

TEACHERS' PERSPECTIVE OF STUDENTS' PERFORMANCE DURING COVID-19

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ABSTRACT

The pandemic coronavirus- 2019 has spread over the world, causing human civilization to become socially estranged from one another. Specifically, COVID 2019 has a huge impact on the education sector as well, which is critical for future economic growth. Therefore, current study focused on identifying the effects of COVID-19 on academic performance of the students in Pakistan from teachers' perspective. Purposive sampling was used to choose the respondents because the present study's scope could only include STEM subject instructors. An interview methodology was employed to acquire data for this study, which was a qualitative method. To collect data, taped interviews were performed with the agreement of the interviewees, which were subsequently transcribed and given back to the respected professors for validation and confirmation. This study shows that COVID-19 will have negative affect on the educational sector in Pakistan. This pandemic distracts the education system of the whole country and this situation will remain until the pandemic is not controlled. But somehow the teachers with the help of Educational Ministry of Pakistan have developed intervention procedures.

Keywords: COVID-19 effects, student's performance, STEM, teachers' perspective

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INTRODUCTION:

The pandemic coronavirus sickness of 2019 has spread over the world, causing human civilization to become socially estranged from one another. The education sectors are significantly disrupted by COVID 2019 which is very essential for future economic

development. On December 31st, 2019 the first case was found in Wuhan city in China, and the first death that occurred due to COVID 2019 was of a 61 years old man in the same city of Wuhan, China on January 11, 2020. The World Health Organization suggests officially the name of the virus as COVID 2019 on 11, February 2020 and announced COVID-19 as a pandemic on March 11, 2020. Pakistan confronted the first two cases of coronavirus on 26 February 2020 in Karachi, where both the cases were found in the students that came from Iran on 18th, March 2020. Later on, all the provinces of Pakistan faced the Corona Virus cases and the first death was reported on 20 March 2020 who was 77 years old man. The Pakistani government imposed a lockdown on 24 March 2020 in all provinces. All the schools, colleges, and universities were closedown earlier due to high interaction occurring among them. In June 2020 Pakistan was ranked in top 10 effected countries of COVID-19 by the World Health Organization (WHO). The number of cases increasing and on August 2020 Pakistan ranked among the top five Asian countries that were reported highest numbers of Corona Virus cases which were 284660 infections. The rate at which the Corona Virus spreading has effect on every sector of human life across the country, the lockdown in the country does not only affect the academic sector but each sector has influenced by the COVID-19.

Medics are trying to find a solution for this pandemic in the laboratories and the Economists make their efforts to manage the consequences that faced by the country in this pandemic because many people lose their businesses, jobs, wages and income as there were restrictions on the movements of human within the country and across the border. The disease that originated from Wuhan city in China was spreading so rapidly in entire China and worldwide.

The lengthy closure of secondary school was good move by the government to keep protect their children and people because school is the place where hundreds of children meet on daily basis that is very risky for them and boost up the speed of spreading the Corona Virus faster. Many low and middle level countries are regretted on the disastrous effect of COVID-19 on the economy and put down many economic drivers (Niyaz Panakaje, Habeeb Ur Rahiman & Mustafa Raza Rabbani, 2022).

The close down of schools, colleges and universities by the government are obligatory for the safety of students and their families. So in that situation closing all the academic institution was an urgent need for that situation which prevailed all over Pakistan. As the World Health Organization admit it as pandemic disease. The Pakistani government starts taking prevention decision on COVID-19. In Khyber Pakhtoon Khwa (KP) the academic year almost get over by March and April for most of the school and colleges. It is seen that most of the school and colleges focusing on scheduling the final examination but due to the government decision for closing down the educational institution. The school and colleges had announced to cancel the exams or postpone the exams or rescheduling their exams dates. Later when the lockdown extended to May, the educational minister announced a meeting after the month of May still the Corona patient cases were increasing day by day. So, the government takes the decision to promote the student on the basis of their previous record.

The closure of all kind of educational institution the science i.e., Science, Technology Engineering, and Mathematics (STEM) subjects are mostly affected. It is due to the reason that the country is already these methods to enhance understanding in those subjects. In Pakistan the student gets very low grades in science (STEM) subjects. Also, it is assumed

that COVID-19 will most likely affect the science subject's syllabus, those started in the beginning of year 2020 along with the entire performance of the STEM subjects.

Purpose

This study mainly emphasized to generate understanding regarding the views of teachers of Math and science on the most expected effects of COVID-19 on STEM education system with respect to the performance of students in these subjects.

SIGNIFICANCE OF THE STUDY

This research may be considered as an important perspective to bring in the notice of Ministry of Education, so that all the upcoming planning till the end of this COVID phase keeping in view the contain effects of COVID-19 on the education system, complied in the light if teachers' opinion. Also, the study may be considered as an important contribution to the literature associated to the STEM subjects and possible effects of COVID-19 on the academic performance of the students. Finally, future directions may also be obtained from current study for further research in the same or closely associated domains.

Literature Review

According to Cathy Mae Toquero (2020), there could be certain effects of COVID-19 on the performance of Higher education Institutions (HEIs), so these effects may not be ignored in order to meet the future challenges. Their results also revealed that global pandemic has opened up various opportunities to the country so that educational mode of delivery and transfer its attention to emerging technologies can further be improved. Similarly, it is highlighted that HEIs may also grab this pandemic as an opportunity to enhance its practices using evidence based scenarios, by providing services for improving the mental health of the students with an ease , and making the schedule that can response to the variations at the time of their needs associated to different workable situations.

Kedra and Kaltsidisi (2020), stated that effects of the COVID-19 pandemic on university Pegagogy by taking student considers experience. A questionnaire having closed ended and open-ended questions are used to collect the required data from the students. The data has been collected from 75 students of different Departments including Molecular Biology and Genetics University of Thrace, Greece. The result revealed that students review that distance learning may become interesting, up to date, convenient, and adequate but the practical exposure of gaining social interaction experience with their class mates and other students plus teachers cannot be obtained. And further show that as bioscience students are worry about their lessons, examination and laboratory work that are highly demanded for this field and very essential for a bioscience student.

Aristovnik et al., (2020) focused on how the performance of students was affected in the first wave of COVID 19 in the start of year 2020 at different scales and perspectives of their lives on global level. Sampling techniques was based upon a comprehensive online questionnaire for data collection where it included closed ended questions. The result of this study showed that respondents with socio-demographic features (applied sciences, male, part-time, a lower living standard, first-level from Africa or Asia) were found to have significantly not as much satisfied as those with greater financial issues. Because these were generally affected more by the pandemic in terms of their emotional life and personal circumstances.

Michael Onyema et al, (2020) to investigate the effect of Corona virus pandemic on education. A structure questionnaire is used to collect the data from 200 respondents that include teachers, students, parents, policy maker, which are selected from different countries. STATA/Regression methods are used to analyze the collected data. The result show calamitous effects of COVID 19 on education and also find that many educators and students depends on technology to continued their online learning during the Corona virus pandemic.

Shehzad et al. (2020), conducted a study to check the difference between male and female E-learning portal's accessibility and usage among the students' perspective. The data have been collected through a survey by using a questionnaire that includes item of system quality, information quality, system usage, satisfaction user. Were used a 5-point Likert scale (1). Poor (2).Fair (3).Satisfactory (4).Very Good (5).Excellent. The study is divided into two models; male and female. And the results show that in male model the information quality and system quality have direct effect on user satisfaction while in female model the service quality and information quality have direct effect on both system use and user satisfaction. Thus, the study clearly shows that female student have more adoptive power and can more successfully use the E learning portal in Malaysia.

Ganzales et al. (2020), analyzing the effect of COVID 19 confinement on the autonomous learning performance of higher education students. Field experiment used for collecting the data and take 450 students that belong to three different subjects in different degree of higher education at Universidad Auto ´noma de Madrid, Spain. To find the exact effect the take the data from 2017 before the pandemic to 2020 after the pandemic arise. The results show a positive effect of COVID 19 confinement on performance of students.

Ogunode Niyi Jacob (2020), identified that effects of COVID-19 schools close down on academic program of senior secondary schools in abaji area council of federal capital territory Abuja, Nigeria. A survey technique is used for the study. 80 teachers are selected through random sample and a structure questionnaire open ended items are used to collect the data for the study. The study indicates that 80% of respondents are strongly agree that COVID-19 Schools close down would affect the academic program of Senior Secondary Schools and the academic calendar of senior secondary schools; and will lead to suspension of internal and external examinations reduction in investment on education; suspension of teaching and learning in Schools; suspension of all extra curriculum activities in Senior Secondary Schools.

Gupta and Goplani (2020) in a study highlight the Impact of COVID-19 on educational institutions in India. Descriptive and Analytical nature of study are used to collect the data from various articles, official website, newspaper, E-news and with discussion with teachers. The result indicates the closure of all educational institutions across the nation for the lockdown periods during which many other issues are also arise like breakdown in regular lectures, postponement of exams, etc that further cause the shortage of time during the next upcoming academic year.

Weiyan Xiong et al. (2020), worked on whether the COVID-19 unfavorably impact international education and student mobility or not. Through a quantitative method the data has been collected from Mainland China and Hong Kong students by selecting 2739 respondents. The result shows that 84% respondents have no interest in studying abroad after the pandemic the remaining 16% prefer to study in abroad. Showed that Mainland China and Hong Kong students are less interested in studying abroad when the pandemic

is over, which may potentially cast long-lasting effects on the international higher education sector. Because of travel restrictions the mobility of international students are highly decreased.

Dr. Pravat Kumar Jena (2020), found various measures had taken by Government of India for education sectors during this pandemic. To highlight various positive and negative impacts of COVID-19, on education different national and international report on COVID 19 are used for data collection, authentic websites are also used for collection of information. The investigation indicates that COVID 19 have very bad impact education nearly 32 crore learners stop to move their school and colleges. The positive impact is that the COVID-19 shows to the world that there is another platform that is using technologies through which education can be attained that was never used before. Also, it was observed that mostly lower income students faced difficulties to cope up with the advance technological system, for which flexible grading policy may serve as a solution (Rodríguez Planes, N., 2022, Ishrat, R & Rahman, W., 2021). Another study conducted by Atlam, E. S., Ewis, A., Abd El-Raouf, M. M., Ghoneim, O., & Gad, I. (2022), highlight that there is a strong relationship between advance technological tools and education system along with the psychological health of the students, so special attention should be given to improve the mental health of the students.

METHODOLOGY

A qualitative method was used to collect data for this study by using an interview approach. The respondents were selected using purposive sampling because current study could maintain its scope to only STEM subject teachers. In order to collect the data recorded interviews with the consent of interview were conducted, which were then transcribed and sent back to the respectable teachers for validation and confirmation.

Participants

The data for the interview is obtained from two teachers each of three government high secondary schools in Khyber District of KPK province in Pakistan and the schools names are. GHSS Speen Dhand Bar Qambar Khel Bara Khyber. GHSS Jan Khan Kale Bar Qambar Khel Bara Khyber. GHSS Kohi Sher Haider Bar Qambar Khel Bara Khyber.

Out of these two teachers one was the science teacher and the other one was the mathematics instructor. The selection of the teachers was based upon by (1). A teacher teaching the subject of math at a secondary level school and teacher teaching the any of the science subject (2) Have taught at least for ten year or even more. (3). Must have some basic knowledge of Corona Virus from any her/his sources. Following this criterion two individual were intentionally choose to contribute in the study.

DATA COLLECTION

Interviews were arranged to collect data for this study. The researcher conducted face to face interviews with schools' teachers. These interviews lasted fifteen minutes each an average. These fifteen interviews are recorded in a smartphone by the permission of participants using constant appropriate qualitative data analysis technique they were transcribed and analyze by the researcher. All form of inconsistencies and discrepancies were talked over and verify. The respondents were requested to go through the transcripts and to validate that the transcription details are based upon their views so that it can be confirmed that the collected data was valid and reliable.

Interview Questions

Interviewer

How do you think the outbreak and consequences of COVID-19 will disturb the performance of class 10 students in Math subject in the upcoming exam?

Mathematics Teachers Responses From

GHS Kohi Sher Haider: As per his response it was identified that COVID-19 will definitely affect the academic performance of class 10 students because of time-to-time outbreak and schools are not active or opened and there were some SOPs rules and regulations that make it hard to teach or learn the mathematics subject. Mathematics is a subject that is very tough and hard to understand without practice. It will be difficult to teach them in online sessions. Due to the outbreak, schools are open lately that resulted in incomplete the course or syllabus on time and this will definitely affect the performance of students in upcoming exams.

GHS Speen Dhand: COVID-19 will affect the performance of Mathematics students negatively because mathematics is a practical work and need a lot of practice in classes and without practice it is very hard to understand and will consume more time to solve Mathematical problems. So for mathematics, groups study is necessary which are not possible due to COVID-19 SOPs rules.

GHS Jan Khan Kale: Due to the fear of COVID-19, obeying SOP's rules and reduce syllabus these things will lead to negative affect on the performance of the students because there learning power has been effected with the COVID-19 and course rescued which will affect their future performance at intermediate and bachelor level. So due to COVID-19 outbreak classes session is also affected which will directly affect the student mental ability.

Interviewer:

How do you think the outbreak and consequences of COVID-19 will disturb the performance of class 10 students in science subject in the upcoming exam?

Science Teachers Responses From

GHS Kohi Sher Haider: Due to COVID-19; difficulties are arising in the classes because students are not allowed to make groups study to solve their problems and to make their practical experiments which is very necessary for a science student. The time is too short and there is no instrument to do separate practical experiments for each student and their test session are also affected due to the outbreak and they will not be able to study conceptually but will just memorize. Some important and basic topics are also excluded from their subjects/syllabus which also affects their future study plan.

GHS Speen Dhand: The outbreak will affect the science students badly in Grade 10 level due to the COVID-19 pandemic vocations and due to the outbreak. The students are not able to attain their regular and face to face classes. Their practical works are not properly done by the teacher and most of their course and practical are remain incomplete due to insufficient time. Their syllabus is also reduced which will affect the future of the students

too and their base will be weak in upper-level education which will make it hard for them to learn those topics in upcoming classes.

GHS Jan Khan Kale: There will be adverse effect of COVID-19 on the academic performance of students in upcoming exams because of outbreak. And their classes are also affected they are not allowed to do group study and group experiments in the lab and mostly our students are not self-sufficient and mostly depends on their teachers but the Pandemic outbreaks break the connection between teacher and their students due to Which they face a lot of difficulties in their study, assignment, and homework. The time is too short to cover up their course on time so due to this reason, the student performance will be affected.

Interviewer:

While observing the trends of years 2018-19 national examination results, I personally observed that the Math subject scores showed improved results with 75% passing rate. Now, with the threats that COVID-19 are showing do you believe that you will may be able to retain these results or may improve the same performance in this subject?

Mathematics Teachers Responses from

GHS Kohi Sher Haider: I think that the previous results of 2018-19 were good due to the completion of the whole course/syllabus on time and there was no barrier in teaching and learning so the results were good. The upcoming results will be affected due to short period of time and incomplete courses and COVID-19 outbreaks. But if the students struggle and the pandemic is controlled then Inshah Allah we hope to maintain the previous results performance.

GHS Speen Dhand: I think that the previous 2018-19 results were satisfactory due to the reason that the courses were properly completed and there was a lot of time to cover the whole syllabus. The students had also attempted face to face regular classes. But the COVID-19 pandemic disturb the whole education system with the outbreaks many problems are faced by both students and teachers. The students are mentally disturbed that make it hard to focus on their study and similarly the teacher have time deficiency to complete the course syllabus to their students. The teacher could not complete the course and unable to attend the practical for the students. In this way the performance of students is badly affected this year.

GHS Jan Khan Khan Kale: I think that the previous results may not be possible to maintain because of the SOPs and the outbreak vocations through which their classes have affected badly and in some regions for some students there is no internet facility to conduct online classes for them due to this reason we will not be able to improve previous 2018-19 results. But we will try and we are trying to do well to maintain their previous performance.

Interviewer:

While examining the different trends for year 2018-2019 exam results country wide, it was observed that certain improvements were noticed in the grades of science related subjects. Now due to the uncertainties during COVID-19, what is your opinion whether you will be able to maintain that improvement or not in the same subjects?

Science Teachers Responses From

GHS Kohi Sher Haider: I think that 2018-19 provided results were good due to government policies and properly completion of the whole syllabus. But due to this pandemic we will not be able to take regular classes, their proper practical session is missed and also test sessions are not be conduct due to short period of time to prepare them for exam. So they may not perform well. But Inshah Allah we will try our best to maintain the previous results record if the disease is controlled.

GHS Speen Dhand: Previous results which recorded were good due proper management of classes, test and practical sessions and having enough time. The upcoming results will be affected negatively because of this pandemic and outbreak. The students miss out their classes, practical, tests and assignments sessions which will result in negative effects. Hence the students may not be able to perform well in the upcoming exams and their results will be affected but we will try to do the best as possible.

GHS Jan Khan Kale: Obviously their results will be affected because they have not attained their classes properly. Their practical and test sessions have not been conducted. Due this reason they may not be able to maintain the previous results record. But we are trying to bring and get good results.

Interviewer:

What do you believe are various strategies that will your school in order to negative effects of COVID-19 so that students are getting benefitted to prepare for their final exams?

Mathematics Teachers Responses From:

GHS Kohi Sher Haider: We are giving different tasks to the students for practice to prepare themselves for upcoming exam and also giving suggestions that we will be available anytime and they can ask any question anytime. The course is also reduced so the students are also be benefitted from it. We have provided them material on the internet websites we also tell them if they have any material related issues on internet websites they can come to school or can personally call to resolve the issues they face.

GHS Speen Dhand: The strategies which are adopted to facilitate the students are that we have arranged zero classes for them to get benefits from it. We have also extended their classes time period to complete the syllabus and trying to reduce the holydays. Topic related tasks are also given to the students by their teachers to prepare them for the forthcoming exam.

GHS Jan Khan Kale: The strategies they used to mitigate negative effects of COVID-19 are included second time classes to be arranged for the students to get maximum benefit from it and to complete their courses on time. The second one is that to follow the SOPs which will be helpful in controlling this pandemic.

Interviewer:

What do you believe are various strategies that will your school in order to negative effects of COVID-19 so that students are getting benefitted to prepare for their final exams?

Science Teachers Responses From

GHS Kohi Sher Haider: Due to COVID-19 outbreak the main reason is that the time is very short due to which the study of the students will be affected. So we have adopted the strategies to increase the time duration of science subject classes and also we have arranged second shift classes to cover the course and to reduce burden of students. So it will be helpful for them.

GHS Speen Dhand: The strategies we adopted are included; to complete the course and to prepare the students for their exams. For this objective we have arranged extra classes, their classes time durations is also extended and the students are also bounded with their practice and assignment in homes during the outbreak. Advices are also giving them to follow the SOPs to control the COVID-19 pandemic.

GHS Jan Khan Kale: The strategies that we are using are to complete their courses on time and then prepare the students for their exams. Different tasks are graded to the students in order to continue their study in the outbreak. In this way the students will be able to cover their topic for their exam's preparation.

Interviewer:

There could be certain effects on introducing new subjects within STEM outlines in Pakistani schools due to COVID-19, what are those effects in your opinion?

Mathematics Teachers Responses From

GHS Kohi Sher Haider: Due to COVID-19 there will be negative effects on the STEM curriculum because the syllabus is reduced about 30 to 40% in which the basic topics are excluded. The syllabus which is teaches to the students is incomplete and many important topics are excluded from the course due to short time. So as a result it will create problems to the students in the future in F.Sc or in graduation level to study.

GHS Speen Dhand: The STEM curriculum will be affected badly because the syllabus is reduced about 30 to 40% which will also affect the future performance of the students because they will face some problem in their F.Sc and graduation they may change their subjects due to missing the basic and important concept in the Grade 10 level.

GHS Jan Khan Kale: There will be negative affect on the STEM curriculum because the STEM subjects are already difficult for the students to understand. So they do not learn properly due to COVID-19 outbreak vocations and some basic topics are also excluded from the syllabus, so therefore the STEM curriculum will be affected badly.

Interviewer:

There could be certain effects on introducing new subjects within STEM outlines in Pakistani schools due to COVID-19, what are those effects in your opinion?

Science Teachers Responses From

GHS Kohi Sher Haider: There will be negative affect on the STEM curriculum because syllabus is reduced about 30 to 40% in which some important and basic topics are excluded from the syllabus. So it will create problems to the STEM students in future Exam and degree like intermediate and graduation.

GHS Speen Dhand: The STEM curriculum will be affected negatively due to COVID-19 as the syllabus is reduced due to which important and basic concept is misses. So, the

students will not be able to study conceptually and their future study will also be affected badly because these excluded topics will be repeated in intermediate and graduation level which will make it hard for the students to understand as they will study those topics for the first time.

GHS Jan Khan Kale: There will be negative affect of COVID-19 on the STEM curriculum because entire students are not allowed to come their schools at a time due this reason syllabus is also reduced which a negative sign for the students because if the remaining course is not taught to the students, their basic will also be affected and the students will not be able to compete in upper classes in their future.

Discussion

It is observed that student's performance can be affected by different factors (Ishrat, R., & Rahman. 2015). After taking the interview from different school teachers resulted that COVID-19 will have negative effects on the educational sector in Pakistan the reason for this negative affect is that there are fewer contact hours among the students and teachers. As the outbreak of the education sector remain for a long time. Another reason is the absence of internet facilities through which online classes is to be conducted that the students can interact with their teachers because Pakistan is under developed country to give online classes facilities to the students. Due to internet issues some students are not able to take their online classes and to log in their portals. Some districts in Pakistan have deprived from internet facilities like "Khyber District" of KP and other backward areas of the country.

Another reason for this negative affect of COVID-19 is that the ministry of education have excluded some basic and important topics from the syllabus and also due to the shortage of time the practical work did not performed so due to reduced syllabus and missing of practical sessions will definitely affect the student performance in the upcoming examinations. It is also clear that during the COVID-19 pandemic "STEM" curriculum will mostly be affected. The teachers are expected a drop in the results of Grade 10 candidates this year if the government is failed to control it.

Results also revealed that teachers are stepping up for the preparation of their students for this teacher have adopted different strategies that help out the students to prepare them for exams, therefore the teachers have prolonged the time period of their classes on active days of school and also have arranged zero classes (second time) and to make sure of the SOPs rules and regulation.

CONCLUSION

This study shows that COVID-19 will have negative affect on the educational sector in Pakistan. This pandemic distracts the education system of the whole country and this situation will remain until the pandemic is not controlled. But somehow the teachers with the help of Educational Ministry of Pakistan have developed intervention procedures due to which all the educational institutes and schools will be benefited in the country.

RECOMMENDATION

It is shown in the study that COVID-19 has negative affect on educational sector in Pakistan. So, further study can be conducted to find out the effect of COVID-19 on the performance of small and medium size enterprises in Pakistan. And further research can also be made that how COVID-19 has affected on employment opportunity in Pakistan.

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