

A STUDY ON CHANGES IN THE STUDENTS' PERSPECTIVE TOWARDS EDUCATION DURING COVID19

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Abstract

This study investigates the changes in students' perspective towards education during COVID 19 period. The study has considered three aspects of a student's perspective towards 'education and career', 'online classes as a tool to grow' and 'additional time to explore skills provided by the pandemic'. The data is either nominal or ordinal in nature. Statistical tools like the test for association between the attributes, Kruskal Wallis test for simultaneous analysis of various factors, Multivariate Analysis of Variance [MANOVA] for testing several dependent variables with one independent variable were carried out for analysis. The study helped us to gain insights in the student's experience during this pandemic which moulded their thoughts and actions to make a better future.

KEYWORDS: COVID 19, Association of attributes, Kruskal Wallis, MANOVA.

INTRODUCTION

COVID 19 is a disease caused by Coronavirus. It is effortlessly transmitted amid humans. Since the outbreak of COVID 19 on December 2019 in Wuhan [China] it has spread worldwide disrupting the lives of people. The first case of the virus in India was on 27th January 2020 and on 24th March 2020, the Government of India declared a nationwide lockdown as a mitigation measure to reduce the quick spread of the virus. The closure of schools in order to reduce the spread of viruses had interrupted the learning of students. As a tool to 'Flatten the curve' the government then decided to conduct classes virtually. This radical shift to virtual classrooms and a pause in the busy lives of students have significantly changed the students' perspective of education.

Some of the papers which discussed about the impact of COVID 19 were referred. (Henrichsand Short, 2020) discussed about the Wisconsin's in person election despite COVID 19. It studied the relationship between the usage of polling place and COVID 19 case numbers across the Wisconsin state. (Morgenstern, Choo, Wang, and Wang, 2020) discussed the impact of US government's order 'stay-at-home' on motor vehicle collisions in New York City. These papers did not have education as a main study. Further (Sarah Farooqui, 2020) article on Education during COVID 19 accelerated our interest towards education. Some of the papers like (Kronenfeld, Ryon, Kronenfeld, Hui, Rodgers, Thorson and Sands, 2020) concentrated mainly on Medical student education and discussed whether online learning is a suitable alternative for them. (Resnick, Mui, Brownie, Kanchanaraksa, Goluband Sharfstein, 2020) discussed the immediate and long term educational changes undertaken in response to COVID19 specifically in public health education. (Kummitha, Kolloju, chittor, Madepalli, 2021) gave us the insight of effects on higher

education institutions in India and Ethiopia due to introduction of online teaching during COVID 19). These acted as a motivation to have education as a central theme of the study.

DATA AND VARIABLE DESCRIPTION

This study deals with the primary data collected as a part of a data analysis project in October 2020. The data was gathered in the form of Google form responses. Students were the intended audience. Demographic details like Age, Gender and the academic qualification was collected in order to understand the background of the respondents. On the whole 194 responses were gathered.

The variables under study were either in nominal or ordinal form. The study is perceived under 3 different aspects.

- Higher education and career encloses analysis on the mindset of students regarding higher education and career which were carried out using the variables : ‘student’s change in study plans’, ‘opting Indian university’, ‘courses unrelated to current study’, ‘rethinking about career’, ‘gender’, ‘taking risk in career’.
- Online classes examines the pros using variables such as ‘digital lectures’, ‘additional lectures’, ‘transportation cost’, ‘travelling time’, ‘recorded lecture’ and examines cons by mostly targeting on the variables related to ‘health and psychological issues’ as well as ‘challenges of online classes’ .
- Exploring talents discovers efficient usage of the pandemic period using the variables ‘exploring hidden talents’, ‘improving skills’, ‘pursuing talents discovered’.

METHODOLOGY

The objective of our study is based on the experiences of the students. Thus the parameters under study are qualitative in nature. This study is more interpretative in nature and the nature of responses is less controllable. Since the study deals with the opinions the questionnaire consisted of questions with 5 point likert scale. Social media platforms provided the required support to spread knowledge about our questionnaire among students.

The collected data was preprocessed to check for any missing observation. Graphs were used for data visualization. The Kolmogorov Smirnov test was used for checking the normality assumption. Association between the attributes and the test for median scores of samples were analyzed using chi-square test and Kruskal Wallis test respectively. The data also had multiple correlated dependent variables with one independent variable. This was evaluated using Multivariate Analysis Of Variance [MANOVA]. To retain the independence of respondents among variables the random number generation has been carried out.

R software with the 3.6.1 version has been used for analysis.

ANALYSIS

Education and career are the passports for a student's better life. So studying the change in the student's mindset towards education and career is vital. (MuraliSankar's, 2016) article gave rise to the investigation of the craze for foreign universities during COVID 19. Test for association (Table 1) between the attributes of a 'student's change in study plans' and 'opting Indian university' gave a conclusion that there is no association.

TABLE - 1 (TEST FOR ASSOCIATION)

ATTRIBUTES	TEST STATISTIC	DEGREES OF FREEDOM	P VALUE
Study plan and choice of University	2.1145	4	0.7147
Career restructuring and pursuing unrelated courses	61.27651	16	3.19E-07

So, the change in study plans won't influence the choice of university (Indian or Foreign). Additionally, an analysis on the association (Table 1) between a student pursuing 'unrelated course' and 'career restructuring' resulted in an association between the attributes. Thus we can conclude that during this pandemic students aimed to have knowledge in various domains and restructured their career objectives accordingly. Also, the proportion of men and women who thought to restructure their career is the same which is supported by the Test for proportions (Table 2).

TABLE – 2 (TEST FOR PROPORTIONS)

TEST STATISTIC	DEGREES OF FREEDOM	P VALUE
3.7377	1	0.0532

The pandemic opened up the entrepreneurship interest among students which can be seen in Figure 1.

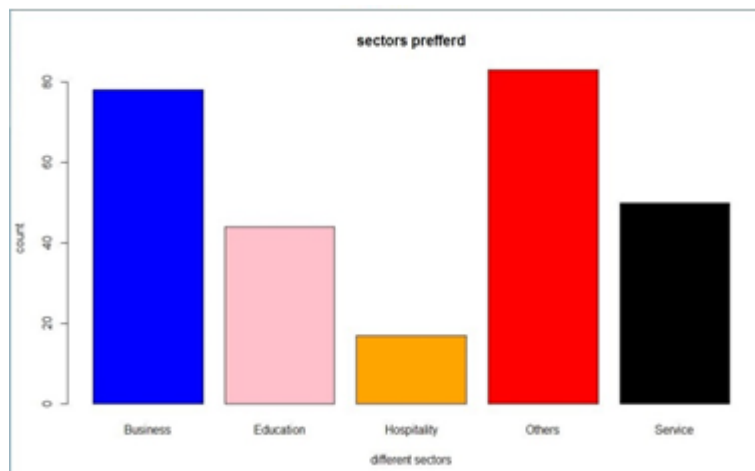


FIGURE 1 - SECTORS PREFERRED BY STUDENTS

The study of the objective would be incomplete without studying the impact of online classes. To study the impact

of online classes the following tests were conducted. The online classes came with a certain set of pros and cons. Kruskal Wallis test (Table 3) acted as a tool to analyze whether the benefits of online classes, represented by the variables 'easy accessibility', 'more learning time', 'record and relearn ideas' , 'no transportation cost'

TABLE – 3 (KRUSKAL WALLIS RANK SUM TEST)

TEST STATISTIC	DEGREES OF FREEDOM	P VALUE
14.032	4	0.007194

and 'time conservation' is enjoyed by all the students. The output showed that the extent of the benefits mentioned is different for each and every student. In spite of the above rewards in online education still **149 respondents preferred 'on campus education than online classes'**(Figure 2).

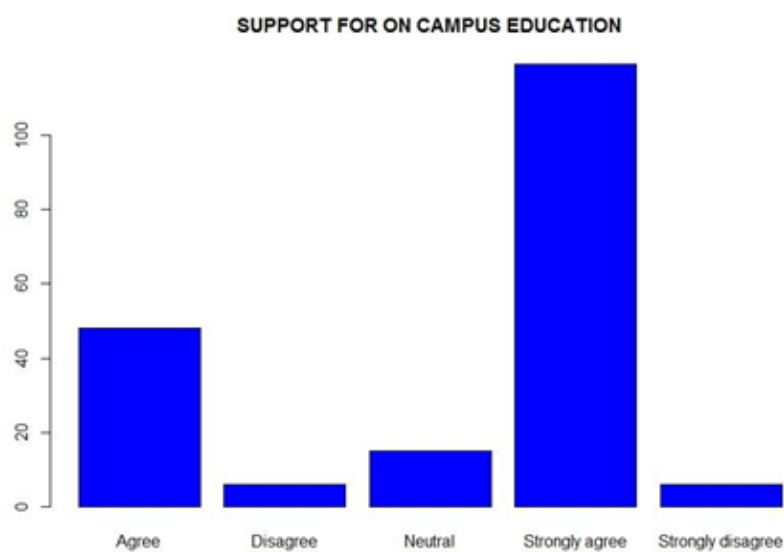


FIGURE 2- SUPPORT FOR ON CAMPUS EDUCATION

The key area affected due to online classes is health and psychological well-being of a student. So, analysis was carried out to check the extent of impact of 'Number of hours of online classes' on the 'stress levels', 'eye and ear problem', 'Edu-life balance' of the students. There was a correlation among various dependent variables. Upon carrying out a Multivariate analysis (Table 4) with health & psychological issues as dependent variable and online class hours as independent variable it can be concluded that the increase in the number of hours of online classes have a major effect on the stress levels than in any other problems.

TABLE – 4 (MANOVA TEST)

RESPONSE VARIABLE	DEGREES OF FREEDOM	F RATIO	P VALUE
STRESS	1	8.7559	0.003474
EYE PROBLEM	1	2.3197	0.1294
EDU LIFE PROBLEM	1	1.1779	0.2791
EAR PROBLEM	1	2.0772	0.1511

Other challenges in e-learning can be visualized using the likert scale graph (Figure 3). [1=Strongly disagree, 2=Disagree, 3= Agree, 4= strongly agree, Neutral is ignored].

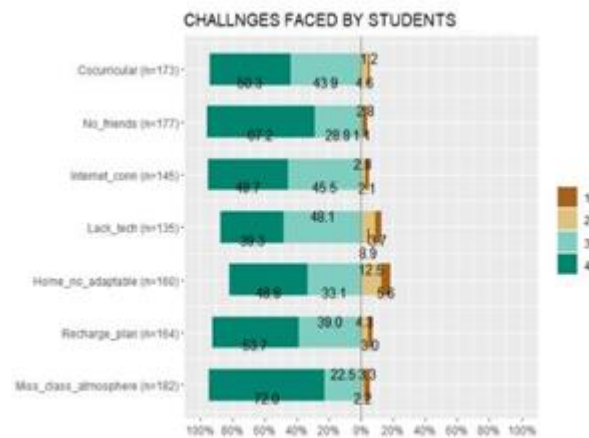


FIGURE 3- CHALLENGES FACED BY STUDENTS

As per the data, the major cons of e-learning are ‘Internet connectivity’, ‘missing classroom atmosphere’ and ‘lack of interaction with friends’. Surprisingly, ‘lack of proper access to technology’ is taking the least position in the challenges faced. Although students had to experience the pros and cons of online classes they had a moment of introspection. Test for association (Table 5) between the attributes ‘online class hours’ and ‘enough time for introspection’ concluded that there was no association between the attributes.

TABLE – 5 (PEARSON’S CHI SQUARE TEST)

TEST STATISTIC	DEGREES OF FREEDOM	P VALUE
9.3069	8	0.3171

This conveys that the increase in online class hours won’t affect the time for introspection

From (Figure 4), it can be seen that more than 50% of the respondents agreed that they would continue their discovered talents even after the pandemic period.

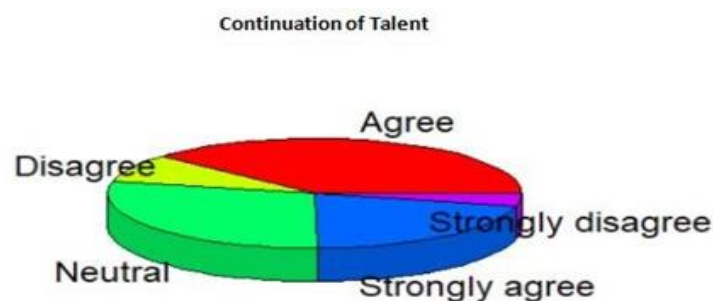


FIGURE 4- CONTINUATION OF TALENT

RESULTS

The study can be summarized as follows. Analyzing the test for association between students doing courses unrelated to their study and restructuring of their career and test for proportion concludes that male and females who are doing courses unrelated to their current study are planning to restructure their career as it provides wider knowledge of their area of interest. Interest towards self-employment has tremendously increased which can be inferred using the bar diagram in Figure 1. Introduction of online classes as an alternative to live classes has various advantages. The preference of advantages depends on the student's situation which is supported by the results of Kruskal Wallis Rank Sum test. From figure 2, nearly 75% of the respondents are supporting on campus education. This is due to the increased stress levels caused by an increase in the number of hours of online classes which is inferred from MANOVA (Table 4). Test for association shows that online hours are irrelevant to time of introspection. Students are also willing to continue their talents (Figure 4).

CONCLUSION

Education which once focused on the depth of a subject now started focusing on the width as well as the depth of the subject. This was achieved by the students by doing courses unrelated to their current study which enabled them to restructure their career. As per the data, this change in students' perspective towards education is common for male and female and no sufficient proof was collected to justify the craze for foreign universities. This transition in students' perspective was possible due to the introduction of online classes. Online classes provided advantages like easy accessibility, time saving, reduction in transportation cost etc., which gave students sufficient time to focus on building a wider spectrum of knowledge. During this transition phase the students faced many challenges pertaining to their health, psychological as well as other issues like lack of proper access to technology etc. In spite of facing these challenges, this pandemic provided students the much needed pause in their hustle-bustle life and gave them a moment for introspection to explore their skills and talents. The students are confident that the skills explored during this pandemic would continue irrespective of the situation. On the whole, COVID 19 created changes in students' perspective towards education, career and recognition of their hidden talent which helped them to get moulded into a better person.

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