have a decent grasp on the Hindi language, with a 22% agreement on its ease of understanding. This positive perception can possibly be attributed to the cultural and linguistic context as well as effective language instruction. On the other hand, it appears that subjects like social science and mathematics are not as widely understood, with only 9% and 7% respectively reporting an ease in comprehending them. This highlights the difficulties that some students may face in mastering these complex subjects, emphasizing the importance of tailored teaching approaches and extra resources in these areas.

Overall, the variety of responses highlights how students' individual views can greatly impact their perception of how easy a subject is to understand. By closely examining these perspectives, educators can gain valuable insight into how to adapt their teaching methods to better meet the needs of students in different subjects. This way, students can receive the necessary support and resources to improve both their understanding and engagement in their studies.

13. How effective was your communication with your teachers during the online learning period.

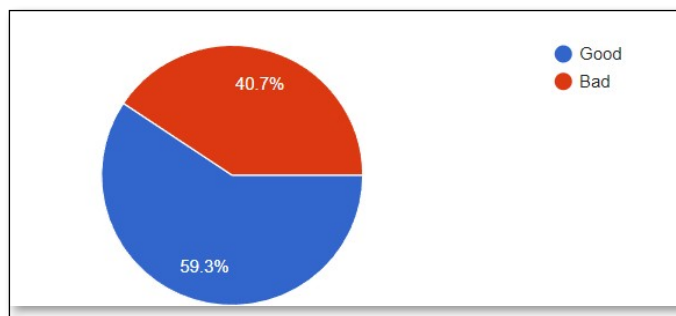


Figure 13: Effectiveness of Communication with Teachers during the Online Learning

Throughout the analysis of 273 responses, it has become evident that there exists a diverse array of opinions surrounding online experiences during the COVID era. A considerable 47.3% of students have expressed their discontent, highlighting various hindrances and drawbacks encountered during the abrupt switch to virtual learning. These obstacles may include technological glitches, the absence of face-to-face interaction, or difficulties in maintaining motivation in a remote setting. However, a notable, albeit smaller, portion of only 9.9% voiced their extreme satisfaction with their online educational experiences, signalling that for some students, the virtual format proved to be advantageous and successfully met their academic needs.

The success of online education can be attributed to several factors, including the effective utilization of digital communication tools, methodically designed virtual classes, and responsive teaching strategies. In particular, teachers who seamlessly adapted their instructional methods to the online setting, provided explicit guidance, and maintained consistent communication likely played a significant role in creating an optimal learning environment.

Although the majority of students (59.3%) reported finding virtual communication effective, the fact that 40.7% did not raises significant concerns about the difficulties of online education. Possible factors such as technical issues, delayed feedback, and the lack of face-to-face interaction may have impeded successful communication for certain students.

The results of this survey highlight the vital need for constant improvement and adjustment in online teaching methods. By pinpointing and tackling the individual difficulties faced by the 40.7% of dissatisfied respondents, we can greatly improve the quality of communication in virtual classrooms. This will ultimately result in a more inclusive and nurturing educational environment for all students.

14. How was your overall learning experience in online mode during the COVID-19 pandemic?

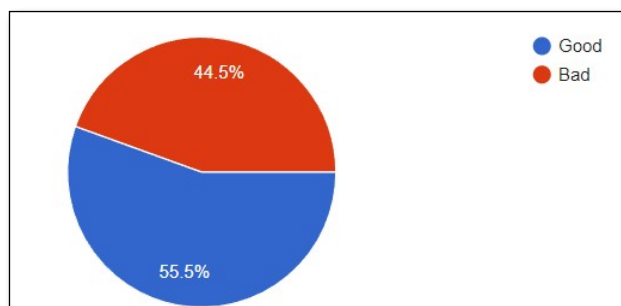


Figure 14: Overall Learning Experience in Online Mode

According to the data, over half of the participants (55.5%) shared their thoughts on their overall learning experience during the COVID-19 pandemic, specifically in an online format. This statistic encompasses a wide range of feelings and experiences that students have encountered during the unprecedented transition to remote education. Interestingly, this percentage falls slightly above the midpoint, indicating a varied reaction and underscoring the complex influence of online learning on students.

This majority's evaluation was likely influenced by a variety of factors, including their ability to adapt to digital platforms, the success of online teaching methods, and their level of involvement in virtual classrooms. Those who had a positive experience were likely aided by creative instructional techniques, interactive online materials, and skilled educators who smoothly guided them through the virtual landscape.

On the other hand, the fact that 44.5% of individuals did not show positive sentiment highlights the struggles encountered during this transition. These difficulties may be attributed to obstacles related to technology, struggles with staying engaged, and a perceived deficiency in the well-rounded learning atmosphere typically found in physical classrooms. This survey result serves as a clear indication for further examination into the intricacies of online learning journeys. By comprehending the elements that impact student satisfaction, educational institutions and educators can enhance their online teaching methods, ultimately resulting in a more comprehensive, successful, and engaging learning experience for every student.

15. Which mode of classes you recommend if given an option?

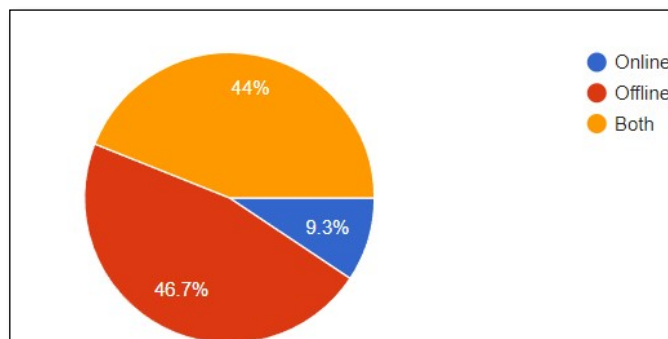


Figure 15: Mode of Class You Recommend

According to the survey results, there is a considerable range of preferences among participants when it comes to their preferred mode of classes. Offline classes were recommended by 46.7% of respondents, while 9.3% favoured online classes, and 44% suggested a combination of both through a hybrid approach. This distribution showcases the intricate landscape of opinions and the diverse expectations individuals have for the ultimate learning experience.

Nearly half of the respondents, 46.7%, prefer offline classes, citing a preference for traditional and personal interactions in a physical classroom setting. The social aspects of on-site education and the value of direct teacher-student engagement are also highlighted by these individuals, who believe that in-person classes facilitate a truly immersive learning experience. In contrast, a smaller percentage of 9.3% supports online classes, placing greater importance on the flexibility, convenience, and accessibility that virtual learning provides. This group values the ability to customize their pace of

learning, access resources remotely, and utilize digital tools that enhance the overall educational experience.

The 44% majority showing support for a hybrid approach highlights the acknowledgement of the valuable aspects of both offline and online education. This group highly appreciates the convenience of online learning while recognizing the irreplaceable advantages of in-person interaction. Their recommendation reflects a sophisticated understanding, striving to find a harmony between the strengths of each method. The diverse perspectives and recommendations further emphasize the significance of providing a flexible education system that caters to individual preferences and the diverse learning styles of students. By taking into account these varying preferences, future educational strategies can create a more adaptable and inclusive learning environment.

Result and Discussion

The purpose of this research was to investigate the influence of online learning on students' academic advancement and overall mental state. A group of 182 students from grades 9 to 12 at Navy Children School, Port Blair, took part in an online questionnaire that consisted of 15 stimulating inquiries. The results of the survey highlighted the significant effects of the shift to virtual classes on students' academic achievement and emotional welfare.

The survey revealed a critical discovery: an alarming decrease in students' ability to maintain attention, with a whopping 74.7% of respondents reporting a decline in focus. This highlights the pressing demand for instructors to implement dynamic and inventive teaching methods that can effectively sustain attention and engagement in virtual learning environments. Equally significant was the decrease in students' writing speed and spelling accuracy, as reported by 50.5% of respondents. This emphasizes the crucial role of educators in emphasizing penmanship skills and finding a harmonious blend between digital and traditional expressions.

According to the survey, the shift to online learning had a significant impact on students' levels of creativity and tolerance. A large number of students expressed feeling less inspired and less accepting of differing viewpoints. This emphasizes the crucial role of educators in creating a nurturing and inclusive learning environment that fosters creativity and open-mindedness. Despite the difficulties that arise with online learning, the survey also uncovered that a portion of students managed to thrive in the digital realm without compromising their handwriting abilities. This highlights the value of embracing diverse learning approaches and implementing effective methods for developing versatile skills that encompass both manual and digital modes of communication.

In light of the survey results, it is evident that the transition to virtual classrooms has brought about more than just academic struggles for students. In fact, it has significantly impacted their outlook on life as well. Therefore, it is imperative for educators to acknowledge and tackle these additional challenges. This can be achieved through the implementation of creative teaching methods, customized support, and tailored materials to cater to the unique requirements of every student.

This research yields valuable insights into the effects of online learning on students' academic progress and well-being. The survey's results underscore the significance of incorporating innovative teaching techniques to promote sustained focus and engagement in virtual classroom settings. Prioritizing penmanship skills, nurturing a supportive and inclusive learning environment, and embracing diverse

learning styles are crucial in addressing these challenges. By doing so, we can guarantee that students receive a successful and rewarding educational journey despite the unprecedented challenges brought about by the COVID-19 pandemic.

Learning Gaps

Based on the findings of the survey carried out at Navy Children School in Port Blair, it is evident that students in classes IX to XII face a number of learning gaps as they navigate the shift to online learning. These gaps are as follows:

1. **Reduced attention span:** A staggering 74.7% of participants reported a decline in their ability to concentrate, indicating a significant hurdle in maintaining consistent engagement in virtual classrooms.
2. **Decreased writing speed and accuracy:** 50.5% of students reported a drop in their handwriting speed, underscoring the need for educators to prioritize penmanship skills and strike a balance between digital and traditional modes of expression.
3. **Impact on creativity and tolerance levels:** Many students reported feeling less creative and less tolerant of others' opinions, emphasizing the need for educators to foster a supportive and inclusive learning environment that encourages creativity and open-mindedness.
4. **Challenges in specific academic subjects:** Mathematics was particularly challenging for 53% of respondents, followed by social science, Hindi, and science. These findings underscore the significance of using individualized teaching approaches, personalized assistance, and specialized materials to meet the diverse needs of all students.

Overall, the survey findings highlight the multifaceted challenges faced by students during the transition to virtual classrooms and emphasize the need for educators to adopt innovative teaching strategies, personalized assistance, and specialized materials to meet the diverse needs of all students. By addressing these challenges, educators can effectively bridge the learning gap and create a more inclusive and supportive virtual learning environment.

Conclusion

Ultimately, this study sheds light on the complex effects of online learning on students at Navy Children School amidst the COVID-19 crisis. The results of the survey demonstrate that virtual education has significantly impacted not only students' academic performance, but also their overall mental and emotional well-being. It is vital for educators to acknowledge and address these added challenges. This can be done by incorporating dynamic teaching strategies, providing individualized support, and designing customized materials. The key takeaway is the need to foster continuous engagement and active participation in virtual classrooms through innovative teaching methods. Emphasizing handwriting skills, cultivating a supportive atmosphere, and catering to diverse needs are all crucial components in this endeavour.

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