

CONDUCTING SURVEYS TO ANALYZE THE IMPACT OF VIRTUAL LEARNING ON STUDENT COMMUNICATION AND SELF-ESTEEM

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ABSTRACT

The Covid-19 pandemic has distorted human lives and disrupted global economies. This research evaluates the hypothesis 'Virtual learning has impacted student communication and self-esteem'. An online survey was conducted among 115 students from Delhi, India, originating from financially secure as well as insecure backgrounds, to examine if virtual learning during the pandemic had a positive or negative impact on student communication and self-esteem.

The survey responses indicated that the pandemic distorted student communication skills as there were limited online interactions between peers and teachers. The inadequacy of digital devices which served as a primary communication tool during the pandemic, technological impediments - data service connectivity and hasty attempts to design online teaching strategies augmented this communication gap. Furthermore, the inability to accurately judge students' scholarly performance and academic loyalty proved to be an immense obstacle to carrying forward a smooth communication channel.

Students' self-esteem seemed to have also waned during the pandemic. The lockdowns and self-isolating, work overload received from instructors, the unfamiliarity and inability to adapt to the new online teaching strategies, stressful home learning environments and financial glitches, overutilization of smart devices, uncertainties in educational and future career plans led to depressiveness, emotional disorders and mood swings among students.

Keywords: Virtual learning, Students, Self-esteem, Communication, Lockdowns, Self-isolating, Technological impediments.

INTRODUCTION

The Covid-19 pandemic has affected numerous aspects of human lifestyle and distorted normal daily routines. The unforeseen pandemic led to prolonged global lockdowns followed by

financial recessions, self-isolation, enforcement of social distancing measures and rising anxiety to safeguard life and human health.

Schools during this pandemic era were shut down, hence jeopardizing academic calendars. To keep intact academic continuity most educational institutes had to shift to online teaching technology, design digital platforms and students were compelled to switch to virtual learning strategies. Nonetheless, the difficulties and dilemmas related to this sudden transition and hasty preparedness of technical designing, hampered the efficacy of e-learning, especially for developing nations like India, where technological impediments such as appropriateness of devices and bandwidth of data services and internet connectivity availability posed to be significant obstacles.

Also, *“Has virtual learning has impacted student communication and self-esteem?”* While a majority of studies state that the new and different virtual teaching methodology impacted each student differently, they all agreed that this left an adverse long lasting effect on students’ mental wellbeing, reduced student communication with teachers as well as peers and decreased students’ self-esteem.

Effective student communication channels enable smooth relationships with peers and teachers by helping them to understand others and to be understood. Students’ self-esteem is important because it's their belief about their own worth and value and it strongly influences their choices and decisions. Both these aspects are highly significant for the well-being of the student community.

This research study involves the conduction of an online survey of 115 students from Delhi, India, both regular students from private schools (students hailing from financially stable backgrounds) as well as underprivileged students from public aided schools (students hailing from financially challenged backgrounds) to collect data and analyzes the survey results to establish a relationship between the virtual learning pattern which was adopted during the pandemic and its impact on student communication and self- esteem.

As per the results of existing studies and literature reviews of multiple authors and the online survey mentioned in this research paper, the increased and continuous prevalence of virtual schooling during the pandemic distorted student communication skills and decreased student self-esteem. The survey connected to this research highlights that the limited online interactions between peers and teachers, the inadequacy of digital devices which served as a primary communication tool during the pandemic, technological impediments - data service connectivity and hasty attempts to design online teaching strategies augmented this communication gap. Furthermore, lockdowns and self-isolating, work overload received from instructors, the

unfamiliarity and inability to adapt to the new online teaching strategies, stressful home learning environments, overutilization of smart devices, uncertainties in educational and future career plans led to depressiveness, emotional disorders and mood swings among students, which decreased students' self-esteem.

Nonetheless, virtual classes were the only way forward to keep academic continuity and technology assisted students in being able to stay engaged with the outer world, hence emerging as a superhero during the lockdown period. Furthermore, online lessons post the pandemic has become an imminent trend in the education sector across the world.

LITERATURE REVIEW

The events related to the pandemic of 2020 caused tremendous disruptions in the education structure worldwide. "In India, around 250 million students were affected due to school closures at the onset of lockdown induced by COVID-19" (KPMG India, 2021). A majority of students hailing from financially challenged backgrounds opted to drop out of school as they did not have the ability as well as the means to adopt online teaching strategies and continue with virtual schools (OECD, 2020). Hence, not only was there decline in learning opportunities as well as learning outcomes, this was followed by a soaring gap in communication between peers and some of such students experienced rising levels of anxiousness and depressive symptoms.

Amongst the students originating from financially stable backgrounds that had the ability and means to attend virtual schools, restricted social interactions decreased quality of general life, limited in-person interactions with peers and teachers, unfavorably impacting the student community. Moreover, teething issues with the unanticipated online teaching strategies related to the pandemic proved to be a disruptive phenomenon resulting in stress that adversely impacted students' learning performance and psychological well-being (Times of India, 2021). Furthermore, unfavorable home learning environments with mounted tensions related to the economic implications of the pandemic, health implications for family members and uncertain educational and future career plans led to some students feeling insecure and hindered students from fully engaging in the online learning process.

According to the data provided by UNICEF, "147 million children missed more than half of their in-person schooling between 2020 and 2022" (World Economic Forum, 2022). In terms of global research experiences, students were overall discontented with virtual teaching strategies and they perceived their educational experience as more difficult as compared to regular in-person learning opportunities before the pandemic. Moreover, online education from the domestic front and self-isolation potentially exposes the student community to smart phones and overutilization of internet services that have been correlated with depressiveness. Emotional disorders,

represented by mood swings in students who felt that the implementation of an online teaching policy from home and self-learning was a difficult task and they complained about extra assignments.

A survey conducted by the United Nations Foundation and the Centre for Budget and Governance Accountability (CBGA) examined the experience of children attending secondary education in government and government-aided schools in Delhi since the start of the pandemic in 2020, showed that there was no one on one interaction amongst students and their teachers. One child reported that he had to go to his aunt's house at night, which was quite far from his own home, to use her phone. Hence, he frequently missed communications with his teachers. Hence, for emerging economies with a vast impoverished population continuing the online classes became a severe challenge.

Hence, the spread of the pandemic led to an education crisis and the damage for some students seemed irreversible. Unique prospects need to be developed to rebuild to the best the lost learning opportunities, boosting student confidence as well as building smooth communication channels for the student community.

METHODOLOGY

An online survey was designed using Google forms to make a quantitative as well as qualitative analysis to analyze the responses for the following details:

Hypothesis: *"Virtual learning has impacted student communication and self-esteem"*

Independent Variable: Virtual Learning

Dependent Variable: Student Communication and Self-Esteem

The 115 student survey respondents from Delhi belonged to a mix of private and public-aided schools - 59 of the total survey respondents were from private schools and originated from financially stable backgrounds and 56 of the total survey respondents were from public-aided schools and belonged to the underprivileged students' category. The survey comprised 15 questions. The age group of the survey respondents from financially stable backgrounds was between 10-18 years and the survey respondents from economically challenged backgrounds were between 13-22 years.

The survey respondents filled out the questionnaire according to their thoughts and experiences related to virtual schooling. A detailed study of the responses was conducted to achieve a comparative discussion analysis between the two categories of survey respondents and reach a conclusion. Further the survey data was tabulated in the form of bar diagrams and pie

charts. The link to view filled questionnaires:

https://docs.google.com/forms/d/1G1HYuj5c3zat9zHUwaM5ag6_DpDEf0dR8kETJXK1BYE/edit

RESULTS

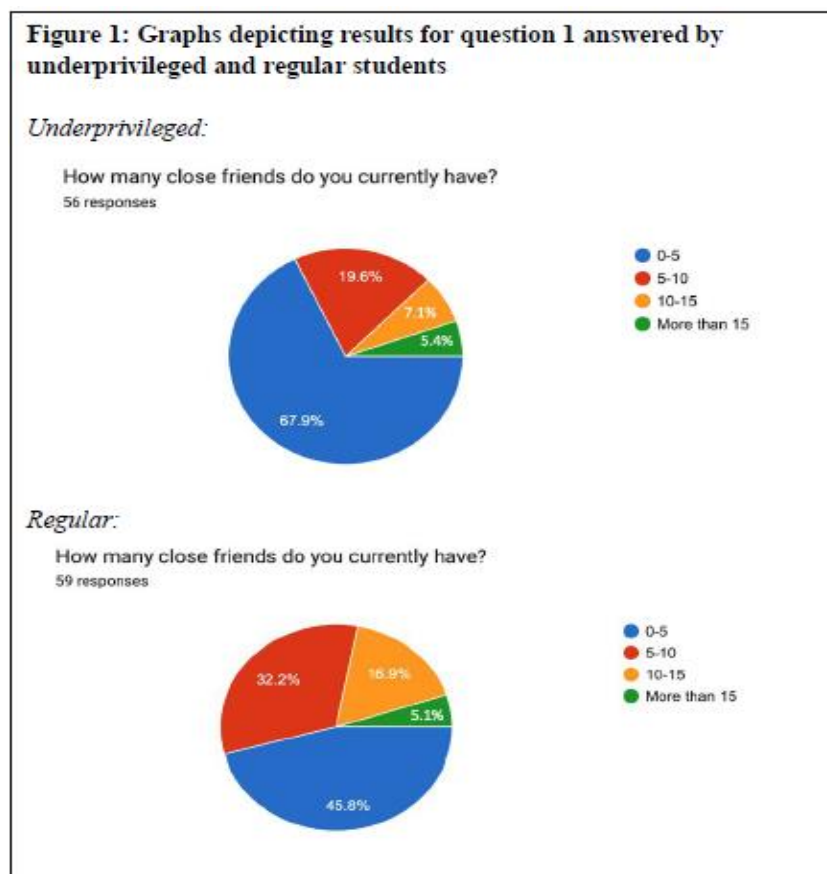
This section lists out the survey questions and the related responses provided by the underprivileged as well the regular students.

Survey Questionnaire and Responses

Q.1. How many close friends do you currently have?

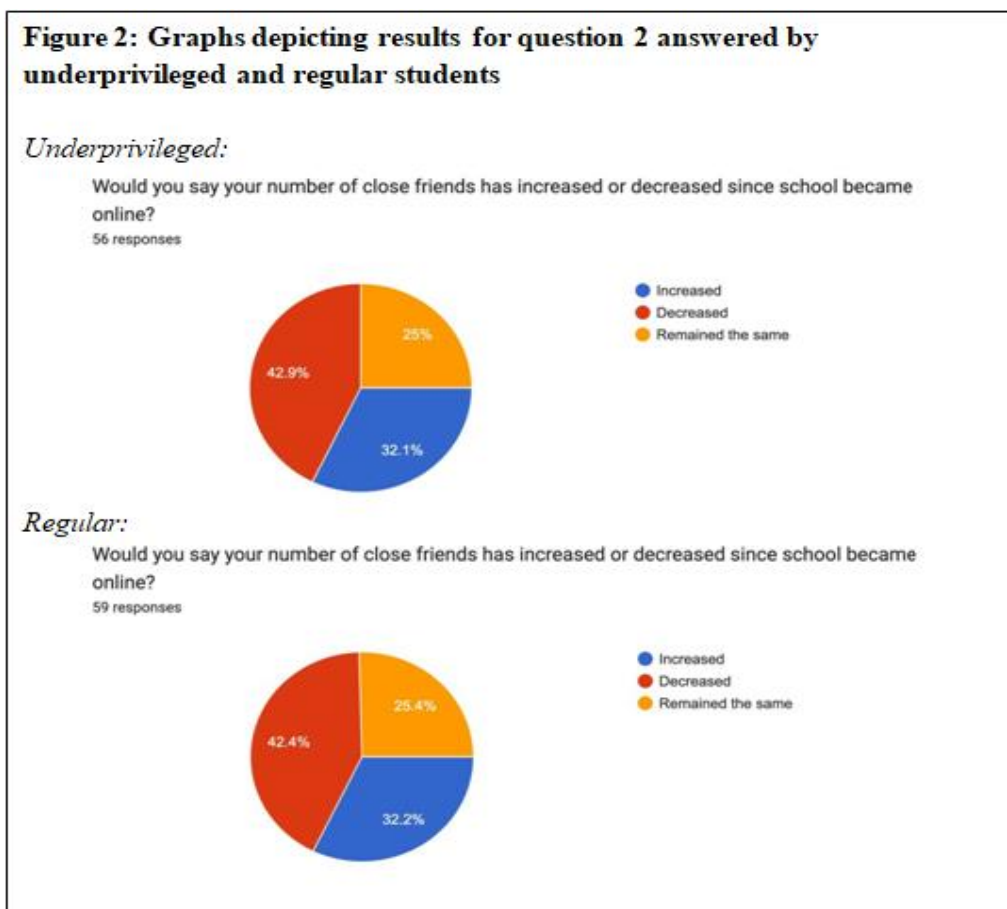
Underprivileged students - 67.9% of them claimed that they have between 0-5 friends, 19.6% had 5-10 friends, 7.1% have 10-15 friends and 5.4% have more than 15 friends.

Regular students - 45.8% of them claimed that they have between 0-5 friends, 32.2% have 5-10 friends, 16.9% have 10-15 friends and 5.1% have more than 15 friends.



Q.2. Would you say your number of close friends have increased or decreased since school began? Underprivileged students - 42.9% claimed that the number of their close friends decreased, 32.1% claimed that the number of their close friends increased and 25% claimed that the number of their close friends remained the same.

Regular students - 42.4% claimed that the number of their close friends decreased, 32.2% claimed that the number of their close friends increased and 25.4% claimed that the number of their close friends remained the same.



Q.3. How often did you get to interact with your friends before Covid? How often do you interact now?

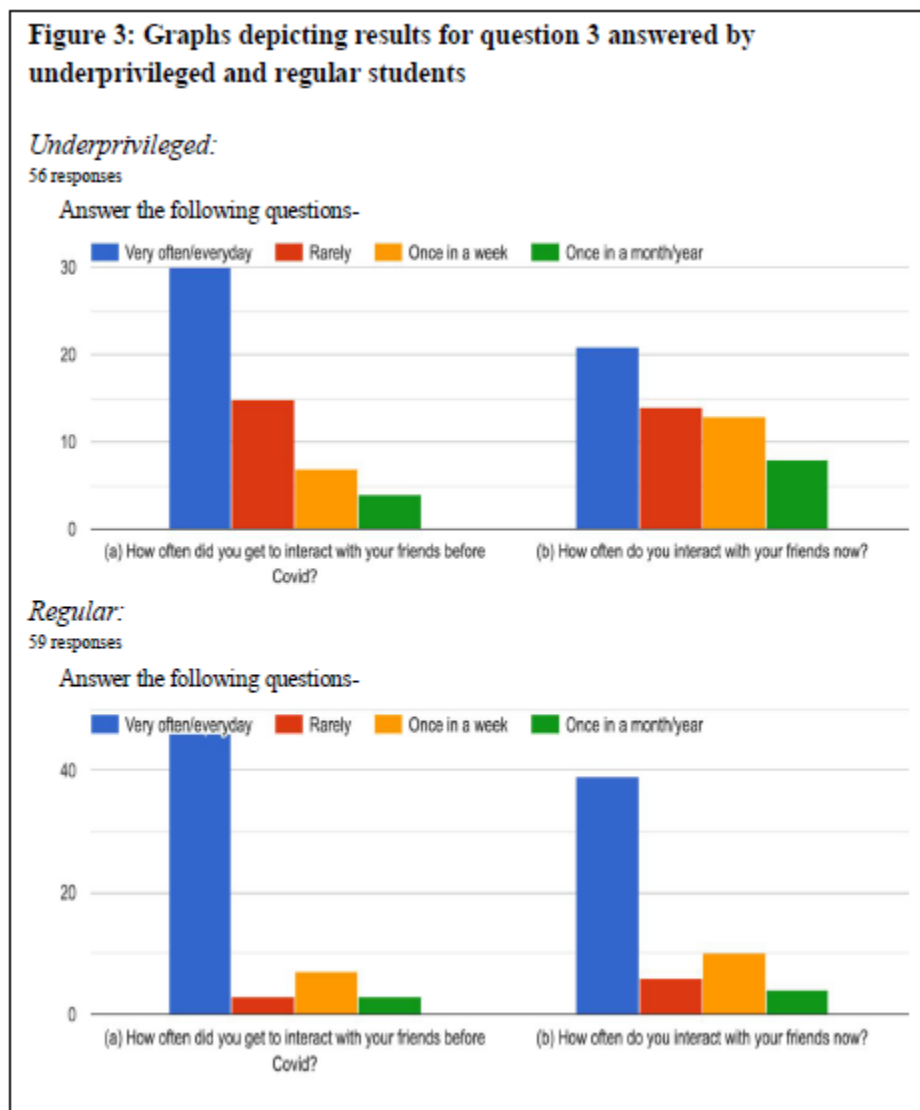
Underprivileged students before Covid - 30 students interacted with their friends very often/everyday, 15 rarely interacted, 7 interacted once a week and 4 interacted once a month/year.

Underprivileged students now - 21 students interact with their friends very often/everyday, 14

rarely interact, 13 interact once a week and 8 interact once a month/year.

Regular students before Covid - 47 students interacted with their friends very often/everyday, 2 rarely interacted, 8 interacted once a week and 2 interacted once a month/year.

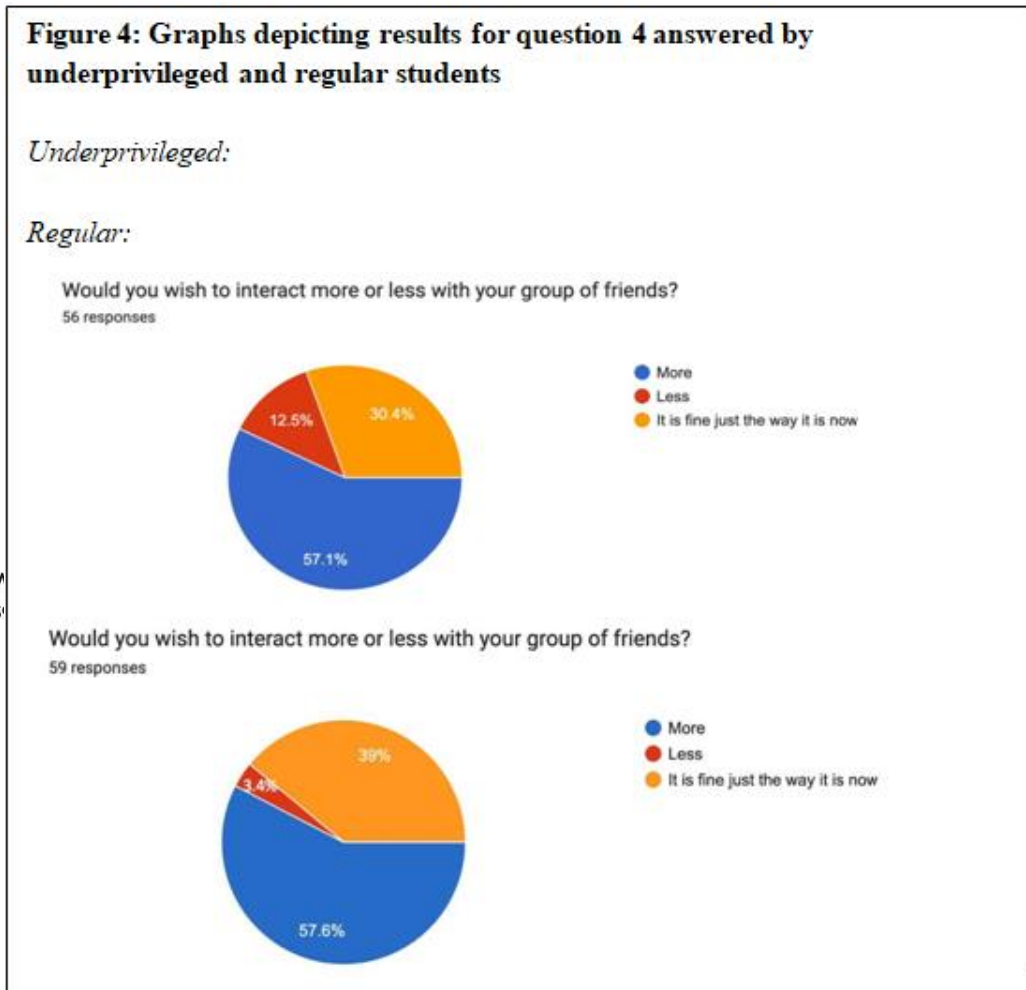
Regular students now - 39 students interact with their friends very often/everyday, 7 rarely interact, 10 interact once a week and 3 interact once a month/year.



Q.4. Would you wish to interact more or less with your group of friends?

Underprivileged students - 57.1% aspired to interact more with their friends, 12.5% wished to interact less with their friends and 30.4% believed that it is fine just the way it is now.

Regular students - 57.6% aspired to interact more with their friends, 3.4 % wished to interact less with their friends and 39% believed that it is fine just the way it is now.



Q.5. How many of your classmates, other than your close friends, are you in regular contact with? (Enter the number- for E.G. - 5, 10, 11 etc.)

Underprivileged students

Range: 0 to more than 11

Regular students

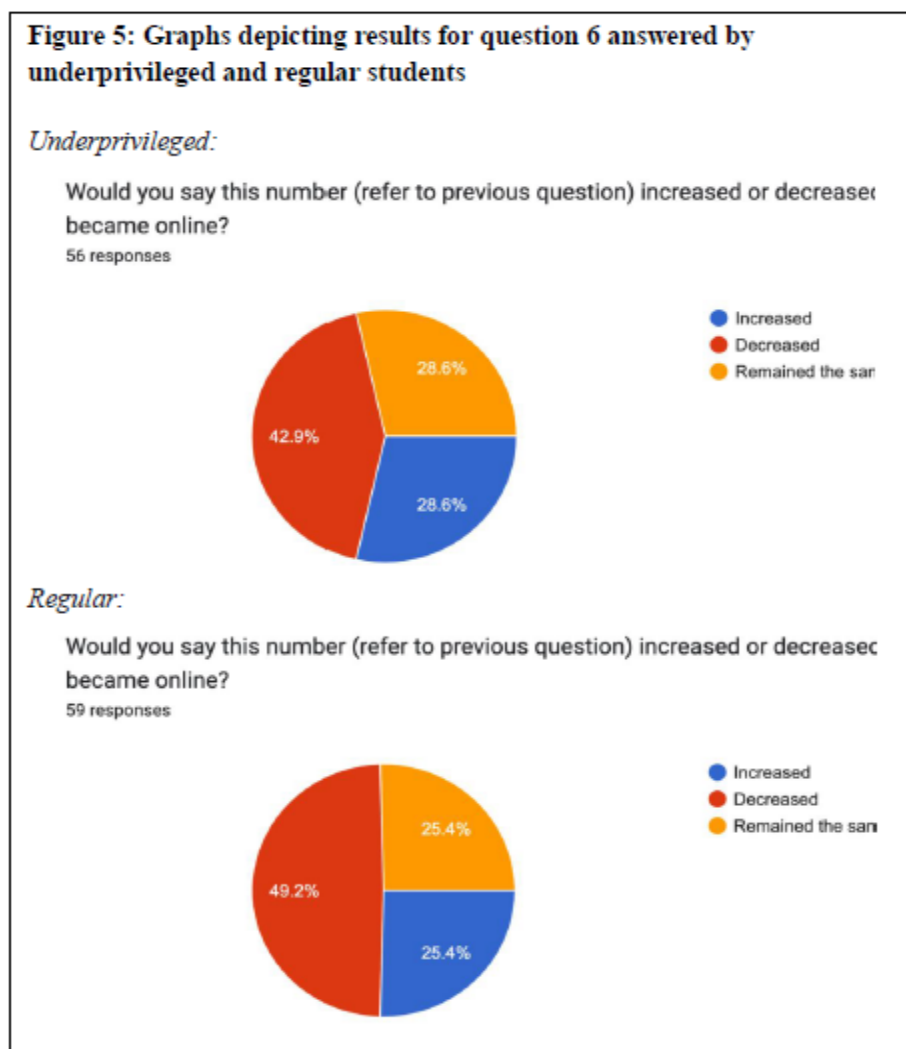
Range: 0-10

Q.6. Would you say this number (refer to previous question) increased or decreased when school

became online?

Underprivileged students - 42.9% believed that the number decreased, 28.6% believed the number increased and 28.6% believed the number remained the same for other than their close friends they were in regular contact with.

Regular students - 49.2% believed that the number decreased, 25.4% believed the number increased and 25.4% believed the number remained the same for other than their close friends they were in regular contact with.



Q.7. Do you find communicating with/seeking help (for notes, assignments etc.) from your peers was easier or more difficult ever since school became online? Feel free to elaborate.

Underprivileged students - 26 found it relatively easy, 20 found it relatively difficult and 10 were not sure whether communicating with/seeking help from their peers was easier or more difficult ever since school became online.

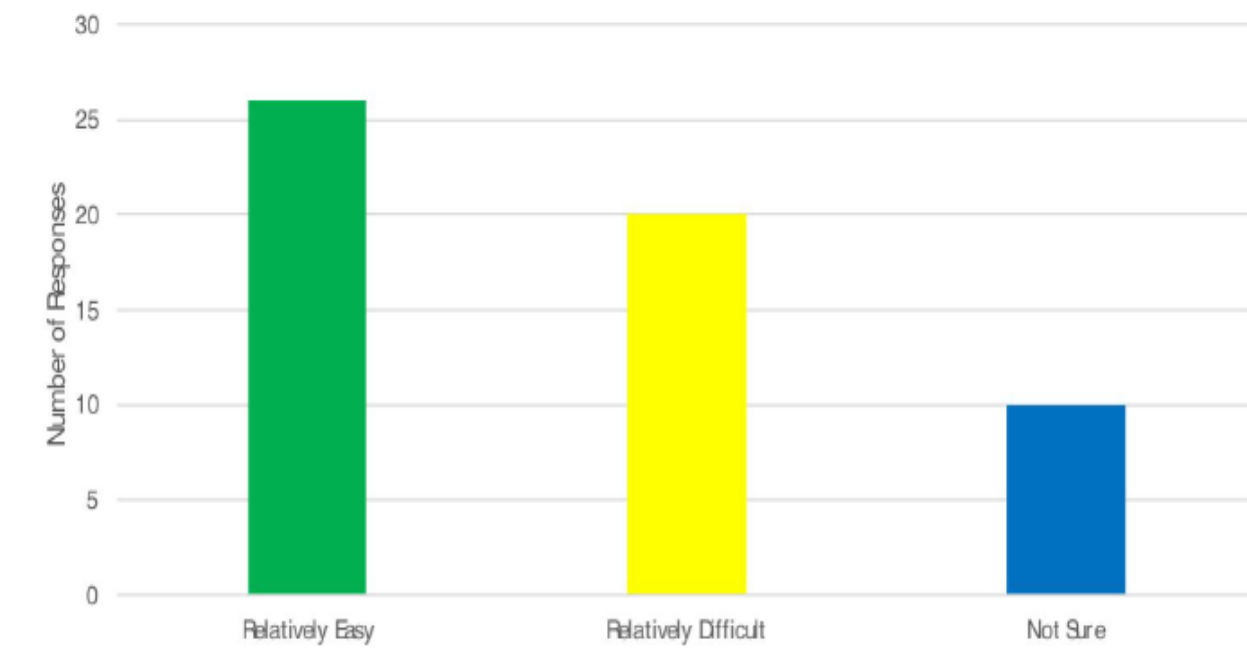
Regular students - 17 found it relatively easy, 25 found it relatively difficult and 17 were not sure whether communicating with/seeking help from their peers was easier or more difficult ever since school became online.

Figure 6: Graphs depicting results for question 7 answered by underprivileged and regular students

Underprivileged:

Do you find communicating with/seeking help (for notes, assignments etc.) from your peers easier or more difficult ever since school became online? Feel free to elaborate.

56 responses



Regular:

59 responses

Do you find communicating with/seeking help (for notes, assignments etc.) from your peers

easier or more difficult ever since school became online? Feel free to elaborate.



Q.8. How often did you get to interact with your teachers before Covid? How often do you get to interact with your teachers now?

Underprivileged students' interaction with teachers before Covid - 33 students interacted very often/everyday, 16 students interacted rarely, 4 students interacted once a week and 3 students interacted once a month/year.

Underprivileged students' interaction with teachers now - 24 students interact very often/everyday, 13 students interact rarely, 8 students interact once a week and 11 students interact once a month/year.

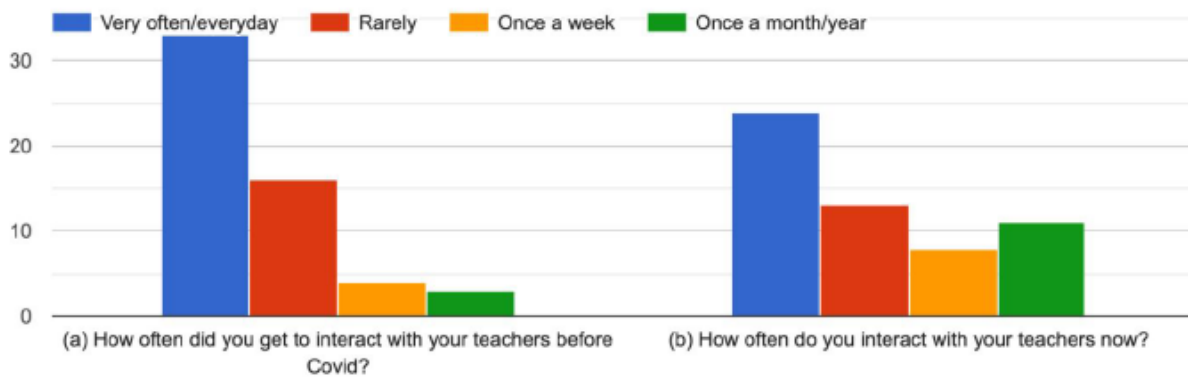
Regular students' interaction with teachers before Covid - 28 students interacted very often/everyday, 21 students interacted rarely, 6 students interacted once a week and 4 students interacted once a month/year.

Regular students' interaction with teachers now - 29 students interact very often/everyday, 17 students interact rarely, 9 students interact once a week and 4 students interact once a month/year.

Figure 7: Graphs depicting results for question 8 answered by underprivileged and regular students

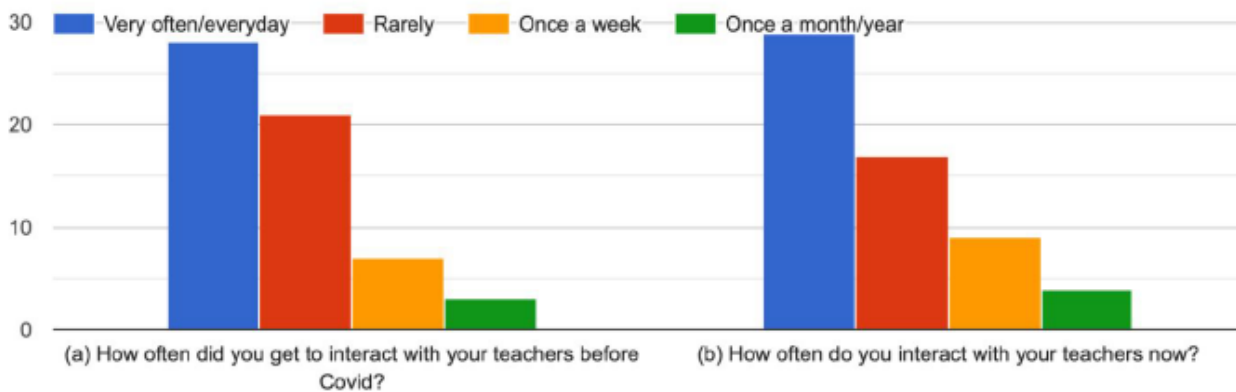
Underprivileged:

56 responses



Regular:

59 responses



Q.9. Would you say interaction with your teachers has become easier or more difficult ever since school became online? Feel free to elaborate.

Underprivileged students - 22 found it relatively easy to interact with teachers, 27 found it relatively difficult to interact with teachers and 7 were not sure.

Regular students - 15 found it relatively easy to interact with teachers, 33 found it relatively difficult to interact with teachers and 11 were not sure.

Figure 8: Graphs depicting results for question 9 answered by underprivileged and regular students

Underprivileged:

56 responses

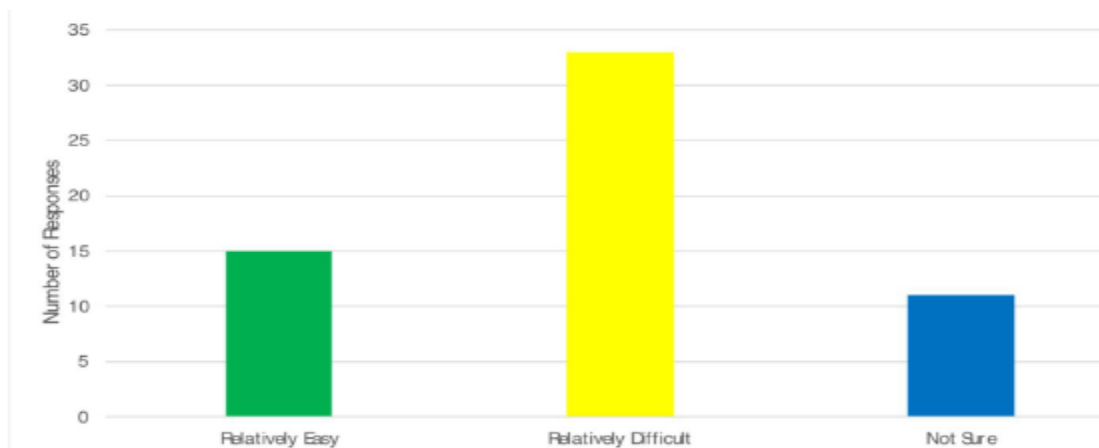
Would you say interacting with your teachers has become easier or more difficult ever since school became online? Feel free to elaborate.



Regular:

59 responses

Would you say interacting with your teachers has become easier or more difficult ever since school became online? Feel free to elaborate.



Q.10. Were you able to express/explain yourself to your teachers and friends more easily online or offline?

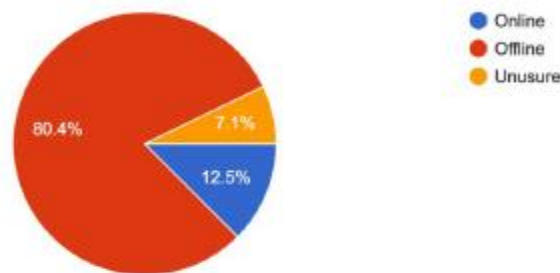
Underprivileged students - 80.4% believed communication was better offline, 12.4% believed communication was better online and 7.1% were unsure.

Regular students - 74.6% believed communication was better offline, 10.2% believed communication was better online and 15.3% were unsure.

Figure 9: Graphs depicting results for question 10 answered by underprivileged and regular students

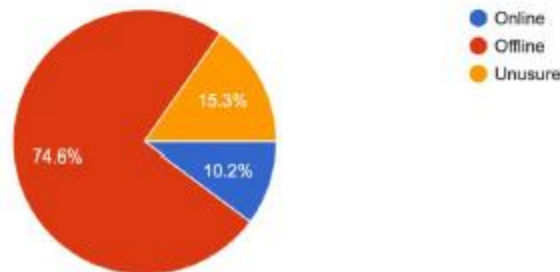
Underprivileged:

Were you able to express/explain yourself to your teachers and friends more easily online or offline?
56 responses



Regular:

Were you able to express/explain yourself to your teachers and friends more easily online or offline?
59 responses



Q.11. Has online messaging ever led to any misunderstandings between you and your teachers/friends/peers? (Which could have been avoided if the discussion was in person?)

Underprivileged students - 25 students felt that online messaging led to misunderstandings between them and their teachers/friends/peers, 16 students felt that online messaging didn't lead to misunderstandings between them and their teachers/friends/peers and 15 students felt it sometimes.

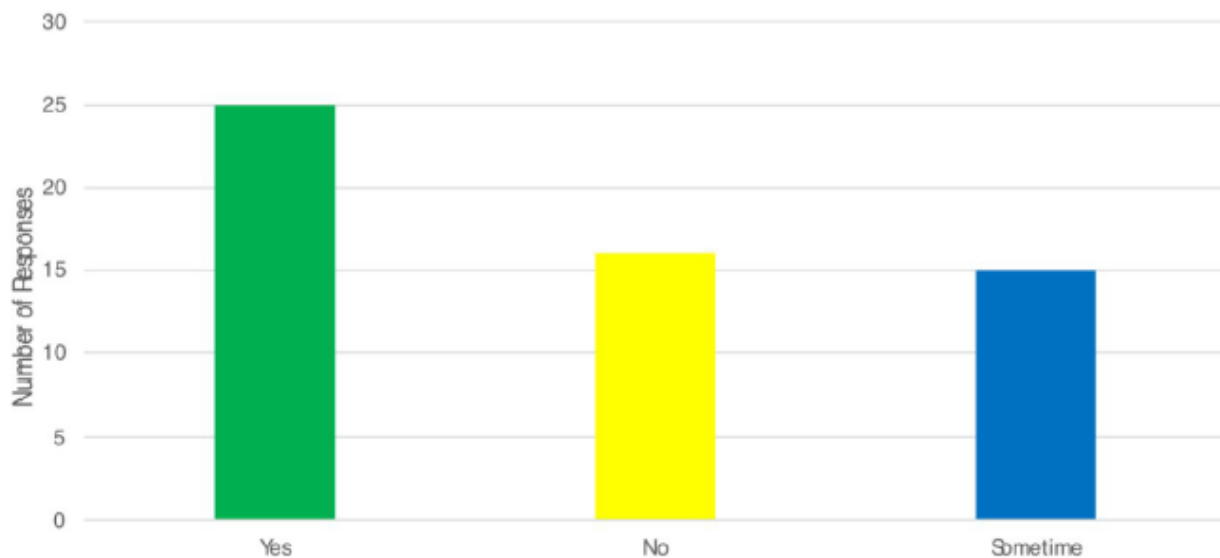
Regular students - 24 students felt that online messaging led to misunderstandings between them and their teachers/friends/peers, 13 students felt that online messaging didn't lead to misunderstandings between them and their teachers/friends/peers and 22 students felt it sometimes.

Figure 10: Graphs depicting results for question 11 answered by underprivileged and regular students

Underprivileged:

Has online messaging ever led to any misunderstandings between you and your teachers/ friends / peers? (Which could have been avoided if the discussion was in person?)

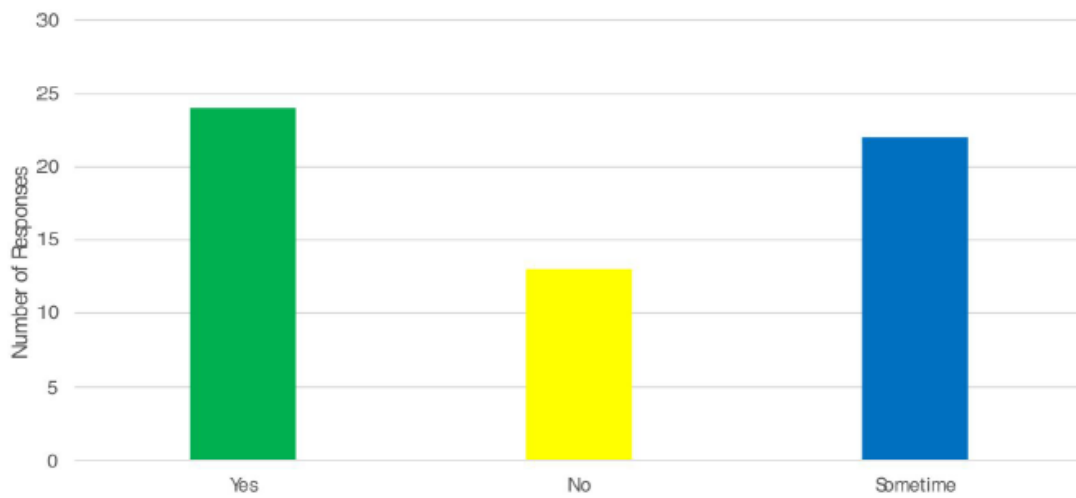
56 responses



Regular:

Has online messaging ever led to any misunderstandings between you and your teachers / friends / peers? (Which could have been avoided if the discussion was in person?)

59 responses



Q.12. Do you think that virtual learning was a deterrent to your leadership skills?

Underprivileged students - 42.9% felt that virtual learning was a deterrent to their leadership skills, 17.9% felt that virtual learning wasn't a deterrent to their leadership skills and 39.3% felt that maybe virtual learning was a deterrent to their leadership skills.

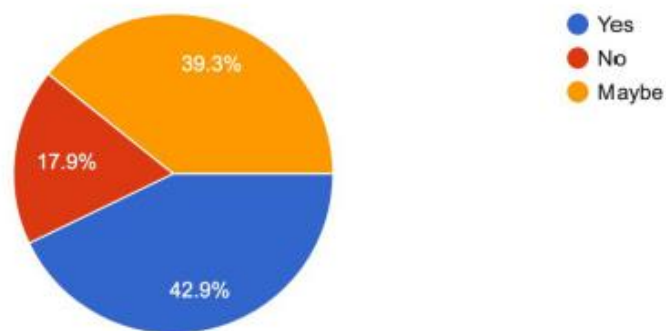
Regular students - 39% felt that virtual learning was a deterrent to their leadership skills, 22% felt that virtual learning wasn't a deterrent to their leadership skills and 39% felt that maybe virtual learning was a deterrent to their leadership skills.

Figure 11: Graphs depicting results for question 12 answered by underprivileged and regular students

Underprivileged:

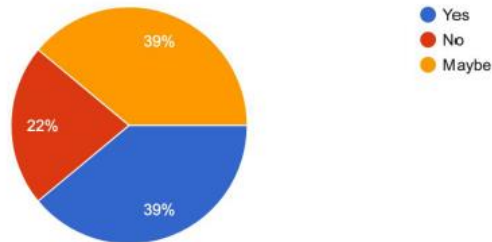
Do you think virtual learning was a deterrent to your leadership skills?

56 responses



Regular:

Do you think virtual learning was a deterrent to your leadership skills?
59 responses



Q.13. Do you think that you lost opportunities (in academics, sports, extra-curricular activities etc.) due to online education? Feel free to elaborate.

Underprivileged students - 38 students felt that they lost opportunities due to online education, 13 students felt that they didn't lose opportunities due to online education and 5 students felt that they sometimes lost opportunities due to online education.

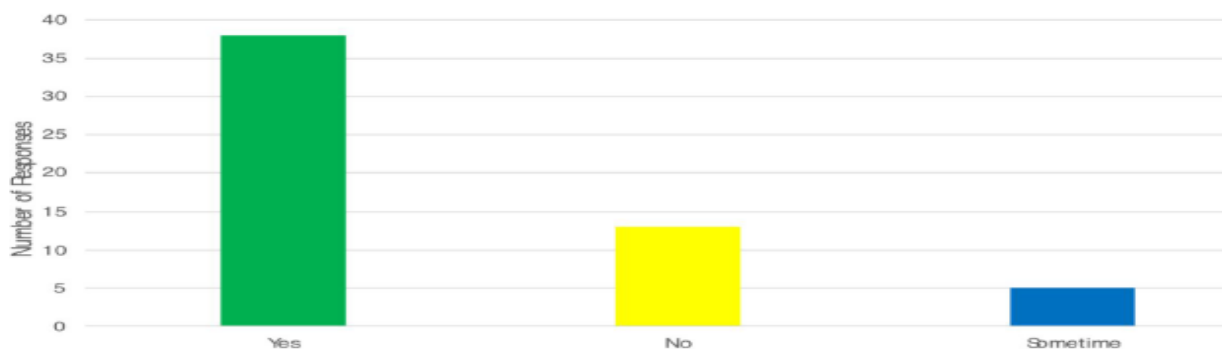
Regular students - 49 students felt that they lost opportunities due to online education, 8 students felt that they didn't lose opportunities due to online education and 2 students felt that they sometimes lost opportunities due to online education.

Figure 12: Graphs depicting results for question 13 answered by underprivileged and regular students

Underprivileged:

Do you think that you lost opportunities (in academics, sports, extracurricular activities etc.) due to online education? Feel free to elaborate.

56 responses



Regular:

Do you think that you lost opportunities (in academics, sports, extracurricular activities etc.) due to online education? Feel free to elaborate.

59 responses



Q.14. Provide your views for the following statements - strongly agree, agree, disagree or strongly disagree. Survey results for the underprivileged and regular students before Covid-

1. “On the whole, I'm satisfied with myself.” 35 underprivileged and 32 regular students agree.
2. “At times I think I am not good at all.” 24 underprivileged and 25 regular students agree.
3. “I feel that I have a number of good qualities.” 26 underprivileged and 39 regular students agree.
4. “I am able to do things as well as most other students in my class.” 33 underprivileged and 26 regular students agree.
5. “I feel I do not have much to be proud of.” 38 underprivileged students agree and 40 regular students disagree.
6. “I certainly feel useless at times.” 25 underprivileged and 23 regular students agree.
7. “I feel that I’m a person of worth, at least on an equal plane with my peers.” 35 underprivileged and 35 regular students agree.
8. “I wish I could have more respect for myself.” 23 underprivileged and 23 regular students agree.
9. “All in all, I am inclined to feel that I am a failure.” 32 underprivileged and 25 regular students disagree.
10. “I take a positive attitude toward myself and my life.” 26 underprivileged students

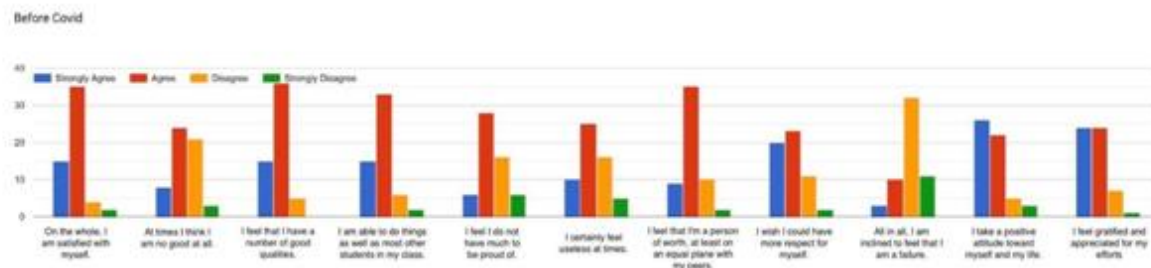
strongly agree and 30 regular students agree.

11. "I feel gratified and appreciated for my efforts." 24 underprivileged students strongly agree, also 24 underprivileged students agree and 33 regular students agree.

Figure 13: Graphs depicting results for question 14 answered by underprivileged and regular students

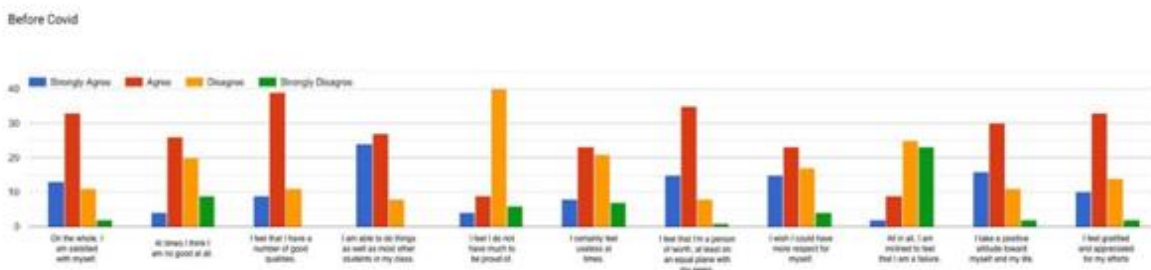
Underprivileged:

56 responses



Regular:

59 responses



Q.15. Provide your views for the following statements - strongly agree, agree, disagree or strongly disagree. Survey results for the underprivileged and regular students presently-

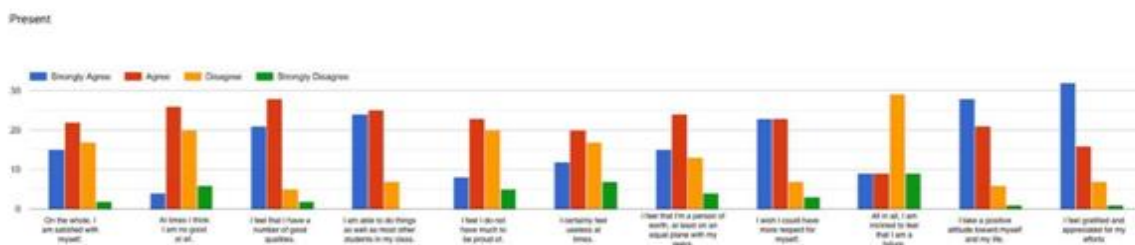
1. "On the whole, I'm satisfied with myself." 22 underprivileged and 28 regular students agree.
2. "At times I think I am not good at all." 26 underprivileged and 26 regular students agree.
3. "I feel that I have a number of good qualities." 38 underprivileged and 38 regular students agree.

4. "I am able to do things as well as most other students in my class." 25 underprivileged and 24 regular students agree.
5. "I feel I do not have much to be proud of." 23 underprivileged students and 20 regular students agree.
6. "I certainly feel useless at times." 20 underprivileged and 25 regular students agree.
7. "I feel that I'm a person of worth, at least on an equal plane with my peers." 24 underprivileged and 29 regular students agree.
8. "I wish I could have more respect for myself." 23 underprivileged students strongly agree, also 23 underprivileged students agree and 26 regular students agree.
9. "All in all, I am inclined to feel that I am a failure." 29 underprivileged students disagree and 26 regular students strongly disagree.
10. "I take a positive attitude toward myself and my life." 28 underprivileged students strongly agree and 25 regular students agree.
11. "I feel gratified and appreciated for my efforts." 31 underprivileged students strongly agree and 27 regular students agree.

Figure 14: Graphs depicting results for question 15 answered by underprivileged and regular students

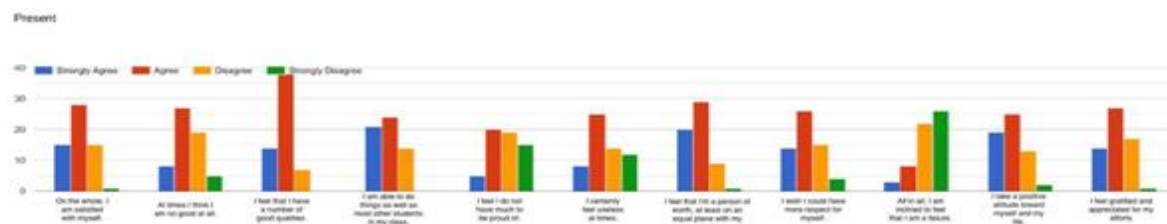
Underprivileged:

56 responses



Regular:

59 responses



DISCUSSIONS AND CONCLUSION

The survey results indicate that the impact of virtual schooling on student communication and student self-esteem were similar for underprivileged and regular students and was in line with the literature review section in the report.

Overall, a majority of students in both categories responded by saying that the number of close friends they have currently has decreased since the pandemic. This means that student communication was reduced during virtual classes. As depicted in answer 2 for 42.9% of underprivileged students and 42.4% of regular students felt that the number of close friends decreased since school became online. Further, the daily interaction between students in the underprivileged category reduced drastically as compared to the regular students' category, during the same period as seen in answer 3. Also, answer 4 depicts that a majority of students in both categories wished to have more interactions with their friends, 57.1% of underprivileged students and 57.6% of regular students.

In both student categories, there was a decrease in the number of classmates students interacted with or were in regular contact with other than their close friends, 42.9% for underprivileged students and 49.2% for regular students, as depicted in answer 6. This depicts a reduction in communication levels.

However, answer 7 depicts contrasting answers for both student categories. A majority of underprivileged students found it relatively easier to communicate or seek help from their peers as compared to the majority of regular students who found it more difficult, ever since schools became online.

Also, answer 8 depicts that the majority of underprivileged students reduced interaction with their teachers during online schooling, while under the regular students' category; this interaction with teachers didn't change much when schools became online. This may be due to the fact that underprivileged students faced the unavailability of smart devices and network issues to connect with teachers. However, interacting with teachers had become relatively more difficult for both student categories.

A majority of students in both categories felt that offline was a better mode to express themselves 80.4% for underprivileged students and 74.6% for regular students. Majority of the students in both categories faced problems due to misunderstandings caused by online means of communication, as depicted in answer 11. This shows that most students' communication skills were negatively affected by the pandemic and virtual learning.

Also, as per answer 12, the majority of students in both categories felt that virtual learning was a

deterrent to their leadership skills, which reduced self-esteem among students. Further, a majority of students in both categories felt that they lost out on opportunities in extracurricular activities during virtual learning which could have boosted their self-esteem.

A majority of students in both categories before Covid and during virtual learning, agreed with positive statements such as ‘I feel that I have a number of good qualities’, ‘I am able to do things as well as most other students in my class’ and disagreed with negative statements such as ‘All in all, I am inclined to feel that I am a failure.’ Virtual learning during the pandemic therefore didn’t totally have a negative impact on student self-esteem. This hypothesis was thus partially correct.

Hence, the survey results indicate that virtual schooling adversely impacted student communication to a large extent but only somewhat decreased students’ self-esteem. However, this survey is limited to 115 students in Delhi and these survey responses cannot be generalized for students globally. A larger survey audience globally would provide more accurate results.

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