Effects of COVID-19 on the academic performance of Afghan students’ and their level of satisfaction with online teaching

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Abstract: The outbreak of COVID-19 affected almost every sector, including higher education institutions across the world particularly Afghanistan educational system. For this purpose, the researcher aimed to investigate the effects of COVID-19 on the academic performance of Afghan students and their level of satisfaction with online teaching. It also explored the significant difference in academic performance of students along with their satisfaction level with online teaching across gender. There were 1231 respondents, including 867 males and 364 females, from public and private universities of Afghanistan. Descriptive and inferential statistical analyses were employed. The findings of the study revealed that COVID-19 has negatively affected the academic performance of Afghan students and the students were highly dissatisfied with online teaching during this critical moment. Besides, the study revealed significant differences in the academic performance of students and their level of satisfaction with online teaching across gender. A strong positive correlation was found between the academic performance of Afghan students and their level of satisfaction with online teaching during the COVID-19 outbreak. According to the findings of the study, several implications and recommendations have been provided.

ABOUT THE AUTHOR

Aminuddin Hashemi is a senior lecturer in the English department of Takhar University, Afghanistan. He earned his Masters degree in TESL from Universiti Teknologi Malaysia (UTM). Mr. Hashemi has published many research papers and participated in various national and international conferences. He also supervised more than 50 bachelor’s degree monographs in the department of English language. His research interests are teaching and learning, Teaching English as a Foreign Language (TEFL), Technology Enhanced Language Learning (TELL), Computer Assisted Language Learning (CALL), Mobile Assisted Language Learning (MALL), Online Teaching and Learning, Learning Analytics (LA), Critical Discourse Analysis (CDA), etc. He is also interested in using various technological tools and applications in EFL classrooms.

PUBLIC INTEREST STATEMENT

The present study aims at investigating the effects of COVID-19 (positive or negative) on the academic performance of Afghan students and their level of satisfaction with online teaching during the COVID-19 pandemic. Academic performance is the assessment of a student’s ability in a variety of academic courses and subjects. Classroom success, graduation rates, and standardized test scores are often used by teachers and school administrators to assess the students’ academic performance. According to the findings of the study, there is a close relationship found between the academic performances of the students with their level of satisfaction. Hence, COVID-19 has affected the academic performance of the students, and they are also dissatisfied with online teaching during this pandemic situation. In this case, one can understand that when their satisfaction level is low, their academic performance has been affected.
Subjects: Educational Research; Higher Education; Open & Distance Education and eLearning; Study Skills; Classroom Practice

Keywords: COVID-19; Academic Performance; Afghan Students; Level of Satisfaction; Online Teaching

1. Introduction
The unexpected outbreak of the coronavirus (COVID-19) pandemic has affected almost every sector, including the higher education institutions around the world (Adedoyin & Soykan, 2020). During this critical moment of the COVID-19 pandemic, most of the countries around the world shifted to online teaching (Bokayev et al., 2021). Like many other countries around the globe, the government of Afghanistan has also decided to dismiss all the educational institutions to contain the huge spread of the COVID-19 pandemic (Orfan & Elmyar, 2020). Due to the closure of all the academic institutions across the country, the ministry of higher education (MoHE) of Afghanistan decided to compensate for the teaching process through an online teaching system. Therefore, MoHE of Afghanistan designed and administered an online platform system called Higher Education Learning Management System (HELMS) to rapidly respond to the COVID-19 crisis in the educational context. The transformation process of face-to-face teaching began to online teaching where thousands of teachers and students were allowed to employ this platform. Since then, the public universities across the country have experienced online teaching as the new phenomenon during the COVID-19 pandemic where there was no prior preparation for such an emergency case.

During the last two decades in some parts of the world, online teaching has grown and changed dramatically due to various reasons (Bayrak et al., 2020). College and university lecturers are more interested in teaching and learning with online approaches where the learning process can be done more at a lower cost (Green, 2010). Besides, Green (2010) stated that online teaching can provide more opportunities of saving time and money since no one drive to seek knowledge. Despite this growing interest in online teaching, students’ satisfaction level remains the most concentrated indicator of online teaching experience. Students’ satisfaction level can be linked to a variety of factors, including students–teachers interaction, students–students interaction, course assessment quality, internet quality, self-efficacy, and students’ learning process (Harsasi & Sutawijaya, 2018; Kirtman, 2009). Therefore, online teaching played a vital role during this critical situation of the pandemic and gained a double reputation.

Hence, one of the affected outcomes of COVID-19 can be the academic performance of students as they experience their first attempt towards online teaching and therefore, their level of satisfaction from online teaching can also be significant to be measured. To address the significance of online teaching in such emergency cases, the present study aimed to investigate the effects of COVID-19 on the academic performance of Afghan students and their satisfaction level with online teaching during the COVID-19 outbreak. In addition, this study figures out the significant difference in the academic performance of Afghan students along with their level of satisfaction across gender. Besides, the relationship between the academic performance of students and their level of satisfaction with online teaching is examined. For this purpose, the researcher formulated the following research questions to reach these goals.

(1) Is there any effect (positive or negative) of the COVID-19 on the academic performance of Afghan students?
(2) To what extent are the Afghan students satisfied with online teaching during the COVID-19 outbreak?
(3) Is there any significant difference in the academic performance of Afghan students across gender?
(4) Is there any significant difference in their level of satisfaction with online teaching across gender?
(5) Is there any relationship between the academic performance of Afghan students and the reported level of satisfaction with online teaching?

2. Review of related works

Although not many studies have been done exploring the effects of COVID-19 on the academic performance of students and assessing their level of satisfaction with online teaching during the outbreak of COVID-19, the researcher made an effort to find out the most related studies concerning the present study. Regrettably, the outbreak of COVID-19 affected greatly almost all the educational levels in different contexts across the globe and have been incorporated into the educational settings to have possible provision for teachers and students (Oyinloye, 2020). A study conducted by Gonzalez, Rubio, et al. (2020) examined the impacts of COVID-19 confinement on the performance of students at the higher education level. They used field experimental research with 458 learners by two groups: control and experimental. Surprisingly, their research revealed that COVID-19 confinement left a positive impact on the performance of the students and helped them to enhance the learning strategies of the students. Similarly, another study was carried out by Realyvásquez-Vargas et al. (2020) explored whether the environmental factors affect students’ academic performance during COVID-19. To do this research, they found that students’ academic performance has been affected by environmental factors during the COVID-19 pandemic.

Furthermore, Elhadary et al. (2020) evaluated the impacts of COVID-19 on the academic performance of science and social science students in Turkey. Their findings showed that many factors affected the academic performance of the students during the COVID-19 crisis. Despite that, their study also revealed that both teachers and students are satisfied with the application of online learning and teaching. Loton et al. (2020) studied online learning during the COVID-19 pandemic with their satisfaction and performance. The result of their findings showed that there is a significant impact on both performances of the students and their level of satisfaction with online teaching and learning during the COVID-19 outbreak. Likewise, another study conducted in Indonesian context where the researcher explored the solution, advantages and constraints with online learning during the COVID-19 pandemic. They have discussed their participant’s satisfaction on the performance of the students during the COVID-19 outbreak (Fatoni et al., 2020). Hence, based on the aforementioned researches carried out on the effects of COVID-19 on the performance of students, one can infer that there is a great impact of COVID-19 on the academic performance of students available in the literature.

Concerning the satisfaction level of students with online teaching during the COVID-19 pandemic, many studies have been done by many researchers. A study conducted by Almusharraf and Khahro (2020) investigated the level of students’ satisfaction with online learning during the outbreak of COVID-19. The result of their study revealed that all the participants were greatly satisfied with online learning tools and platforms. Their study also showed that students were satisfied with the support provided by staff during the COVID-19 crisis. While another study was conducted in Kazakhstan to explore distance learning and the parents’ satisfaction during the COVID-19 pandemic of the educational quality. Their findings indicate that parents’ level of satisfaction with online learning is positively correlated, while numbers in children have negatively correlated to the satisfaction of parents with online learning platforms during the COVID-19. Overall, their satisfaction with the quality of online learning is greatly positive (Bokayev et al., 2021). The findings of a study revealed by Baber (2020) are in line with the indicated studies where the researcher found a positively great level of satisfaction in providing online teaching. In contrast, the findings of the study revealed by Sharma et al. (2020) indicated that the majority of their respondents are dissatisfied with online learning platforms. Similarly, the findings of a study revealed by Dinh and Nguyen (2020) show that online teaching and learning had a lower satisfaction level than face-to-face teaching.

Besides, many other studies explored the level of satisfaction with online teaching during the COVID-19 pandemic in various contexts and found a high level of satisfaction with online teaching.
(Chen et al., 2020; Choe et al., 2019; Fatani, 2020). On the other hand, Alanozi et al. (2020) studied technology satisfaction and students’ performance in online courses. They reported that there was a weaker relationship between students’ performance and technology satisfaction in online courses. While there was another study carried out in China by Chen et al. (2020) analyzing students’ satisfaction level with online teaching during the outbreak of COVID-19. The findings of their study showed no direct effects found on students’ satisfaction by personal factors, while the availability of online applications had the greatest impact on students’ satisfaction level. Despite all studies on satisfaction level, various researchers reported high satisfaction level of students with online teaching during the COVID-19 outbreak (Ali et al., 2011; Baek et al., 2014; Coman et al., 2020; Johnston et al., 2005; Naziya & Khan, 2020; Roach & Lemasters, 2006; Sharma et al., 2020; Surahman & Sulthoni, 2020). Unexpectedly, not many studies have been found with low or dissatisfaction in online teaching during the COVID-19 pandemic. Surprisingly, there were also no studies found examining the gender differences in the academic performance of students and as well as differences in the level of satisfaction across genders with online teaching during the COVID-19 crisis.

Given that Afghanistan is one of the low-income countries around the world along with less infrastructure of ICT at the public universities (McMahon et al., 2020; Noori et al. 2020). Online teaching and learning as a new phenomenon remained unacquainted to the students and most of the teachers (Hashemi, 2020). Lack of pedagogical training in using technological devices and applications, the high cost of Wi-Fi, and lack of electricity with a shortage of devices for providing online teaching environments are the key barriers towards online education (Hashemi & Kew, 2021). Hence, during the pandemic of COVID-19 in Afghanistan, multiple challenges and dissatisfaction, and uncertainty of the application with online teaching were reported. Based on personal experiences, most of the students did not participate in the online session and their engagement in the online classes was so weak. On the other hand, the uncertainty of using applications and platforms made the students to be confused about taking part in online teaching sessions. For example, HELMS was introduced by the MoHE of Afghanistan as the alternative application and platform responding to COVID-19, but instead, most of the teachers were willing to teach their students through Google Classroom, WhatsApp, and or other social Medias platform. This uncertainty of using the platforms lead the student to be dissatisfied and surely affected their performance in online teaching.

Despite that, it was also reported that female students were not willing to take part in the online sessions and did not accomplish the assigned task due to some unpleasant culture and/or inequality in terms of having money to buy electronic devices such as a computer, mobile and/or pay the cost of internet. According to Orfan (2021), these situations are considered due to the limitation and cultural norms limit that exists in Afghan society. These inequalities in accessing the aforementioned devices and applications affected the academic performance of students during the outbreak of the COVID-19 crisis in some parts of the country and by all means dissatisfied students from online teaching.

However, online teaching has played a crucial role in the higher education institutions of Afghanistan during the COVID-19 pandemic, many studies have been carried out to investigate the effects of COVID-19 on the academic achievements of students worldwide. Unfortunately, no studies have been done to explore the effects of COVID-19 on the academic performance of Afghan students and their level of satisfaction with online teaching. In this regard, the current study is an attempt to eliminate this research gap to explore whether COVID-19 affected the students’ performance and are they satisfied with online teaching across the country. This study is also significant on the rise to the literature in Afghanistan context and as well as to provide insights for MoHE of Afghanistan, researchers, and students to enhance their preparedness of such emergency cases in the future.

3. Methodology
The current research study used a quantitative research design in which a survey questionnaire was adapted to examine the effects of COVID-19 on the academic performance of students and their level of satisfaction with online teaching. The obtained data were analyzed through
descriptive and inferential statistical analysis. The researcher employed descriptive statistics to identify the frequency, percentage, the mean, and standard deviation of the respondents’ demographic profile as well as to measure their level of satisfaction with online teaching. While the inferential statistics were used to examine the differences in the academic performance of students and their level of satisfaction with online teaching across gender as well as to figure out the relationship between performance and satisfaction level (Table 1).

3.1. Participants
The present study was carried out in Afghanistan where all the respondents (N = 1231) including 867 male and 364 female students participated in the study from public and private universities. Their ages ranged between 18 and 30 years old. The selection process of the sampling was employed through the simple random sampling technique to ensure that every sample has an equal chance of being selected in the study.

3.2. Data collection instruments
The researcher designed the survey questionnaire based on the literature studied. There were 41 items adapted from the works of (Almazova et al., 2020; Almusharraf et al., 2020; Elhadary et al., 2020). The questionnaire consists of three sections designed with five points Likert scale ranging from 1 to strongly disagree to 5 to strongly agree. The first section of the questionnaire was focusing on the demographic profile of the students containing five items. Section 2 of the questionnaire containing 18 items aimed to seek the academic performance of the students. The third section of the questionnaire containing 18 items focuses on the students’ level of satisfaction with online teaching during the COVID-19 outbreak. To conduct this research study, the researcher translated the questionnaire into Dari language since English is a foreign language and most of the students cannot speak English.

3.3. Validity and reliability
To check the validity, the questionnaire was sent to two experts of research in the faculty of language and literature at Takhar University. The expert’s suggestions and comments were incorporated and considered in the questionnaire for further improvement. For the reliability of each item, the researcher conducted a pilot study among 56 students from different universities. The Cronbach’s Alpha value was 0.838 > 0.07 which was acceptable (Table 2).

3.4. Data collection procedure
The survey questionnaire was administered through Google forms. The link of the questionnaire was shared through the social media platforms (Facebook, WhatsApp, and Twitter) with an invitation letter. It was shared 53 times on my Facebook page by the students and friends publicly. It was also sent to hundreds of university lecturers requesting them to share the questionnaire with their student groups. The respondents were given 20 days to complete and answer the questionnaire. Besides, the privacy and confidentiality matter was mentioned in the consent form ensuring the respondents that the provided information can only be used for research purposes.

3.5. Data analysis
The process of data analysis began after the closure of the questionnaire from the Google form shared with the respondents through the Statistical Package of Social Science (SPSS) software, version 26. The descriptive statistical analysis was used to compute the mean, standard deviation, percentage, and frequency of the respondent’s demographic profile and the level of satisfaction with online teaching. While the inferential statistical analysis was employed to examine the gender differences in the academic performance of students along with the level of satisfaction. Besides, it was also used to examine whether there is any relationship between the academic performance of the students and their level of satisfaction during the COVID-19 outbreak.
4. Findings

Descriptive statistical analysis along with inferential analysis were employed to answer the research questions. The formulated Tables provided below are the outputs based on the research questions. The initial part of the tables is the descriptive of respondents demographic along with the overall mean score of each variable. While the second part represents the outcome of inferential statistics.

Table 3 illustrates the preferences of teaching mode by gender and age. There are 157 male respondents and 37 female respondents with the age of 18–25 preferred to have online teaching session. While 423 male respondents and 184 female respondents of the same age preferred to have face-to-face teaching. 53 male respondents and 66 female respondents who had age range of 25–30 preferred to have online teaching while 146 male respondents and 66 female respondents of the same age range preferred to experience face-to-face teaching. 34 male respondents and 10 female respondents who are above 30 years old preferred to use online teaching. There are 54 male respondents and 42 female respondents who have agreed to have face-to-face teaching. To consider the overall preferences by gender, it is indicated that 316 respondents preferred to have online teaching classes while the majority of the respondents (915) are happy with face-to-face teaching.

Table 4 aims to elicit the effects of COVID-19 on the academic performance of Afghan students. As it is indicated in Table 4, the mean score of each item ranged between 2.68 and 2.90. This shows that the majority of the respondents have either strongly disagreed or simply disagreed on each item about the academic performance of the students. To consider the highest and the lowest mean of items related to the academic performance of Afghan students affected by COVID-19, item 11 indicates the creativity skills during the COVID-19 had the highest mean score $M = 2.91$. Whereas the lowest mean score $M = 2.68$ goes to item 15 through which the respondents were asked their attitude towards using the platforms during the pandemic.

The items tabulated in Table 5 elicits the satisfaction level of Afghan students with online teaching during the COVID-19 outbreak. As shown in Table 5, there are two items (4 and 18) with the highest mean score of $M = 2.78$ indicating that they were not satisfied with the online classes, and professional development training for online teaching can be a must for the

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### Table 1. Respondents gender and age

| Gender  | Age     | Frequency | Valid Percent |
|---------|---------|-----------|---------------|
| Male    | 18–25   | 580       | 70.4%         |
|         | 25–30   | 199       |               |
|         | above 30| 88        |               |
| Total   |         | 867       |               |
| Female  | 18–25   | 221       | 29.6%         |
|         | 25–30   | 91        |               |
|         | above 30| 52        |               |
| Total   |         | 1231      | 100%          |

### Table 2. The reliability test for the questionnaire

| Reliability Statistics | Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|------------------------|------------------|---------------------------------------------|------------|
| .811                   | .838             | 36                                          |

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satisfaction level. While the lowest mean scores for the level of satisfaction with online teaching during the COVID-19 ranged 2.63, 2.67, and 2.68, respectively, in items 3, 2, and 11. The items in Table 5 about the satisfaction level have the lowest mean score comparing to Table 4 related to the effects of COVID-19 on the academic performance of Afghan students.

According to Table 6, the overall mean score of the academic performance of the respondents is 2.7226 with a standard deviation of 1.45069. And the overall mean score of level of satisfaction is higher than the academic performance 2.7648 with a standard deviation of 1.45841.

Table 7 is based on the descriptive statistical analysis and illustrates the mean score of the academic performance of students by gender. The mean score of 2.8085 for the male respondents in academic performance is higher than the mean score of 2.5179 for the female respondents.

Table 8 indicates the mean score of the level of satisfaction by gender with online teaching. The mean score for the male respondents is 2.8403 with a standard deviation of 1.45174. While the mean score for female respondents in the satisfaction level is 2.5852 which shows the higher dissatisfaction by gender with online teaching.

Inferential statistical analysis was used to determine whether there is any significant difference in the academic performance of students across gender. Table 9 illustrates these significant differences. As can be seen in Table 9, the p-value for the academic performance of students was less than the alpha value (P = 0.001 < 0.05). Hence, the null hypothesis is rejected and the alternative hypothesis is accepted indicating that there is a significant difference in the academic performance of students across gender during the COVID-19 outbreak.

Table 10 illustrates the significant difference between genders in the level of satisfaction of students with online teaching. According to Table 10, the p-value for the level of satisfaction was less than the alpha value (P = 0.005 < 0.05). Hence, the null hypothesis is rejected and the alternative hypothesis is accepted. Therefore, it can be concluded that there is a significant difference in the students’ level of satisfaction with online teaching across gender during the COVID-19 outbreak.
### Table 4. The effects of COVID-19 on the academic performance of Afghan students

| No | Academic Performance                                                                 | Frequency and Percentage %                      |
|----|---------------------------------------------------------------------------------------|-------------------------------------------------|
|    |                                                                                       | Items   | Strongly Disagree | Disagree | Neutral | Agree     | Strongly Agree | Mean | S.D  |
| 1  | I enjoyed completing online courses.                                                   | 401     | 32.6              | 175      | 14.2    | 208       | 22,017.9       | 227  | 18.4 |
|    |                                                                                        | 32.6    | 175               | 14.2     |         | 208       | 22,017.9       | 227  | 18.4 |
| 2  | Performing well in this course made me feel good about myself.                         | 408     | 33.1              | 180      | 14.6    | 185       | 209            | 249  | 20.2 |
|    |                                                                                        | 33.1    | 180               | 14.6     |         | 185       | 209            | 249  | 20.2 |
| 3  | I felt that online education was a good course to advance my studies and that there were dramatic changes in my academic performance. | 394     | 32.0              | 181      | 14.7%   | 210       | 216            | 230  | 18.7 |
|    |                                                                                        | 32.0    | 181               | 14.7%    |         | 210       | 216            | 230  | 18.7 |
| 4  | Completing this course moved me closer to attaining my career goals.                   | 387     | 31.4              | 198      | 13.9    | 185       | 261            | 200  | 16.2 |
|    |                                                                                        | 31.4    | 198               | 13.9     |         | 185       | 261            | 200  | 16.2 |
| 5  | I feel able to perform well in this course.                                            | 372     | 30.2              | 183      | 14.9    | 244       | 201            | 231  | 18.8 |
|    |                                                                                        | 30.2    | 183               | 14.9     |         | 244       | 201            | 231  | 18.8 |
| 6  | During the COVID-19 outbreak, I did all my activities successfully online.              | 365     | 29.7              | 176      | 14.3    | 218       | 228            | 244  | 19.8 |
|    |                                                                                        | 29.7    | 176               | 14.3     |         | 218       | 228            | 244  | 19.8 |

(Continued)
| No | Academic Performance                                                                 | Frequency and Percentage % |
|----|-------------------------------------------------------------------------------------|-----------------------------|
|    | Items                                                                               | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | Mean  | S.D   |
| 7  | During the COVID-19 outbreak, I organized my time to do everything the teachers asked me to do. | 35.7             | 29.0     | 178     | 14.5  | 206             | 16.7  | 25.6  | 20.8   | 234   | 19.0   | 2.86  | 1.50  |
| 8  | During the COVID-19 outbreak, my grades improved.                                   | 36.7             | 29.8     | 166     | 13.5  | 185             | 15.0  | 246   | 20.0   | 267   | 21.7   | 2.90  | 1.54  |
| 9  | During the COVID-19 outbreak, I have acquired more knowledge by taking online classes. | 38.4             | 31.2     | 164     | 13.3  | 185             | 15.0  | 262   | 21.3   | 236   | 19.2   | 2.84  | 1.52  |
| 10 | During the COVID-19 outbreak, I have improved my communication skills by taking classes online. | 38.7             | 31.4     | 173     | 14.1  | 220             | 17.9  | 204   | 16.6   | 247   | 20.1   | 2.80  | 1.52  |
| 11 | During the COVID-19 outbreak, I improved my creativity skills.                     | 35.2             | 28.6     | 165     | 13.4  | 184             | 14.9  | 305   | 24.8   | 225   | 18.3   | 2.91  | 1.50  |
| No | Academic Performance | Frequency and Percentage % |
|----|----------------------|----------------------------|
|    | Items                | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | Mean | S.D |
| 12 | During the COVID-19 pandemic, the existing functions of the online teaching platform can meet the learning needs. | 360 29.2 | 161 13.1 | 241 19.6 | 248 20.1 | 221 18.0 | 2.84 | 1.48 |
| 13 | During the COVID-19 pandemic, I actively answered the teacher’s questions and participate in classroom learning. | 397 32.3 | 178 14.5 | 192 15.6 | 247 20.1 | 217 17.6 | 2.76 | 1.51 |
| 14 | During the COVID-19 pandemic, I completed the online study assignment assigned by the teacher on time. | 391 31.8 | 193 15.7 | 191 15.5 | 228 18.5 | 228 18.5 | 2.76 | 1.51 |

(Continued)
| No | Academic Performance                                                                 | Frequency and Percentage % |   |   |   | Mean | S.D |
|----|---------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|---|---|---|------|-----|
| 15 | I hold a completely negative attitude towards the platform because of some dissatisfaction with the use of the platform (such as registration trouble, slow login, etc.) | 410 | 33.3 | 195 | 15.8 | 196 | 15.9 | 234 | 19.0 | 196 | 15.9 | 2.68 | 1.49 |
| 16 | Fear and anxiety during the coronavirus lockdown affected my study plan.                                                                 | 405 | 32.9 | 177 | 14.4 | 190 | 15.4 | 214 | 17.4 | 245 | 19.9 | 2.77 | 1.54 |
| 17 | I have experienced difficulty communicating with my teachers during the COVID-19 crisis.                                                  | 427 | 34.7 | 175 | 14.2 | 185 | 15.0 | 219 | 17.8 | 225 | 18.3 | 2.71 | 1.53 |
| 18 | I have faced some technical problems browsing the university website during the COVID-19 crisis.                                           | 429 | 34.8 | 184 | 14.9 | 185 | 15.0 | 204 | 16.6 | 229 | 18.6 | 2.69 | 1.53 |
Table 5. Students level of satisfaction with online teaching during the COVID-19 outbreak

| No | Level of Satisfaction                                                                 | Items                                                                 | Frequency and Percentage % |
|----|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------|----------------------------|
|    |                                                                                       | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | Mean | S.D |
| 1  | I am satisfied with the webinars, seminars, and courses offered based online          | 412 33.5          | 183 14.9 | 183 14.9 | 209 17.0 | 244 19.8       | 2.75 | 1.54 |
|    |                                                                                       | 422 34.3          | 202 16.4 | 185 15.0 | 201 16.0 | 221 18.0       | 2.67 | 1.52 |
| 2  | I am satisfied with the instructors’ follow-up in each session of online teaching.   | 473 34.7          | 207 16.8 | 185 15.0 | 220 17.9 | 192 15.6       | 2.63 | 1.49 |
| 3  | I am satisfied with the instructors' various online teaching approaches.              | 393 31.9          | 202 16.4 | 185 15.0 | 189 15.4 | 262 21.3       | 2.78 | 1.54 |
| 4  | I am satisfied with the online classes as they helped me achieve the course learning outcomes. | 408 33.1          | 205 16.7 | 185 15.0 | 227 18.4 | 206 16.7       | 2.69 | 1.50 |
|    | I am pleased with the quality of teachers' work in online courses.                   | 404 32.8          | 197 16.0 | 206 16.7 | 202 16.4 | 222 18.0       | 2.71 | 1.50 |
|    | I am satisfied with teachers' motivation in online courses.                           | 404 32.8          | 197 16.0 | 206 16.7 | 202 16.4 | 222 18.0       | 2.71 | 1.50 |

(Continued)
| No | Level of Satisfaction                                                                 | Frequency and Percentage % |
|----|---------------------------------------------------------------------------------------|----------------------------|
|    | Items                                                                                 | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | Mean | S.D |
| 7  | My interactions with teachers are satisfying in online teaching.                       | 420 34.1          | 202 16.4 | 185 15.0 | 205 16.7 | 219 17.8 | 2.68 | 1.51 |
| 8  | I am satisfied with the convenience of the online learning environment.                 | 392 31.8          | 200 16.2 | 183 14.9 | 210 17.1 | 246 20.0 | 2.77 | 1.53 |
| 9  | Online courses allow students to access a wide range of resources.                    | 395 32.1          | 212 17.2 | 185 15.0 | 189 15.4 | 250 20.3 | 2.75 | 1.53 |
| 10 | I have adequate technical support from my university.                                  | 386 31.4          | 193 15.7 | 184 14.9 | 255 20.7 | 213 17.3 | 2.77 | 1.50 |
| 11 | I am satisfied with fair compensation or incentives for teaching online.              | 419 34.0          | 196 15.9 | 202 16.4 | 203 16.5 | 211 17.1 | 2.67 | 1.50 |
| 12 | I am satisfied with the online teaching policies that have been implemented by my university. | 411 33.4          | 199 16.2 | 189 15.4 | 201 16.3 | 231 18.8 | 2.71 | 1.52 |
Table 5. (Continued)

| No | Level of Satisfaction                                                                 | Frequency and Percentage % |        |
|----|----------------------------------------------------------------------------------------|-----------------------------|--------|
|    | Items                                                                                  | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | Mean | S.D |
| 13 | I work well together with our teachers and students in online courses.                   | 397              | 194      | 209     | 198   | 233             | 2.74 | 1.51 |
| 14 | I am satisfied with the assessment made by our teacher in online courses.                | 391              | 193      | 184     | 239   | 224             | 2.77 | 1.51 |
| 15 | I am satisfied with the content quality of my online courses.                            | 398              | 192      | 185     | 245   | 211             | 2.74 | 1.50 |
| 16 | I am satisfied with the Wi-Fi provided for online teaching.                              | 394              | 189      | 185     | 233   | 230             | 2.77 | 1.52 |
| 17 | I am satisfied with the application offered by the University for Online teaching.      | 403              | 192      | 200     | 210   | 226             | 2.73 | 1.51 |
| 18 | Professional development or training for online learning made me experience a higher level of satisfaction with online teaching. | 389              | 187      | 205     | 204   | 246             | 2.78 | 1.52 |
Table 6. Descriptive statistics of the average mean score of variables

|                          | N  | Mean   | Std. Deviation |
|--------------------------|----|--------|----------------|
| Academic Performance    | 1231| 2.7226 | 1.45069        |
| Level of Satisfaction   | 1231| 2.7648 | 1.45841        |
| Valid N (listwise)      | 1231|        |                |

Table 7. The mean score of the academic performance by gender

| Gender   | Mean | N  | Std. Deviation | Std. Error of Mean |
|----------|------|----|----------------|--------------------|
| Male     | 2.8085 | 867 | 1.43013        | .04857             |
| Female   | 2.5179 | 364 | 1.48141        | .07765             |
| Total    | 2.7226 | 1231| 1.45096        | .04135             |

Table 8. The mean score of the satisfaction level by gender

| Gender   | Mean | N  | Std. Deviation | Std. Error of Mean |
|----------|------|----|----------------|--------------------|
| Male     | 2.8403 | 867 | 1.45174        | .04930             |
| Female   | 2.5852 | 364 | 1.46056        | .07655             |
| Total    | 2.7648 | 1231| 1.45841        | .04157             |

Concerning the relationship between the academic performance of students and their level of satisfaction with online teaching, a Pearson correlation analysis was carried out to identify any relationship if available. As shown in Table 11, it indicates that the P-value is less than the alpha value (P = 0.000 < 0.05). Therefore, it is considered to be significant and can be concluded that there is a strong positive correlation between the academic performance of students and their level of satisfaction with online teaching during the COVID-19 pandemic.

5. Discussion

The present study aimed at investigating mainly the effects of the COVID-19 pandemic on the academic performance of Afghan students and their level of satisfaction with online teaching as well as the gender differences in the academic performance and their level of satisfaction with online teaching. Besides, it also attempted to explore the relationship between academic performances of students with their level of satisfaction during the COVID-19 outbreak. In this regard, according to the findings, a general question was asked by the respondents to evaluate their preferences of teaching mode (online or face-to-face). Hence, the findings of the study in this respect revealed that almost all of the respondents preferred to have face-to-face teaching, while fewer respondents preferred to have online teaching. The findings of the study are in line with the studies conducted by (Beltekin & Kuyulu, 2020; Surahman & Sulthoni, 2020) whose findings revealed that online taught course was not as effective as face-to-face teaching. In other words, their respondents preferred face-to-face teaching over online teaching. Unlike this finding, the findings of studies conducted by (Khan et al., 2021; Novikov, 2020) revealed that online teaching for its freedom and ease of use had been preferred over face-to-face teaching during the COVID-19 outbreak. This may account for the negative effects of COVID-19 on students' academic performance.
### Table 9. Independent samples test of academic performance across gender

| Academic performance | Levene's Test for Equality of Variances | t-test for Equality of Means | 95% Confidence Interval of the Difference |
|-----------------------|-----------------------------------------|------------------------------|------------------------------------------|
|                       | F            | Sig. | t    | df   | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Equal variances assumed | 3.062        | .080 | 3.220 | 1229 | .001           | .29068          | .09028               | .11356 | .46779 |
| Equal variances not assumed | 3.174        | 660.269 | .002 | .29068 | .09159 | .11084 | .47051 |
Table 10. Independent samples test of students level of satisfaction across gender

|                      | Levene's Test for Equality of Variances | t-test for Equality of Means | 95% Confidence Interval of the Difference |
|----------------------|-----------------------------------------|------------------------------|-----------------------------------------|
|                      | F            | Sig. | t    | df  | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower  | Upper  |
| satisfaction         | .221        | .638 | 2.808 | 1229 | .005             | .25509          | .09083             | .07689 | .43329 |
| Equal variances      | assumed     |      |       |     |                  |                 |                    |        |        |
|                      | 2.801       | 677.711 | .005 | 25509 | .09106 | .07630 | .43388 |
| Equal variances      | not assumed |      |       |     |                  |                 |                    |        |        |

equality across gender.
Concerning the first research question on whether there was any effect positive or negative of the COVID-19 on the academic performance of Afghan students. The findings of the study showed that COVID-19 has negatively affected the performance of students in many aspects such as their ability to perform well in each course activity, their performance in doing assignments, and their grades. It is in line with the findings of studies conducted by (Elhodary et al., 2020; Realyvásquez-Vargas et al., 2020) whose findings revealed that COVID-19 affected the academic performance of students. Unlike this finding, a study conducted by Novikov (2020) reported that there were no considerable effects of COVID-19 on students' exams. Furthermore, the findings of a study conducted by Sintema (2020) support the result of the present study indicating that COVID-19 affected the examination result of the students. Similarly, other studies conducted by (Mahdy, 2020a; Oyinloye, 2020) confirming that COVID-19 has negatively affected the education system of Nigeria, particularly the performance of students. In addition, this finding is similar to the studies reviewed on the literature indicating that COVID-19 affected the academic performance of students. To consider the overall findings related to the effects of COVID-19 on the academic performance of Afghan students, it was found that COVID-19 has negatively affected the academic performance of Afghan students.

The findings for the second research question on the level of satisfaction revealed that all respondents were highly dissatisfied with online teaching during the COVID-19 outbreak. According to findings, the respondents showed dissatisfaction from the webinars and courses presented through online mode along with the instructor's approaches and follow up with online sessions during the pandemic. This finding is consistent with the findings of Ali et al. (2011) who reported dissatisfaction with online teaching and considered online teaching as a poor medium with low quality. Moreover, it was also found that the respondents level of satisfaction is ultimately low in various aspects such as teachers quality of works in various content, teachers motivation in online sessions, teachers vs students interaction, lack of technical support, lack of specific program and policy by the university with online teaching, lack of proper assessments with online teaching, lack of electricity to ensure enough online sessions occur, lack of secure applications and lack of effective and professional training with online teaching during the COVID-19 outbreak. This finding contradicts the findings of Almusharraf and Khahro (2020) who reported that their respondents were highly satisfied with online teaching. To discuss the university rules and policy, a study conducted by Aristovnik et al. (2020) confirmed that this factor has affected the students' satisfaction level with online teaching during the COVID-19 outbreak. The findings of the study are in line with a study done by Baber (2020) concerning the students–teachers interaction and teachers motivation with online teaching. Unlike this finding, a study conducted by Abuhassna et al. (2020) has reported that students had highly satisfied with online teaching. To consider the overall level of satisfaction with online teaching, several studies have been found in line with the findings of the present study (Aristovnik et al., 2020; Babinčáková & Bernard, 2020; Bauk et al., 2014; Bokayev et al., 2021; Bolliger & Wasilik, 2009; Chen et al., 2020; Durak, 2020; Fatani, 2020; Gonzalez, De La Rubia et al., 2020; Johnston et al., 2005; Loton et al.,

| Academic performance | Pearson Correlation | Sig. (2-tailed) | N   | Students Satisfaction | Pearson Correlation | Sig. (2-tailed) | N   |
|-----------------------|---------------------|----------------|-----|------------------------|---------------------|----------------|-----|
| Academic performance  | 1                   | .902**         | 1231|                        | 1                   | .902**         | 1231|
| Satisfaction          | .902**              | .000           | 1231|                        | 1                   | .000           | 1231|

**. Correlation is significant at the 0.01 level (2-tailed).
Considering the average mean score of both variables (academic performance and students’ level of satisfaction), one can understand that COVID-19 has influenced the academic performance of Afghan students as the mean score was ultimately low. Besides, the mean score for the level of satisfaction with online teaching also suggests that the satisfaction level was highly affected by the COVID-19 outbreak. According to the findings, there is a difference in the mean score by gender and these variances show the true effects of COVID-19 on the academic performance of Afghan students and their level of satisfaction with online teaching. Therefore, it was evident that there are some inequalities in the performance of male students vs female students as well as in their level of satisfaction with online teaching. A study carried out by Orfan (2021) confirmed inequalities of males vs females.

Concerning the third research question on whether there is any significant difference in the academic performance of Afghan students across gender. The findings of the study revealed that there is a statistically significant difference in the academic performance of Afghan students across gender. This finding indicates that there is an inequality in the influence of COVID-19 on the academic performance of students between males and females. This is because most of the female students are deprived of having access to technological tools and applications. In other words, when there were inequalities in the availability and accessibility of the resources between males and females, the performance of the students will vary across gender. This finding confirms the study carried out by Mahdy, (2020b) who indicated that COVID-19 has affected the performance of students and it varies between males and females. Therefore, this finding supports the idea and personal experience of the researcher who had indicated that males have more resources in any aspect than females in Afghanistan. The findings of a study revealed that male students have more confidence in assessing technological skills over female (Aristovnik et al., 2020). From this finding, it can be implied that COVID-19 has affected the academic performance of female students in various aspects such as assessments, project works, and online assignment submission. In this respect, it can be concluded that the poor performance of female students has led them to be more negatively affected by COVID-19 during the pandemic in Afghanistan.

As expected, the findings of the study concerning the fourth research question on whether there is a statistically significant difference in the level of satisfaction with online teaching across gender revealed that there is a statistically significant difference by gender. Surprisingly, male students are more satisfied with online teaching than female students. This finding is similar to a study carried out by Mirjeta et al., (2009) who reported a higher level of satisfaction by males. This is because male students in the Afghan context have more opportunities in access to modern technological devices and applications than female students. While another study by González-gómez et al. (2012) contradicted this finding indicating that female students are more satisfied with online teaching than male students. It is a kind of discrimination that exists between male and female students. Different factors can be involved in the dissatisfaction level of female over male students with online teaching during the COVID-19 outbreak. For example, lack of technological devices, lack of professional training in ICTs application, lack of accessibility and availabilities of internet and other materials can have more influence on the satisfaction level with online teaching. Unlike this finding, studies conducted by (Bayrak et al., 2020; Guven-kocak, 2020; Sharma et al., 2020; Tosta, 2012) found that female students were highly satisfied with online teaching than male students. To evident the findings of the present study, several other studies have been revealed to confirm that there is a statistically significant difference in the level of satisfaction with online teaching (Aristovnik et al., 2020; Malikawa et al., 2021; Mcwherter, 2017).

For the last research question on whether there is any relationship between academic performances of the Afghan students with their level of satisfaction in online teaching, the analysis of the findings revealed that there was a strong positive correlation between the academic
performance of Afghan students and their level of satisfaction with online teaching during the COVID-19 outbreak. This finding is similar to the findings of the studies carried out by (Dhagane & Afrah, 2016; Malkawi et al., 2021) who found a strong correlation between the academic performance of students and their level of satisfaction. Moreover, when the academic performance of the students has been affected negatively by COVID-19, the level of satisfaction with online teaching can also be highly affected. Therefore, it can be implied that there is a strong relationship between students’ academic performance and students’ satisfaction level.

6. Conclusion
The present study aimed at investigating the effects of COVID-19 on the academic performance of Afghan students and to identify to what extent are the Afghan students satisfied with online teaching in the Afghanistan context. The study also sought to explore whether there is any significant difference in the academic performance of Afghan students and their level of satisfaction with online teaching across gender. In addition, the relationship between the academic performance of students and their level of satisfaction has also been examined. Thus, the findings revealed that COVID-19 negatively affected the academic performance of Afghan students. It was also found that Afghan students were highly dissatisfied with online teaching during the COVID-19 crisis. The findings showed that there was a significant difference in the academic performance of Afghan students across gender, as well as a significant difference in the level of satisfaction with online teaching was found across gender. Finally, a strong positive correlation was identified between academic performance and their level of satisfaction with online teaching.

This is the first study investigating the effects of COVID-19 on the academic performance of Afghan students and exploring their level of satisfaction with online teaching across Afghanistan. A major strength of this study is considered to be its large sample size of 1231 along with its huge context among public and private universities in Afghanistan. Hence, the findings of the study present several implications and suggestions for the MoHE and other involved parties for them to enhance both the quality and capacity of online teaching during unexpected and emergencies and, from another side, to stimulate the students’ academic performance and to improve their level of satisfaction with online teaching. Therefore, it is recommended for the MoHE and all the involved stakeholders to provide online teaching applications, provide professional training for online teaching applications and devices, provide Wi-Fi facilities, provide cheap internet packages, and provide virtual resources. Also, it is recommended for teachers to provide interactive and comprehensive online services along with supportive guidance and constructive feedback that could enhance the students’ level of satisfaction with online teaching. As the finding of this study concerning the correlation between academic performance and satisfaction level showed a positive relationship, it is indicated that low performance results in high dissatisfaction with online teaching.

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