

Role of Social Media in Education During Covid-19: A Case Study of Swat

Zahoor Alam¹, Khayam Hassan², Asad Ullah³

¹Researcher, Department of Media and Communication Studies, University of Swat

²Lecturer in Media & Communication Studies, University of Swat

³Researcher, Department of Media and Communication Studies, University of Swat

Correspondence: zahooralam390@gmail.com¹

Abstract

The study aimed to find out the role of social media in education during corona outbreak for the students of Swat. It was also the aim of the study to search out the use of media social media by students for the purpose of educational materials. As a quantitative method, the researchers collected data through survey technique by random sampling techniques. Researchers used questionnaire comprises of 19 close-ended questions for that data collection including demographic section, while distributed among 200 students of University of Swat, however; the responds rate was 75% (150) were returned. After data collection, Statistical Package for Social Sciences (SPSS) software used for analysis and to make sure objectivity in the results, while, data was interpreted through descriptive and chi-square statistics to find out the results of the developed hypotheses. The study revealed that most of the students responded that online classes are less effective than physical class. It has also been revealed that in district Swat most of the students uses Facebook and YouTube for the engagement in the education. It has also been explored that most of the students did not accessed online classes due to connectivity issues in hilly areas.

Keywords: Social Media, Educational Purposes, Effectiveness, Online Class, Swat, Pakistan.

Introduction

Media especially social media considered as an important tool of society which is used by majority of people in the 21st century especially by youths for different purposes. Everyone uses it to fulfill their needs. During corona outbreak the educational institutions focuses online education system (Safdar et al., 2020; Safdar et al., 2020a).

COVID-19 pandemic has profoundly affected educational institutes for a long time. In education point of view, it is more concern of parents regarding their children. (Chick et al., 2020; Safdar & Khan, 2020). There is need to make quick move and adjust novel methods to guarantee to keep up top notch surgical training in these difficult occasions. This should be done while keeping up wellbeing and health of the student, teachers, and our patients.

Monetary and psychosocial results of the COVID-19 pandemic have been sweeping and uncommon around the globe. These conditions seem to have had significant (Pakpour & Griffiths, 2020; Safdar, 2021). The examination and utilization of such information could be utilized to devise focused on

Article History

Received:
June 13, 2020

Revised:
August 2, 2020

Accepted:
August 10, 2020

Published:
September 15, 2020

instruction as well as counteraction projects to help beat dread of COVID-19 and help such people to participate in precaution practices

Overall pandemic of COVID-19 has constrained advanced education foundations to poop from eye to eye to online training. Be that as it may, numerous public establishments, particularly in creating nations, frequently don't approach formal internet learning the executive's frameworks (LMS) for encouraging correspondence with understudies or potentially among employees. This exploration experimentally looks at the degree to which online media destinations are embraced by employees and understudies for supporting formal, i.e., sole and authority apparatuses, scholastic correspondence. For this reason, online poll overviews, supplemented with top to bottom meetings, were embraced with both employees and understudies (Sobaih et al., 2020; Safdar et al., 2018; Shabir et al., 2015).

The outcomes demonstrated that understudies' very own use of online media has advanced its successful utilization for continuing proper instructing and learning (Shabir et al., 2014; Shabir et al., 2015a). Notwithstanding, noteworthy contrasts were found between employees and understudies with respect to web-based media use for understudy backing and building an online network (Shabir et al., 2014b). Understudies utilized web-based media for building an online network and supporting one another, while employees were centered on instructing and adapting solely. The outcomes affirm that appropriate utilization of web-based media could advance another time of social learning, social presence and an elective stage to encourage web-based learning (Shabir et al., 2014a; Shabir et al., 2015b). Exploration suggestions for advanced education policymakers, particularly in creating nations, and researchers are talked about

History and Causes of COVID-19

In human's COVID causes respiratory contamination which incorporates pneumonia, cold, wheezing and hack then again it causes looseness of the bowels and upper respiratory sickness in creatures. It very well may be communicated between people, human to creatures through airborne beads it's enters the human's cells through film ACE - 2 through exopeptidase receptor. WHO and ECPC are encouraging individuals to abstain from going to public spots and furthermore dodge close contact with the contaminated people and pets, Novel COVID-19 was artistry detached from a market in Wuhan China on 7 January 2020, to stop COVID spread evade close contacts with the tainted people and separate pets, for example, canines, felines which are tainted? Keep social removing there is no antibodies to forestall the COVID (Jones, 2020; Safdar, 2021).

Statement of the Problem

Corona outbreak stopped the majority of organizations across the world to run like educational organizations etc. During COVID19 social media played an important role to maintain educational activities. The most recent decade has seen a significant ascent inside the clients of online media with the appearance of innovation. Hence current research aimed to explore the role of social media in educational learning during Covid-19.

Significance of the Study

Social media play a role in educational activities. This study was conducted to examine that what issues and difficulties faced students during online study. As there are only few studies have been conducted in Pakistan to highlight the role of social media in educational activities during COVID19 this study is conducted to fill this gap in literature.

Objectives of the Study

- To search out social media's role in online learning in district Swat.
- To see the role of online media in educational activities during COVID19.
- To dig out what are the advantages/disadvantages of social media in online learning during corona outbreak.

- To find out the role of teachers in online learning.
- To examine the importance of online learning and physical class.
- To see the effects of online learning on male and female students of University of Swat.
- To analyze issue and difficulties in connectivity in district Swat.

Hypothesis

H1: It is more likely that female students use more social media for online learning.

H2: It is more likely that physical class is more effective than online class.

H3: It is more likely that students from rural area faced more connectivity issues in online study.

Literature Review

Zhang et al., (2020) said that against the setting of the COVID-19 flare-up, a crisis strategy activity called "suspending classes without stopping learning" was dispatched by the Chinese government to keep instructing exercises as schools the nation over were shut to contain the infection. Be that as it may, there is uncertainty and difference about what to instruct, how to instruct, the outstanding burden of instructors and understudies, the showing condition, and the suggestions for training value. Potential challenges that the approach faces include: the shortcoming of the internet showing framework, the innocence of educators (counting inconsistent learning results brought about by instructors' shifted understanding), the data hole, the intricate condition at home, etc. To handle the issues, we propose that the administration needs to additionally advance the development of the instructive data interstate, consider outfitting instructors and understudies with normalized locally situated educating/learning gear, direct online educator preparing, remember the improvement of monstrous online training for the public vital arrangement, and backing scholastic examination into online instruction, particularly instruction to assist understudies with web based learning challenges.

Mirbabaie, et al., (2020) Stated that Lately cultural emergencies, for example, the COVID infection 2019 episode have offered ascend to a pressure between formal order and control' and casual web-based media initiated self-arranging data and correspondence frameworks that are used for emergency the executives dynamic. Online media doubt influences the spread of calamity data as it involves moves in media observation and support yet in addition changes in the manner in which people and associations comprehend data in basic circumstances. Up until now, a little considered idea in this space is the idea of sense-giving. Beginning from hierarchical hypothesis, it is utilized to clarify the components behind purposeful data arrangement that encourages aggregate significance creation. In our investigation, we look to comprehend the likely effect of sense-giving from Twitter emergency correspondence produced during the Hurricane Harvey catastrophe occasion. Interpersonal organization and substance examinations performed with a dataset of 9,414,463 tweets yielded bits of knowledge into how sense-giving happens during a huge scope calamity occasion. Hypothetically, we determined (1) unending sense-giving, which depends essentially on effective position and recurrence; just as (2) irregular sense-giving which happens from high estimation of message substance and influence of fame, that is, retreats. Our discoveries accentuate the significance of information-rich entertainers in correspondence organizations and the influence of their impact in emergencies, for example, COVID infection 2019 to lessen web-based media doubt and encourage sense-production.

Khan (2020) said that HEC coordinated all universities cross country to begin online classes due to the Coronavirus lockdown. In Pakistani advanced education settings, separation/virtual learning is anything but a typical practice and for the Pharm-D understudies their inclination is consistently up close and personal talks. Furthermore, the majority of the state funded colleges come up short on appropriate virtual training framework. Thusly, the learning management framework utilized by colleges is just utilized for enlistment, participation and dissemination of the examination material (PowerPoint documents/address freebees). The Institute of Pharmaceutical Science (IPS), University of Veterinary and Animal Science, executed the order to adjust virtual/online classes for the Pharm-D and Master of Philosophy understudies. Different free programming like Zoom, Google Meet and Facebook Live were short-

recorded for virtual/online classes. Google Meet and Facebook Live Meetings were directed by making private gatherings for the understudies from a similar semester. Conversation meetings directed at the Facebook Live helped with explaining understudies' ideas and any extra questions with respect to the talk. Recorded talks were additionally shared at a WhatsApp gathering to help update. It is seen that by utilizing these techniques an understudy with helpless relational abilities is viably associating with the instructor in examination with the eye-to-eye educating meeting. Taking everything into account, utilization of the web-based media and interpersonal interaction applications may fill in as a valuable correspondence and showing device for creating nations. In the event that the circumstance perseveres and lockdown is broadening. Utilizing advance learning the executive's frameworks and like Moodle or Blackboard will be a superior choice. Accordingly, permitting understudies to get an inside and out presentation of the virtual learning strategies and on opposite end educators can do exhaustive appraisals also.

Tess, (2013) stated that the ubiquity of web-based media (for example Facebook, Twitter) is not any more evident than at the college. Social medications are progressively noticeable in advanced education settings as educators look to technology to media and improve their guidance just as advance dynamic learning for understudies. Numerous researchers contend for the deliberate coordination of web-based media as an instructive apparatus. Experimental proof, in any case, has slacked in supporting the case. The majority of the current exploration on the utility and adequacy of online media in the advanced education class is restricted to self-announced information (e.g., reviews, surveys) and substance butt-centric yeses. This paper sums up the insightful works just as audits the discoveries of experimental investigations. A few impediments are examined, and future zones of exploration are proposed.

Dunn, (2013) Stated that school - wide study demonstrated that 68% idea web-based media could improve their learning experience. 22% demonstrated that it would not include any worth or would cause interruption, while 10% were uncertain. The proof focuses towards the requirement for additional examination. The inquiry isn't on the off chance that we should utilize web-based media to upgrade learning, however how it ought to be utilized successfully. The subjective information proposes that it is an individual manner.

Zepke and Leach (2010) the writing portrays the priceless open doors offered by interpersonal interaction, however similarly there are numerous challenges attempting to foil the most excited educator. Security issues and open doors for misunderstanding and miscommunication are high, as the normal shows of eye-to-eye connection don't matter on long range informal communication destinations. This concern was raised by numerous understudies. The formal and casual nature of such practice should be incorporated inside the arranging stages; else it might prompt trouble (Zaidieh, 2012). The time is to take overseen chance and investigate innovative strategies for learning and instructing. The less fatty's journey and their encounters route should meet understudy desires and offer a more unique and suitable instructional method. To sum up the benefits featured within the investigation can be clarified as.

Marbán (2020) Explored that online learning has reshaped instruction from various perspectives. The motivation behind this investigation is to react to the subject of whether COVID-19 is the entryway for advanced learning in science training. To this end, this investigation investigates a few takes-up of online media stages by imminent optional teachers. Information was gathered from 102 forthcoming science educators from the Copperbelt University (CBU). Group investigation approach was utilized. Results uncovered that members' scores for computerized learning in science in bunch 2 were higher than those in both group 1 and 3. This is a reasonable sign that planned instructors in groups with low scores are bound to display low aptitude levels in the utilization of versatile innovation and the reception of online media comparable to mathematics instructional method during the Coronavirus emergency. Results show various examples. Notwithstanding, generally results shows that advanced learning could be a positive reaction to COVID-19 conclusion period.

Theoretical Framework

The study has been conducted under the light of “*Social Learning Theory*” that stated as the human beings learn every time (Muro & Jeffery, 2008). This theory is based on that we learn in an environment by observing the behavior of others, it also says that by interaction we learn, and it develops several behaviors, by observing it make us tilt and our opinion is changed about something, it also changes our personality, (Bandura 1977). Social learning is regard as the most influential and important theory in learning and development, it is also called the liaison between the behaviorist learning theories and cognitive learning theories, (Muro & Jeffery, 2008). People learn through observations, and media also came in this regard, but how and what type there is a question about this, Imitation is the direct propagation of behavior

Research Methodology

Research methodology defined as study technique used by researcher is known as research methodology (Kumar, 2018). It is basically a process used by researcher for the solution of problem. In this study quantitative methodology used to get better solution of problem. This method is adopted by the researchers to clearly observe the attitude of the respond toward the phenomena. In this study, the researchers adopted quantitative method.

Research Technique: Gillham (2008) define data collection technique as a method used for the collection of data of a particular situation or phenomena by the researcher. Regarding research technique, the researchers collected data through survey to find out the opinion and views of the students in getting online education during COVID 19.

Population: Babbie (2013) describe population as a group of individuals having similar qualities of researcher interest. Lavrakas (2008) defined population; as a group of individuals from which information is collected to inspect the problem. Population of the current research study was the students of the University of Swat.

Sampling & Size: Singh and Mangat (2013) described the sampling as “smaller set of elements which is chosen from large group”. Pandey. P, Pandey (2015) state sampling as “when a whole population is represented by a small group”. For the current research, data was collected through simple random sampling method from Students of University of Swat. Sample size was 150.

Data Collection Tool: Kumar (2011) said that the researchers developed questionnaire for survey research. For the current research study, questionnaire used for data collection, where questionnaires were distributed randomly among the students of all departments of University of Swat.

Data analysis: For the objectivity and accuracy, computational data analysis was used. Data was analyzed through Statistical Package of Social Sciences (SPSS).

Data Analysis

Table 1: *Demographic Distribution of the respondents.*

Demographic	Category	F	%
Gender	Male	125	83.3
	Female	25	16.7
	Total	150	100.0
Age	18-22	120	80.0
	23-26	30	20.0
	Total	150	100.0
Semester	1 st	45	30.0
	3 th	21	14.0
	5 th	24	16.0

	7 th	60	40.0
	Total	150	100.0
Department	English	59	39.3
	Sociology	33	20.0
	Journalism	28	18.7
	Law and Sharia	18	12.0
	Math's	3	2.0
	Forestry	3	2.0
	Total	150	100.0
Tehsils	Babuzai	48	42.2
	Bahrain	8	3.4
	Barikot	12	5.2
	Charbagh	21	10.8
	Kabal	25	14.2
	Khwazakhela	17	11.6
	Matta	19	12.5
	Total	150	100.0

Above table demonstrates the respondents on the base of gender that 83% of them were male and 17% were female students of district swat who filled the questionnaire. These respondents were exposed to social media so for that they filled the questionnaire. Furthermore 80% of the students who responded to the questionnaire were 18 to 22 years old students, 20% of them were 23 to 26 years old. According to semester, 40% of the students were studied in 7th semester, 30% were studied in 1st semester, 5th semester respondents were 16% and 14% of them were students of the semester 3rd. Regarding their subject whereas majority 39% of them were the student of English, 20% of them were the students of Sociology, 19% of them studied Journalism while 02% of them studied Math's and Forestry. Regarding residency of the respondents that 42% of them belong to Babuzai tehsil, 14% to Kabal tehsil, 13% of Matta tehsil, 12% of Khwazakhela, 11% from Charbagh, 5% from Barikot, and 03% of them were from Bahrain tehsil.

Table 2: *Frequency distribution of the questions.*

Question	Category	F	%
Respondents' time consumption on Social Media	Less Than 5 Hours	64	42.7
	More Than 5 Hours	50	33.3
	5 hours	36	24.0
	Total	150	100.0
	Facebook	51	34.0
Frequent exposure to Social Media during COVID-19	You Tube	47	31.3
	Bost of the above	27	18.0
	Instagram	13	8.7
	Twitter	12	8.0
	Total	150	100.0
Students have access to attend online classes	Yes	36	24.0
	No	68	45.3
	Depend	46	30.7
	Total	150	100.0
	Not at all	18	12.0
Online Classes are less effective than physical class	Only a little	18	12.0
	To some extent	44	29.3
	Rather much	43	28.7
	Very much	27	18.0
	Total	150	100.0

Do you think social media is the most effective source of educational information for students?	Strongly Agree	36	24.0
	Agree	52	34.7
	Neutral	27	18.0
	Disagree	24	16.0
	Strongly Disagree	11	7.3
	Total	150	100.0
Social Media played an important role in education during COVID	Strongly Agree	18	12.0
	Agree	51	34.0
	Neutral	31	20.7
	Disagree	50	33.3
	Total	150	100.0
Do you think social media helped the students during COVID?	Agree	76	50.7
	Neutral	42	28.0
	Disagree	28	18.7
	Strong Disagree	4	2.7
	Total	150	100.0
Do you actively engage in educational discussion through social media?	Not at all	12	8.0
	Only a little	56	37.3
	To some extent	43	28.7
	Rather much	9	6.0
	Very much	30	20.0
	Total	150	100.0
Do you follow pages, groups, threads etc. for educational discussions?	Not at all	38	25.3
	Only a little	73	48.7
	To some extent	9	6.0
	Rather much	15	10.0
	Very much	15	10.0
	Total	150	100.0
Do you write and share educational contents on social media	Not at all	69	46.0
	Only a little	54	36.0
	To some extent	12	8.0
	Rather much	6	4.0
	Very much	9	6.0
	Total	150	100.0
How much you got satisfaction from online lecture	Not at all	69	46.0
	Only a little	54	36.0
	To some extent	12	8.0
	Rather much	6	4.0
	Very much	9	6.0
	Total	150	100.0

The above table showed that 43% of the respondents consumed social media less than 5 hours, 33% consumed more than 5 hours while 24% of them consumed social media 5 hours. In concern with the use of social networks that 34% of the respondents used Facebook, 31% of the respondents were exposed to YouTube, 18% of the respondents were used mostly both YouTube and Facebook, 09% of them were used Instagram, while 08% of the respondents were exposed to Twitter. Accessed to online classes 45% of the respondents have accessed online classes, 31% of them accessed on depend while 24% did not accessed online classes. Regarding online class effectiveness, 29% of the respondents responded that online class are less effective than physical class to some extent and rather much, 18% of them responded that online classes were very much effective while 12% of them replied not at all and only a little. Regarding social media as effective source, 35% agreed that social media is the effective source of

information, 24% strongly Agreed, 18% of them were neutral, 16% of them Disagree while 07% of them were strongly disagreed. Regarding social media's role in education, 34% of the respondents agreed that social media played an important role in education during COVID, 33% of them disagreed, 21 % of them were neutral while 12% of them were strongly agreed. Furthermore, 51% of the respondents agreed that social media helped the students during COVID, 28 of them were neutral, 19% of them were disagreed while 03% of them were strongly disagreed. Regarding online engagement during class discussion, 37% of the respondents actively engaged in educational discussions through social media only a little, 29% of them engaged to some extent, 20% of them engaged very much, 08% of them engaged not at all while 06% of them were engaged rather much. Regarding online educational pages, 49% of the respondents followed pages, groups, threads etc. for educational discussions only a little, 25% of them followed not at all, 10% of them followed rather much and very much while 06% of them followed to some extent. Regarding content sharing, 46 % of the respondents shared educational contents not at all, 36% of them shared only a little, 08% of them shared to some extent, 06% of them shared very much while 04% of the respondents shared educational contents rather much. Regarding online education satisfaction, 46% of the respondents got satisfaction from online lectures not at all, 36% of them got only a little, 08% of them got to some extent, 06% of them got very much while 04% of the respondents satisfaction to online lectures.

Table 3: *Mean, Standard Deviation, P-value and association of assumed hypothesis (H1)*

Hypothesis	Means	Std. Deviation	Person Chi-Square	Df	P-Value	Association
Female use more social media for online learning.	1.53	.721	3.778 ^a	3	.723	Not Significant

Significant P-value at <0.05

The result showed use of social media for educational purpose. The mean score (1.53), std. deviation (.721), chi-square value is (3.778) and p-value (.723) showed no significant association among assumed hypothesis at <0.05 level. Hence the hypothesis (H1) female students use more social media for online not supported.

Table 4: *Mean, Standard Deviation, P-value and association of assumed hypothesis (H2)*

Hypothesis	Means	Std. Deviation	Person Chi-Square	Df	P-Value	Association
Physical class is more effective than online class.	1.73	.762	24.368 ^a	2	.000	Significant

Significant P-value at <0.05

The result showed effectiveness of physical classes. The mean score (1.73), std. deviation (.762), chi-square value is (24.368) and p-value (.000) showed significant association among assumed hypothesis at <0.05 level. Hence the hypothesis (H2) physical class is more effective than online class supported.

Table 5: *Mean, Standard Deviation, P-value and association of assumed hypothesis (H3)*

Hypothesis	Means	Std. Deviation	Person Chi-Square	Df	P-Value	Association
Rural students faced connectivity issues in online study.	1.59	.823	22.116 ^a	2	.000	Significant

Significant P-value at <0.05

The result showed connectivity in Swat district. The mean score (1.59), std. deviation (.823), chi-square value is (22.116) and p-value (.000) showed significant association among assumed hypothesis at <0.05 level. Hence the hypothesis (H3) students from rural areas faced more connectivity issues in online study supported.

Results and Discussion

The aim of the study was to find out the role of social media in education during COVID-19. The result of the study reveals that 83% of the students who used social media were males and 17% of them were. So, it means that males are more as compared with female because we are living in a conservative society where females getting education facing many barriers while getting education as well as in our Pashtun community mobile phones or Internet access is strictly prohibited for females. This study further explored that 43% of the respondents consumed social media less than 5 hours, 33% consumed more than 5 hours while 24% of them consumed social media 5 hours which means that social media is need of the day students consume media to fulfill their needs regarding education.

The researchers were also interested to dig out that which social media network site used mostly by the students. There are many social networking sites which used students according to their own interest. The result of the study exemplifies that 34% of the respondents used Facebook, 31% of the respondents used YouTube, 18% of them mostly used both YouTube and Facebook, and 09% of them used Instagram, while 08% of the respondents used Twitter.

The majority of students belong to far flung areas where connectivity issues matter. The results of the study explored that only 45% of the students have accessed online classes, 31% of them accessed on depend while 24% did not accessed online classes. Which means that it clearly shows that social media is easily accessible for everyone in 20th century but in hilly areas due to limited facilities the ratio of students who are able to access online classes is very low.

The satisfaction also matters that how many students satisfied that online classes were less effective than physical class 29% of the students' respondents responded that online class are less effective than physical class to some extent and rather much, 18% of them responded that online classes were very much effective while 12% of them replied not at all and only a little. The result explored that majority of the students satisfied that online classes are less effective because in physical class due to face-to-face communication students able to learn more as compared online class.

Conclusions

This research has been conducted to find out the role of social media in education during COVID-19. In Corona outbreak there were an emergency situation around the globe. Students were forced to online learning because physically arrangement of class were impossible in such emergency situation. For this study the researchers adopted quantitative methodology whereas, survey was done for data collection. Questionnaire distributed among the students of University of Swat, through simple random sampling. Data was analyzed by SPSS, data presented in the form frequency distribution and correlation. It is concluded that female students accessed online classes less than male it is also required that our society has to remove barriers from the way of female due to which they can get education easily. The study was designed to know which social media site is effective for students through which they can easily get education. Majority of them were in the favor of Facebook and YouTube, which means that these both sites are most effective for the students as compared with other sites. As well as in far flung area these both sites are top trend sites most of the students used it commonly.

Acknowledgements

None

Conflict of Interest

Authors have no conflict of interest.

Funding Source

Authors received no funding to conduct this study.

References

- Babbie, E. (2013). *The practice of social research (International Edition)*. Andover: Cengage Learning.
- Chick, R. C., Clifton, G. T., Peace, K. M., Propper, B. W., Hale, D. F., Alseidi, A. A., & Vreeland, T. J. (2020). Using technology to maintain the education of residents during the COVID-19 pandemic. *Journal of Surgical Education*, 77(4), 729-723. [10.1016/j.jsurg.2020.03.018](https://doi.org/10.1016/j.jsurg.2020.03.018)
- Dunn, L. (2013). "Teaching in higher education: can social media enhance the learning experience?" In: 6th Annual University of Glasgow Learning and Teaching Conference, Glasgow, UK, 19th Apr 2013
- Farrelly, M., & Brown, R. (2011). Rethinking urban water management: experimentation as a way forward?. *Global Environmental Change*, 21(2), 721-732.
- Gupta, R. S., Springston, E. E., Warrier, M. R., Smith, B., Kumar, R., Pongracic, J., & Holl, J. L. (2011). The prevalence, severity, and distribution of childhood food allergy in the United States. *Pediatrics*, 128(1), e9-e17.
- Jones, D. S. (2020). History in a crisis: lessons for Covid-19. *New England Journal of Medicine*, 382(18), 1681-1683.
- Khan, T. M. (2020). Use of social media and WhatsApp to conduct teaching activities during the COVID-19 lockdown in Pakistan. *International Journal of Pharmacy Practice*. doi: 10.1111/ijpp.12659
- Kumar, R. (2018). *Research methodology: A step-by-step guide for beginners*. Sage.
- Lavrakas, P. J. (2008). *Encyclopedia of survey research methods*. Sage Publications.
- Lynch, V. M., Baran, J. R., Lagow, R. J., & Davis, B. E. (1994). Three polyhalogenated tricyclo [5.1.0.0.3, 5] octane compounds. *Acta Crystallographica Section C: Crystal Structure Communications*, 50(11), 1765-1768.
- Marbán, J. M. (2020). Is COVID-19 the Gateway for Digital Learning in Mathematics Education? *Contemporary Educational Technology*, 12(2), ep269.
- Mirbabaie, M., Bunker, D., Stieglitz, S., Marx, J., & Ehnis, C. (2020). Social media in times of crisis: Learning from Hurricane Harvey for the coronavirus disease 2019 pandemic response. *Journal of Information Technology*, 0268396220929258.
- Pakpour, A. H., & Griffiths, M. D. (2020). The fear of COVID-19 and its role in preventive behaviors. *Journal of Concurrent Disorders*. Mulenga, TBD(TBD), TBD.
- Pandey, P., Ramegowda, V., & Senthil-Kumar, M. (2015). Shared and unique responses of plants to multiple individual stresses and stress combinations: physiological and molecular mechanisms. *Frontiers in Plant Science*, 6, 723.

- Safdar, G. (2021). Covid-19, Media Dependency and Fear of Death: Analysis of Pre, During and Post Infection among Affected People. *Psychiatria Danubina*. In Press.
- Safdar, G. Khan, A.W., Abbasi, A. (2018) "Role of Social Media for Promotion of Education in Southern Punjab". *Journal of Education Research*, 21(1), 73-85.
- Safdar, G., Javed, M.N., Amin, S. (2020a). Use of Internet for Educational Learning among Female University Students of Punjab, Pakistan. *Universal Journal of Educational Research*, 8(8), 3371-3380.
- Safdar, G., Khan, A.W. (2020). E-Learning: Current Scenario of Internet and Educational Learning among University Students of Punjab, Pakistan. *Journal of Educational Research*, 23(1), 171-185.
- Safdar, G., Rauf, A., Ullah, R., Rehman, A.U. (2020). Exploring Factors Leading to Quality Online Learning in the Era of Covid-19: A Correlation Model Study. *Universal Journal of Educational Research*, 8(12A), 7324-7329.
- Shabir, G., Hameed, Y.M.Y., Safdar, G., Gilani, S.M.F.S. (2014a). "Impact of Social Media on Youth: A Case Study of Bahawalpur City". *Asian Journal of Social Sciences and Humanities*, 3(4), 132-151.
- Shabir, G., Iqbal, Y.W., Safdar, G. (2014b). "Demographics' Differences in Social Networking Sites Use: What Communication Motives Does it Gratify?" *International Journal of Social Work and Human Service Practice*, 2(5), 184-194.
- Shabir, G., Safdar, G., Hussain, T., Imran, M., Seyal A.M. (2015a). "Media Ethics: Choosing the Right Way to Serve". *Research on Humanities and Social Sciences*, 5(3), 80-85.
- Shabir, G., Safdar, G., Imran, M., Seyal, A.M., Anjum, A.A. (2015). "Process of Gate Keeping in Media: From Old Trend to New". *Mediterranean Journal of Social Sciences*, 6(1S1), 588-593.
- Shabir, G., Safdar, G., Jamil, T., Bano, S. (2015b). "Mass Media, Communication and Globalization with the perspective of 21st century". *New Media and Mass Communication*, 34, 11-15.
- Shabir, G., Safdar, G., Shah, S.R.A., Asim, M. (2014). "Iranian Higher Educational System and its Socio-Political Impacts in 21st Century". *Journals of Educational Research*, 17(2), 107-116.
- Singh, R., & Mangat, N. S. (2013). *Elements of survey sampling* (Vol. 15). Springer Science & Business Media.
- Sobaih, E. E., Hasanein, A. M., & Abu Elnasr, A. E. (2020). Responses to COVID- 19 in Higher Education: Social Media Usage for Sustaining Formal Academic Communication in Developing Countries. *Sustainability*, 12(16), 6520.
- Tess, P. A. (2013). The role of social media in higher education classes (real and virtual)- A Literature review. *Computers in human behavior*, 29(5), A60-A68.
- Zhang, W., Wang, Y., Yang, L., & Wang, C. (2020). Suspending classes without stopping learning: China's education emergency management policy in the COVID-19 Outbreak.