



Media dependency, uses and gratifications, and knowledge gap in online learning during the COVID-19 pandemic: The case of Afghanistan and Turkey

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ABSTRACT

This study aims to address how dependency on media for learning purposes increased dramatically during COVID-19 by assessing the effects of online learning on students' academic performance during the COVID-19 pandemic with a specific focus on Afghanistan and Turkey. Through the theoretical framework of the uses and gratifications theory, the study tries to explain the uses of devices to use the internet for learning purposes to gratify the needs of students during the pandemic. Furthermore, the study tries to address how the knowledge gap between students of different countries affects students' academic performance during online learning and their uses and gratifications of media during COVID-19.

The study followed the quantitative research method where primary data was collected from 400 participants (200 Afghan and 200 Turkish students) through a close-ended survey questionnaire. The study found that Turkish students were more satisfied with the online learning process during the COVID-19 pandemic than Afghan students. Furthermore, there is a considerable difference in attitude, perceived impact, and satisfaction with online learning during the COVID-19 pandemic among Afghan and Turkish students. Due to the knowledge gap, Turkish students had a better attitude toward online learning during the pandemic as compared to Afghan students. The study also found that Turkish students perceived a more significant impact of online learning on their academic performance during the COVID-19 pandemic in contrast to Afghan students. Limited access to different media and technological resources for Afghan students shaped their learning outcomes by lowering their academic performance.

Keywords: online learning, COVID-19 pandemic, media dependency, uses and gratifications, knowledge gap, students' performance

INTRODUCTION

COVID-19 was a deadly and serious global infectious disease that prevails on an international level and due to its viral characteristics, it was spread from individual to individual and soon it covered the entire world. The pandemic situation of COVID-19 impacts all around the world and according to the WHO data, approximately 550 million people were infected and almost 6.34 million people have died from the viral disease. The coronavirus originated in China, the city of Wuhan that has more than 11 million residents in 2019. In the previous decade, coronavirus was outbreak due to an infectious virus in 2003 called severe acute respiratory syndrome (SARS) (Almarzouqi et al., 2022).

The outbreak of the coronavirus not only resulted in the sudden shift of education from traditional to online models but also forced educational institutions to improve their technological infrastructure for

continuing the delivery of academic learning programs. The abrupt transformation, however, created several socio-economic challenges. Though distance learning is an effective solution to continue education during the COVID-19 times, the impact on underdeveloped and developing countries is far more ferocious as opposed to the developed nations. The global outbreak caused by the novel coronavirus (COVID-19) led to unprecedented public health concerns, compelling governments to impose strict lockdown measures to limit the social contact and spread of the virus. The education sector was no exception and encountered closures of educational institutions causing challenges for teachers, students, and parents (Clark et al., 2021; Eyles et al., 2020; Gopal et al., 2021). As a response to the outbreak, educational institutions shifted towards online mediums to continue education and teaching (Hashemi, 2021).

During the pandemic situation of COVID-19 governments of different countries implemented lockdowns to restrict individuals from contracting with each other and controlling the spread of COVID-19 (Dhawan, 2020). Due to the implementation of the lockdown, education activities were also restricted, and educational institutes prefer to shift learning programs with the help of an online system. Consequently, the education system was dramatically changed and there was an increase in the use of online learning methods. Due to the sudden increase in the restriction and conversations in the education system regarding online learning programs, the educational institutes required to adopt the technology and investment in ed-tech that was reached approximately US\$18.66 billion in 2019, and the overall market of online education was estimated to reach up to \$350 billion by 2025 (Marinoni et al., 2020).

Many studies have shown that the education system in many countries has been affected by online learning. Japanese medical students have found it difficult to adapt to using electronic learning materials, but the impact of this on their performance on achievement tests has been relatively low. It was found that, even after the pandemic, face-to-face classes are still preferable in an electronic learning environment. This is because the majority of students prefer this type of learning. Students who prefer face-to-face classes have significantly higher total achievement test scores than those who prefer electronic learning (Sekine et al., 2022). Teachers in Morocco have been using WhatsApp to teach during quarantine. They found that this is a way to keep pedagogical continuity during the break from teaching in classrooms, and they prefer face-to-face and hybrid teaching (El Omari et al., 2023).

The Iranian undergraduate nursing students who used online learning found that it was a good way to learn, but there are some disadvantages. The advantages include being able to learn at your own pace, being able to focus more on what you want to learn, and not having to worry about other things in your life. The disadvantages include not being able to talk to other students, having problems with the files that contain their education information, having to use different software to learn, having problems with the hardware on their computers, and being away from the context of their education (Salmani et al., 2022). Students in Indonesia exhibit a favorable attitude toward online learning. They behave negatively toward online learning. Therefore, it is advised that teachers help their students transform their negative attitudes into good ones (Autila et al., 2023).

Jafar et al. (2023) found that the more challenges faced by students in Peninsular Malaysia, the less motivated they are to pursue online learning programs. Students with many problems are more likely to follow face-to-face classes than online classes, even during a pandemic. Therefore, student empowerment is necessary if the authorities want to continue the online program.

Social presence, validation, and inter-student interaction as drivers of online learning satisfaction during the pandemic. Moreover, the quality of a robust learning system has an indirect impact on learning satisfaction through student-to-student interaction (Pangarso & Setyorini, 2023).

The study conducted by Eli-Chukwu et al. (2023) found that Nigeria's higher education institutions were still relatively early in embracing the use of online learning methods. At the time, there were no accessible online learning modules that were up to date with the pandemic. It was a difficult task for both instructors and students, given the need for involvement in data and communications innovation and the lack of a foundation to support online learning.

The academic staff welcomes the introduction of online learning programs for student groups with special needs. They support these students' ability to manage educational engagement, social connections, and knowledge sharing. Academic staff showed no interest in devoting time to training and agreed that technology

Table 1. Popular online learning platforms used during the COVID-19

No	Platform name	Founded and initial release year	Link
1	Zoom	2011	https://zoom.us
2	Google Classroom	2014	https://classroom.google.com
3	Microsoft Teams	2017	https://www.microsoft.com/microsoft-teams
4	Google Meet	2017	https://meet.google.com
5	Cisco WebEx	1995	https://www.webex.com
6	GoToMeeting	2004	https://www.goto.com
7	DingTalk	2014	https://www.dingtalk.com
8	BYJU'S	2011	https://byjus.com

was not needed for more than the time allotted for a regular classroom session. Members of the Academic Department provided ideas on developing systems and appropriate curricula to help overcome barriers and facilitate online learning support for students with special needs for various courses (Al Hosni et al., 2023).

The education institute responded to the significant demand of students with online learning programs and provided free access to different platforms such as Zoom, Google Classroom, Microsoft Teams, Google Meet, Cisco Webex, GoToMeeting, Ding Talk, and BYJU's (Table 1). During the COVID-19 pandemic, Zoom was the main choice for many universities, organizations, and students. All technology companies started to increase their capabilities to provide one-step facilities to create a connection between teachers and students. For instance, a Singapore-based company developed an application to meet the exponential needs of teachers and students by providing unlimited videoconferences, auto-translation, capabilities, and editing of the project work that was highly admired by professional educators. BYJU'S, which is an Indian multinational educational technology company founded by Byju Raveendran in 2011 and currently has over 115 million registered students, is a Bangalore-based educational technology that was used to provide free live class links with the help of the app and the number of pupils utilizing this application was predicted to have increased during this period. Alibaba's distance learning solution ding talk also provided services to more than 100,000 large-scale remote cloud servers in just one month (Schleicher, 2020).

Communication has become highly digitalized in the present times. Even before the pandemic, reliance on digital technologies for communication was an integral part of students' lives. With the surge of the pandemic, online learning became highly dependent on technology for communication. Every person involved in the process of learning essentially needs digital technology to communicate effectively. During the process of communication, the media holds great importance. Media has acquired different shapes in the present times; however, the widely followed media in current times are digital. Digital media shapes the lives of its users in different ways (Couldry & Hepp, 2018).

ONLINE LEARNING IN AFGHANISTAN

There are several types of challenges and opportunities that were enjoyed by the students and teachers in Afghanistan due to the implementation of lockdown during the pandemic situation of COVID-19 (Almarzouqi et al., 2022). The results represent that there is no relationship between the attitudes of students toward distance learning and quality qualitative findings represented that distance learning helped the students to overcome challenges and avail opportunities. On the other side, it is also a reality that students lack access to online learning platforms during the pandemic situation of COVID-19 in Afghanistan (Himat et al., 2021).

In Afghanistan, the schools were shut down in March 2020 and over 10 million students were out of school, and approximately 300,000 students were from public and private universities that do not have Internet and electricity to take their online classes at home. According to the report, approximately 3.7 million students were not able to continue online learning and only 28.6% of students could access distance-learning programs, 13.8% of students used radio, and only 0.2% of students connected with the Internet (Mohammadi et al., 2021). Although the pandemic situation of COVID-19 is difficult for every country, you understand that poor countries like Afghanistan could not afford online learning programs, which was a great difficulty for the students.

Tadesse and Muluye (2020) highlighted that the COVID-19 crisis led to a social divide where children from advantaged and economically stable parents were able to afford better digital infrastructure while young teachers with a better understanding of the digital technology skills were able to keep up with the distance learning. In underdeveloped nations like Afghanistan, with low socioeconomic strata, the adoption of online education is far more effective than the developed nations. Hence, there is a need to assess the impact of online education during the COVID-19 epidemic in underdeveloped and developing countries with a specific focus on Afghanistan and Turkey.

The government of Afghanistan dismissed the delivery of physical education to contain the spread of the COVID-19 virus. The Ministry of Higher Education of Afghanistan developed and administered an online teaching platform by the name of the higher education learning management system to respond to the education crisis created by the pandemic (Hashemi, 2021). All universities nationwide experienced the online teaching scenario as a new platform without any prior preparation for such a crisis.

On the other hand, the online medium for education is not without challenges. A study based on the analysis of student satisfaction and academic performance in the Afghan context revealed that online education negatively affects the academic performance of students since the majority of the learners are not equipped with internet-based learning via smartphone or computer (Himat et al., 2021).

ONLINE LEARNING IN TURKEY

With the implication of online learning, Turkey has overcome the risk of closed educational activities by arranging to develop an online learning platform, and it was not difficult for the country because Turkey is a developing country where the majority of students have access to the internet, and they could join their online classes. A large number of international institutes work in Turkey and during the crisis, students from different countries could not go from one institute to another, as there were restrictions on physical learning (Aguilera-Hermida et al., 2021).

In Turkey, even early childhood education was also continued during the pandemic situation. The pandemic situation affected several aspects of life and application is one of the most significant factors that completely changed all over the world.

The research team last rated that the government supported the families to continue the students' education and faced several difficulties to overcome the challenges in the way of education. Several school administrators revealed that the efforts and practices were made to support the education of the students as well as support them psychologically to avoid the trauma and helped the families to improve their technical competencies. The Turkish government took extra care of the public and enhanced the user-friendly distance education platform, which was helpful to meet the requirements of high-quality education over a distance. However, teachers were also required to have training to use technological devices, therefore, the government also supported the educational institutes to provide the required training for the teachers as well (Hwang & Chien, 2022).

The Council of Higher Education in Turkey accelerated its adoption of distance education methods to ensure the continual delivery of education among the public and private sectors. Similar to the measures adopted by Afghanistan, the government of Turkey designed and launched platforms at the school and university levels to support distance education in response to the COVID-19 outbreak (Elhadary et al., 2020). In response to the pandemic, technological development in the education sector was accelerated to cater to the loss of education during the COVID-19-induced restrictions.

A plethora of research emphasized the effectiveness of online mediums while stating that online learning helps in yielding better academic results among students (Zheng et al., 2021). On the other hand, some studies have established a negative relationship between online learning and academic performance (Chen et al., 2020). Gunes (2020) discussed several benefits associated with online learning that positively affects the academic performance of individuals/students, such as the shift towards online medium has resulted in the establishment of student-centered education delivery. In an online system, teachers play the role of facilitators instead of opting for a one-way teaching model approach (Sad et al., 2014). In an online scenario,

the teacher asks the students to explore on their own while remaining in close contact with students to help them in the form of feedback and comments (Gunes, 2020).

Research conducted in Turkey revealed that students of web-based learning programs have a more positive association with lifelong learning opportunities than those attending face-to-face learning. Hence, online education improves the capability of students to share and access resources while also facilitating cooperation and socialization. Moreover, a survey based on Turkish students' perspectives regarding the preferred medium after the pandemic revealed that around 46% of the students prefer going back to face-to-face education as soon as the pandemic restrictions ease out due to a lack of adequate planning, design, and development of the online instructional programs (Sarac, 2021). Limited capability and availability of technologically advanced resources in underdeveloped countries create a hindrance affecting the academic performance of students during the epidemic. Hence, there is a dire need to assess the impact of online learning on the academic performance of students during the pandemic with a specific focus on Afghanistan and Turkey.

MEDIA DEPENDENCY AND ONLINE LEARNING

Media bear a great responsibility in highlighting the most important issues in societies. People see that online media is much more effective in this regard, and they prefer online media over traditional media when following up on citizens' rights issues, as traditional media must follow a winning strategy and do more in this regard (Aldamen, 2017). The link between media and audiences is a major emphasis of the idea. The impact of media on people's life is directly related to the needs of the users that are fulfilled by media (Ball-Rokeach et al., 1976). A person who relies on media more is influenced by it more as compared to others (Jung, 2017). In the current times, media shapes the lives of people instantly because they rely on media extensively. During COVID-19, dependency on media for learning purposes increased dramatically. This dependency affected the nature of communication. People were not used to instant connectivity for learning purposes because before the pandemic they relied mostly on conventional media such as physical classrooms, printed books, and newspapers. The abrupt shift towards digital access to learning tools left a mark on learners (Kooli-Chaabane et al., 2022).

In times of the pandemic, communication is carried out through three mechanisms, which are digital media, conventional media, and interpersonal communication. Digital media emerged as the most active media for communication during the pandemic. For learning purposes, digital media helped people to advance remote learning and accelerate their research work. Several learners relied on digital media for gathering information (Salman, 2021). Media dependency has evolved over time. Before the pandemic, dependency on media was less for the learners, however, during the pandemic learners had to rely entirely on digital media not only for their academic needs but also for entertainment and leisure. Spending more time on media led people to witness a more powerful impact of it on them (Muñiz, 2020). Communication through digital media has resulted in a lack of social connectedness. Face-to-face interactions have become less frequent, which has deteriorated the quality of it among students (Mahmud et al., 2018). The ability to communicate in real-time scenarios has decreased in students, which will eventually shape their professional lives. Students have become shy, and their speaking skills have reduced dynamically. These outcomes of online learning make students improve the quality of communication online, however, the social connectedness decreases, which has its negative consequences. Accessing information online has become easier, however, articulating that information through speech has become difficult for students (Nguyen et al., 2021).

During COVID-19, online learning has changed the role of students in the social context quite dramatically. Students are no more confined to academic activities; instead, their role in extra-curricular activities has increased significantly. Governments are using carefully developed content to influence students for changing their political identities. Researchers have found that students desire to share the information that they believe is right with their friends and family (Hashim et al., 2020). This dependency on media is changing the way students choose their careers and excel in their academic lives.

USES AND GRATIFICATIONS AND ONLINE LEARNING

People use different media that give the satisfaction of desire and gratification of knowledge, social interaction, entertainment, etc. (Katz et al., 1973) and play an important role in implementing technology in life. This theory clarifies the needs of smartphones, but it has a wider range or segment of human needs through different mediums of technology (Wang et al., 2018). During the COVID-19 pandemic, everyone faced lockdown, and most importantly educational institutions were shut down so that no classes were held physically. These institutions conduct their classes online instead of in-person classes for students to complete their education. Students needed a device to attend their online classes, and based on the findings of this study, in developing countries such as Turkey students were having access to laptops and desktop computers, while in underdeveloped countries, like Afghanistan, the majority of students had only access to smartphones because smartphones are easily available at cheap prices for people and everyone uses a smartphone to fulfil many gratifications like knowledge, interaction, communication, etc.

It is quite beneficial in understanding online learning during a pandemic by keeping a focus on communication. Through uses and gratifications, broader impacts of communication through different media on learning experiences can be located. The key postulates of uses and gratifications state that media serve four functions in society. These functions are surveillance, correlation, entertainment, and cultural transmission. Uses and gratifications also hold that media users are not passive instead they are active. They shape media, which subsequently influences the choices made them (Kujur & Singh, 2020).

The learning process is considered hectic by students and the core reason behind the poor performance of students is a lack of interest and motivation in them. Researchers have found that online learning increases motivation in students for learning. Their attitude towards studies changes and their engagement in learning activities increases. Enjoyment in the classes, convenience in the accessibility of courses, and socializing help trigger motivation in students (Khoa, 2020).

In the digitized world, the ability to communicate effectively on different media varies. People with good technological skills communicate better than those who lack these skills. These differences are sharp across racial and ethnic lines. Researchers are of the view that the quality of communication on a racial and ethnic basis differs sharply. Interacting with people from different cultures online is difficult. A lack of cross-cultural knowledge bars people from communicating effectively. These factors play a role in online learning as well. In online classes, interactions among class fellows have different outcomes for different people. The uncertainty of the nature of the relationship with peers places an additional burden on students during online learning (Brown & Keep, 2018).

Gratifications change for different courses online. Every course has specific attributes, and some factors influence the learning process of students more in those courses as compared to others. For example, in entrepreneurship of government, trust in the government, motivation to learn, and prospects for gaining profit through these courses remain the most important factors that influence the learning process (Wu & Song, 2019). If these factors are present in an online learning course, the motivation for learners will be strong to take the course and participate actively in its activities.

KNOWLEDGE GAP IN ONLINE LEARNING

Stability and peace in society enable learners to pay attention to their academics and fulfil their roles as students efficiently. Societies where peace does not exist such as war zones do not support healthy academic activities. Stability is related to the availability of infrastructure for the students. The areas where insurgencies or other forms of instability prevail do not record higher levels of performance of students. The stability of society also allows efficient communication. With uninterrupted sending and receiving of information, tasks are completed easily and perfectly (Rublev et al., 2021).

Media also shapes the learning outcomes of students primarily by its accessibility. Access to different media learners helps them gather and integrate their academic activities. Banning or censorship of media bars learners from connecting with each other and gathering information. Interruption in connectivity is the primary factor that affects online learning negatively. In the cases where an interruption in connectivity does not happen, the performance of students improves quite dramatically (Yra et al., 2020). There is a greater

benefit to those located in higher socioeconomic demographics than to those located in lower socio-economic demographics. The knowledge gap theory (Tichenor et al., 1970) suggests that there is an increasing disparity between those who are privileged and those who are not in terms of their knowledge and access to education, which consequently leads to the widening of the rich-poor gap. Thus, it is concluded that the greater advantage wealthy people have over disadvantaged ones will perpetuate unless something is done about it, leading to this gap getting wider and wider over time. In an educational setting, knowledge gap theory can play out in several ways. For example, students from higher socioeconomic backgrounds such as Turkey in this study may have parents who are better educated and can therefore help them with their homework more effectively. They may also have greater access to resources like tutors and private schools. As a result, these students are likely to perform better in their educational institutes, creating a vicious cycle that further entrenches the divide between rich and poor. At present, this trend is expected to continue as people from low socioeconomic backgrounds have lower levels of human capital investment than people from high socioeconomic backgrounds (Tichenor et al., 1970).

The student-instructor relationship help is an important factor as well. In online learning, students are the audience, and the teacher is the presenter. The academic qualification, cultural background, and digital skills of the audience shape their relationship with the instructor. For a good student-instructor relationship, all these factors are important. A good academic qualification allows students to grasp learning outcomes quickly. Likewise, cross-cultural awareness helps students to form good teams with their class fellows thus the learning process becomes efficient. In addition, digital skills are a paramount need for an efficient online learning experience. Students who lack these skills seldom perform well in academics (Yusuf & Ahmad, 2020). The factors detailed above impact the life of a student in many ways. The most important effects, in this regard, are effects on the cognitive and behavioral attributes of the students. Students from peaceful and stable societies have the capacity to concentrate on learning more. Likewise, students who have strong accessibility to media show digital behavior as compared to those who have less frequent access to media. In short, the more a person uses the media the more influence it should have on that person. No person can remain immune from the impacts of media in the modern globalized world.

METHODS AND PROCEDURES

Based on the literature review and previous research, it can be stated that an in-depth evaluation of online mediums for education purposes is required to understand how the medium affects the academic performance of students and the feasibility of the medium in terms of accessibility and its subsequent impact on the learning capabilities of students in Turkey and Afghanistan. The research aims are, as follows:

1. To analyze the role of COVID-19 on a radical shift in the educational sector towards online mediums.
2. To compare the impact of online learning on students' academic performance in Afghanistan and Turkey during the pandemic.
3. To assess the perception of online learning and teaching among Afghan and Turkish students.
4. To understand how the students depended on online media and how that affected their performance during the pandemic.
5. To evaluate the impact of COVID-19 on the learning process during online learning.
6. To understand the uses and gratifications of online learning during the online learning process.
7. To understand and analyze how knowledge gaps between two different countries were able to affect students' academic performance.

Quantitative Approach

The research intends to keep an exploratory research design. As the name implies, exploratory research explores the research question. Exploratory research does not offer conclusive evidence. Rather it aims to gain a better understanding of the problem in depth (Dudovskiy, 2016; Saunders et al., 2019). Similarly, the research topic at hand does not intend to provide any conclusive evidence but rather focuses on understanding the impact of online learning and how the shift towards the new medium due to COVID-19 impacts the academic performance of students, their perception of the feasibility, and success of the

Table 2. Reliability analysis

	No of items	Cronbach's alpha	
		Afghanistan	Turkey
Attitude towards online learning	7	0.686	0.673
Impact of online learning on academic performance	8	0.800	0.753
Satisfaction with online learning	8	0.922	0.841

mediums along with the perception of teachers regarding the effectiveness of online learning in an existing and post-pandemic world.

Thus, by keeping an exploratory research design, the researchers can investigate the key facts and opinions of students and teachers regarding the role of online learning on academic performance (Saunders et al., 2019). Moreover, the design will facilitate the comparison of opinion analysis in Turkey and Afghanistan context while facilitating in providing the study with a new angle by laying the foundation for future research.

The questionnaire has been used as primary data collection for being more accurate, simply understanding, and to add more quality to the research study either directly from the selected sample or from all members of the study community, by asking a set of specific questions prepared in advance, relying on voluntary responses and snowball probability sampling methods. Furthermore, the questionnaire included closed questions based on the Likert scale. For collecting primary data, two countries' students have been selected as a sample size to show the differences between students in two different countries. The sample size from each population was selected using a non-probability sampling technique that included 400 students in total with each country indicating 200 students; this technique was used by researchers to select respondents based on accessibility and reach (Saunders et al., 2019).

The questionnaire covered the following issues:

1. The first axis contains the respondents' demographic data.
2. The second axis contains the attitude of students toward online learning during the COVID-19 pandemic, and it contains seven items.
3. The third axis contains the impact of online learning on the academic performance of students during the COVID-19 pandemic, and it contains eight items.
4. The fourth and last axis contains the satisfaction of students with online learning during the COVID-19 pandemic, and it contains eight items.

Questionnaire Reliability

The questionnaires were also distributed once before in a 10% pilot study to test and check the validity of the questionnaires as it was proved to be well. Moreover, the questionnaires were presented to three academicians to verify the validity of their paragraphs. The researchers benefited from the specialist's observations by adopting the agreed-upon observations, whether by deletion, addition, or amendment until the study tool appeared in its final form, divided into two variables and each variable contains four dimensions. The researchers considered the opinions of the specialists and their adjustments as an indication of the truthfulness of the content of the study tool, and the relevance and diversity of its paragraphs. After making the required adjustments, the balance between the contents of the study instrument in its paragraphs is achieved, thus the validity of the scale has been verified.

After conducting an internal validity analysis, the questionnaires were further analyzed for the reliability of scales using Cronbach's alpha (**Table 2**). For this analysis, all items that were not valid in either the Persian version or the Turkish version of the questionnaires were excluded from the measures. All items with which Cronbach's alpha score is less than 0.60 were excluded.

Results from **Table 2** show that after deleting the non-valid items from the scale, all scales had a Cronbach's alpha higher than 0.60, deemed to be considered reliable in both the Persian and Turkish versions of the questionnaires.

Pearson collection coefficient test was used to determine the internal validity for each statement and the relationship with its dimension for both the Persian and Turkish versions of the questionnaire separately (**Table 3**).

Table 3. Pearson collection coefficient test

Attitude toward online learning			Impact of online learning on academic performance			Satisfaction with online learning		
Pearson correlation			Pearson correlation			Pearson correlation		
Sr.#	Afghanistan	Turkey	Sr.#	Afghanistan	Turkey	Sr.#	Afghanistan	Turkey
1	0.627**	0.735**	1	-0.064	0.241**	1	0.781**	0.649**
2	0.701**	0.676**	2	0.427**	0.587**	2	0.848**	0.727**
3	0.699**	0.647**	3	0.703**	0.729**	3	0.846**	0.714**
4	0.672**	0.419**	4	0.705**	0.567**	4	0.832**	0.671**
5	0.464**	0.633**	5	0.675**	0.395**	5	0.800**	0.713**
6	0.620**	0.445**	6	0.705**	0.704**	6	0.801**	0.648**
7	0.269**	0.391**	7	0.783**	0.652**	7	0.815**	0.665**
8	0.461**	0.210**	8	0.658**	0.562**	8	0.716**	0.725**
			9	0.425**	0.575**			

Note. * $p < 0.05$ & ** $p < 0.01$

Items that are not significantly correlated with its dimensions at a 5% significant level and that have a Pearson correlation score less than 0.25 in either one of the questionnaires were excluded and deleted. Results from **Table 3** showed that item 8 of attitude toward online learning, and item 1 of 'impact of online learning on academic performance' had a Pearson correlation of less than 0.25 and were not statistically significant at 5% in one or both versions of questions, and hence were excluded from the study.

RESULTS AND DISCUSSION

Comparison of Online Learning Patterns Between Afghan and Turkish Respondents During the COVID-19 Pandemic–Chi-Square Test Analysis

After the COVID-19 pandemic, the learning process of students has changed as schools are closed and classes have been taken in online session. To analyze differences in online learning patterns between Afghan and Turkish respondents, the study conducted a Chi-square test for independence analysis given the categorical nature of all variables. For this analysis, the hypothesis is as below:

H₁₋₀: There is no association between online learning patterns and country.

H₁: There is an association between online learning patterns and country.

Comparison of Physical Classes Before the COVID-19 Pandemic Between Afghan and Turkish Respondent–Chi-Square Test Analysis

To analyze the comparison of physical classes conducted before the COVID-19 pandemic between Afghan and Turkish respondents, the hypothesis is as below:

H_{1a-0}: There is no association between physical classes before the COVID-19 pandemic and country.

H_{1a}: There is an association between physical classes before the COVID-19 pandemic and country.

Chi-square test for independence was conducted to analyze this hypothesis (H_{1a}). Results showed that there is a significant association between physical classes before the COVID-19 pandemic and country, $\chi^2(1)=0.958$, $p=0.328$. Hence, H_{1a} is rejected. The descriptive statistics support this result, showing that a similar proportion of Afghan (88.0%) and Turkish (91.0%) respondents were taking physical classes before the COVID-19 pandemic (**Table 4**).

Comparison of Online Learning Participation Before the COVID-19 Pandemic Between Afghan and Turkish Respondents–Chi-Square Test Analysis

To analyze the comparison of online learning participation before the COVID-19 pandemic between Afghan and Turkish respondents, the hypothesis is, as below:

H_{1b-0}: There is no association between online learning participation before the pandemic and country.

H_{1b}: There is an association between online learning participation before the pandemic and country.

Chi-square test for independence was conducted to analyze this hypothesis (H_{1b}). Results showed that there is a significant association between online learning participation before the pandemic and country,

Table 4. Comparison of physical classes before the pandemic between Afghan & Turkish respondents (n=400)

Variables	Afghanistan (n=200) [n (%)]	Turkey (n=200) [n (%)]	Chi-square (χ^2)	p-value
Yes	176 (88.0)	182 (91.0)	0.958	0.328
No	24 (12.0)	18 (9.0)		

Note. *p<0.05; **p<0.01; & ***p<0.001

Table 5. Comparison of online learning participation before the pandemic between Afghan & Turkish respondents (n=400)

Variables	Afghanistan (n=200) [n (%)]	Turkey (n=200) [n (%)]	Chi-square (χ^2)	p-value
Yes	72 (36.0)	95 (47.5)	5.438	<0.05*
No	128 (64.0)	105 (52.5)		

Note. *p<0.05; **p<0.01; & ***p<0.001

Table 6. Comparison of online classes during the pandemic between Afghan & Turkish respondents (n=400)

Variables	Afghanistan (n=200) [n (%)]	Turkey (n=200) [n (%)]	Chi-square (χ^2)	p-value
Yes	162 (81.0)	195 (97.5)	28.376	0.001***
No	38 (19.0)	5 (2.5)		

Note. *p<0.05; **p<0.01; & ***p<0.001

$\chi^2(1)=5.438$, $p<0.05$. Hence, H1b is accepted. The descriptive statistics support this result, showing that the number of online learning participants before the pandemic was higher in Turkey (47.5%) as compared to Afghanistan (36.0%) (Table 5).

Comparison of Online Classes During the COVID-19 Pandemic Between Afghan and Turkish Respondents–Chi-Square Test Analysis

To analyze the comparison of online classes conducted during the COVID-19 pandemic between Afghan and Turkish respondents, the hypothesis is as below:

H_{1c-0}: There is no association between online classes during the COVID-19 pandemic and country.

H_{1c}: There is an association between online classes during the COVID-19 pandemic and country.

Chi-square test for independence was conducted to analyze this hypothesis (H_{1c}). Results showed that there is a significant association between online classes during the COVID-19 pandemic and country, $\chi^2(1)=28.376$, $p<0.001$. Hence, H_{1c} is accepted. The descriptive statistics support this result, showing that almost all Turkish respondents had taken online classes during the COVID-19 pandemic (97.5%), while a few Afghan respondents were not taking online classes during the COVID-19 pandemic (19.0%) (Table 6).

Comparison of Access to Device for Online Learning Between Afghan and Turkish Respondents–Chi-Square Test Analysis

To analyze the comparison of access to a device for online learning during the COVID-19 pandemic between Afghan and Turkish respondents, the hypothesis is as below:

H_{1d-0}: There is no association between access to a device for online learning during the COVID-19 pandemic and country.

H_{1d}: There is an association between access to a device for online learning during the COVID-19 pandemic and country.

Chi-square test for independence was conducted to analyze this hypothesis (H_{1d}). Results showed that there is a significant association between access to a device for online learning during the COVID-19 pandemic and country, $\chi^2(1)=2.832$, $p=0.092$. Hence, H_{1d} is rejected. The descriptive statistics support this result, showing that a large and equal proportion of Afghan and Turkish respondents had access to a digital device for participating in online learning (Afghanistan–90.0%, Turkey–94.5%) (Table 7).

Table 7. Comparison of access to digital device for online learning between Afghan & Turkish respondents (n=400)

Variables	Afghanistan (n=200) [n (%)]	Turkey (n=200) [n (%)]	Chi-square (χ^2)	p-value
Yes	180 (90.0)	189 (94.5)	2.832	0.092
No	20 (10.0)	11 (5.5)		

Note. *p<0.05; **p<0.01; & ***p<0.001

Table 8. Comparison of types of electronic devices used between Afghan & Turkish respondents (n=400)

Variables	Afghanistan (n=200) [n (%)]	Turkey (n=200) [n (%)]	Chi-square (χ^2)	p-value
Desktop	6 (2.1)	49 (13.5)	109.004	<0.001***
Laptop	87 (31.1)	145 (39.7)		
Tablet	8 (2.9)	34 (9.3)		
Smartphone	172 (61.4)	137 (37.5)		

Note. *p<0.05; **p<0.01; & ***p<0.001

Table 9. Comparison of number of semesters studied online between Afghan & Turkish respondents during the pandemic (n=400).

Variables	Afghanistan (n=200) [n (%)]	Turkey (n=200) [n (%)]	Chi-square (χ^2)	p-value
1	81 (40.5)	24 (12.0)	50.969	<0.001***
2	75 (37.5)	79 (39.5)		
3+	44 (22.0)	97 (48.5)		

Note. *p<0.05; **p<0.01; & ***p<0.001

Comparison of Types of Electronic Devices Used Between Afghan and Turkish Respondents–Chi-Square Test Analysis

To analyze the comparison of types of electronic devices used by students between Afghan and Turkish respondents, the hypothesis is, as below:

H_{1e-0}: There is no association between types of electronic devices and country.

H_{1e}: There is an association between types of electronic devices and country.

Chi-square test for independence was conducted to analyze this hypothesis (H_{1f}). Results showed that there is a significant association between types of electronic devices and country, $\chi^2(4)=109.004$, $p<0.001$. Hence, H_{1f} is accepted. The descriptive statistics support this result, showing that Turkish respondents were mostly using smartphones for online lectures (61.4%), while Afghan students used either laptops (39.7%) or smartphones (37.5%) during online lectures (**Table 8**).

Comparison of Number of Semester Studied Online During Pandemic Between Afghan and Turkish Respondents–Chi-Square Test Analysis

To analyze the comparison of the number of semesters studied online during the COVID-19 pandemic between Afghan and Turkish respondents, the hypothesis is, as below:

H_{1f-0}: There is no association between the numbers of semesters studied online during the COVID-19 pandemic and country.

H_{1f}: There is an association between the numbers of semesters studied online during the COVID-19 pandemic and country.

Chi-square test for independence was conducted to analyze this hypothesis (H_{1e}). Results showed that there is a significant association between the number of semesters studied online during the COVID-19 pandemic and country, $\chi^2(2)=50.969$, $p<0.001$. Hence, H_{1e} is accepted. The descriptive statistics support this result, showing that Afghan respondents studied a considerably lesser number of semesters online during the pandemic as compared to Turkish respondents (**Table 9**).

Table 10. Comparison of currently studying online between Afghan & Turkish respondents (n=400).

Variables	Afghanistan (n=200) [n (%)]	Turkey (n=200) [n (%)]	Chi-square (χ^2)	p-value
Yes	48 (24.0)	116 (58.0)	47.788	<0.001***
No	152 (76.0)	84 (42.0)		

Note. *p<0.05; **p<0.01; & ***p<0.001

Table 11. Normality tests (attitude)

	Country	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Attitude	Afghanistan	0.103	200	p<0.001	0.975	200	p<0.001
	Turkey	0.064	200	p<0.050	0.986	200	p<0.050

Note. ^aLilliefors significance correction

Comparison of Students Currently Studying Online Between Afghan and Turkish Respondents–Chi-Square Test Analysis

To analyze the comparison of students currently studying online between Afghan and Turkish respondents, the hypothesis is, as below:

H_{1g-0}: There is no association between students currently studying online and their country.

H_{1g}: There is an association between students currently studying online and the country.

Chi-square test for independence was conducted to analyze this hypothesis (H_{1f}). Results showed that there is a significant association between students currently studying online and country, $\chi^2(1)=47.788$, p<0.001. Hence, H_{1f} is accepted. The descriptive statistics support this result, showing that Turkish respondents were still studying online, while Afghan students did not study online (Table 10).

Comparison of Attitude Towards Online Learning, Impact of Online Learning on Academic Performance, and Satisfaction with Online Learning Among Afghan and Turkish Respondents–Independent t-Test Analysis

The study further aims to analyze the differences of opinion and perception of Afghan and Turkish respondents regarding online learning procedures and their impact on their academic performance. For this purpose, an independent t-test analysis was conducted, which allows determining the differences in the mean of continuous variables between the two groups. Before t-test analysis, the normality and homogeneity of variances were measured as the assumptions for running a parametric test i.e., independent t-test analysis (Table 11). For this purpose, the hypothesis is, as below:

H₂₋₀: There is no difference in the impact of the online learning process among Afghan and Turkish students.

H₂: There is a difference in the impact of the online learning process among Afghan and Turkish students.

Comparison of Attitude Towards Online Learning Between Afghan and Turkish Respondents–Independent t-Test Analysis

To analyze the comparison of attitudes toward online learning among Afghan and Turkish respondents, the hypothesis is, as below:

H_{2a-0}: There is no difference in attitude towards online learning among Afghan and Turkish students.

H_{2a}: There is a difference in attitude towards online learning among Afghan and Turkish students.

The independent t-test analysis was conducted to analyze this hypothesis (H_{2a}). Before the t-test, normality using the Shapiro-Wilk test and homogeneity of variances using Levene's test for equality of variances were tested on attitude towards online learning for both countries i.e., Afghanistan and Turkey as so to determine the model fit for the data. Both countries were not normally distributed in 'attitude towards online learning' score (Afghanistan-W[200]=0.975, p<0.001; Turkey-W[200]=0.986, p<0.05) (Table 11). However, since the sample size for both countries is higher than 30 (n=200), then the score is considered to be normal under the theory of central tendency. Moreover, an independent t-test can be well performed under non-normal data, considering it a robust test against the violation of normality assumption, so the analysis continued.

Table 12. Comparison of attitude towards online learning for Afghan & Turkish respondents (n=200)

	Afghanistan		Turkey		Levene's test for equality of variances		Independent t-test (equal variance assumed)	
	M	SD	M	SD	F	p-value	T	p-value
Attitude towards online learning	2.40	0.65	2.85	0.61	0.08	0.781	-7.18	<0.001***

Note. *p<0.05; **p<0.01; & ***p<0.001

Table 13. Normality tests (impact)

Country	Kolmogorov-Smirnov ^a			Shapiro-Wilk			
	Statistic	df	Sig.	Statistic	df	Sig.	
Impact	Afghanistan	0.094	200	p<0.001	0.980	200	p<0.010
	Turkey	0.075	200	p<0.010	0.969	200	p<0.001

Note. ^aLilliefors significance correction

Table 14. Comparison of impact of online learning on academic performance for Afghan & Turkish respondents (n=200)

	Afghanistan		Turkey		Levene's test for equality of variances		Independent t-test (equal variance assumed)	
	M	SD	M	SD	F	p-value	T	p-value
Impact of online learning on academic performance	2.76	0.65	3.01	0.66	0.20	0.654	-3.78	<0.001

Note. *p<0.05; **p<0.01; & ***p<0.001

For the assumption of 'Levene's test for equality of variances', F-test indicated that there is no significant difference in variance between the two countries (F=0.08, p=0.781), hence t-test with equal variances assumed was used (Table 12). A t-test indicated that there is a statistically significant difference in attitude among Afghan and Turkish students (t[398]=-7.18, p<0.001). Hence, H2a is accepted. The mean scores also support this result, showing that Turkish students had a better attitude toward online learning (mean [M]=2.85, standard deviation [SD]=0.61) as compared to Afghan students (M=2.40, SD=0.65).

Comparison of Impact of Online Learning on Academic Performance During the COVID-19 Pandemic Between Afghan and Turkish Respondents-Independent t-Test Analysis

To analyze the comparison of the impact of online learning on academic performance during the COVID-19 pandemic among Afghan and Turkish respondents, the hypothesis is, as below:

H_{2b-0}: There is no difference in the impact of online learning on academic performance during the COVID-19 pandemic among Afghan and Turkish students.

H_{2b}: There is a difference in the impact of online learning on academic performance during the COVID-19 pandemic among Afghan and Turkish students.

The independent t-test analysis was conducted to analyze this hypothesis (H_{2b}). Again, before the t-test, normality using the Shapiro-Wilk test and homogeneity of variances using Levene's test for equality of variances were tested on impact for both countries i.e., Afghanistan and Turkey as so to determine the model fit for the data. The 'impact of online learning on academic performance during the COVID-19 pandemic' for both countries were not normally distributed (Afghanistan-W[200]=0.980, p<0.01; Turkey-W[200]=0.969, p<0.001) (Table 13). However, the theory of central tendency implies that the sample size should be greater than 30 to consider the data normal. Here, the sample size for both countries is 200 students, so the t-test is considered to be a robust test against the violation of the normality assumption. Hence, the analysis continued.

For the assumption of 'Levene's test for equality of variances', F-test indicated that there is no significant difference in variance between the two countries (F=0.20, p=0.654), hence t-test with equal variances assumed was used (Table 14). A t-test indicated that there is a statistically remarkable difference in the impact of online learning on academic performance among Afghan and Turkish students (t[398]=-3.78, p<0.001). Hence, H_{2b} is accepted. The mean scores also support this result, showing that Turkish students perceived a higher impact of online learning on their academic performance during the COVID-19 pandemic (M=3.01, SD=0.66) as compared to Afghan students (M=2.76, SD=0.65).

Table 15. Normality tests (satisfaction)

	Country	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Satisfaction	Afghanistan	0.089	200	p<0.001	0.965	200	p<0.001
	Turkey	0.092	200	p<0.001	0.950	200	p<0.001

Note. ^aLilliefors significance correction

Table 16. Comparison of attitude towards online learning, impact of online learning on academic performance, and satisfaction with online learning for Afghan & Turkish respondents (n=200)

	Afghanistan		Turkey		Levene's test for equality of variances		Independent t-test (equal variance assumed)	
	M	SD	M	SD	F	p-value	T	p-value
Satisfaction with online learning	2.51	0.95	2.93	0.78	8.61	0.004	-4.87	<0.001***

Note. *p<0.05; **p<0.01; & ***p<0.001

Comparison of Satisfaction with Online Learning During the COVID-19 Pandemic Between Afghan and Turkish Respondents–Independent t-Test Analysis

To analyze the comparison of satisfaction with online education during the COVID-19 pandemic among Afghan and Turkish respondents, the hypothesis is, as below:

H_{2c-0}: There is no difference in satisfaction with online learning during the COVID-19 pandemic among Afghan and Turkish students.

H_{2c}: There is a difference in satisfaction with online learning during the COVID-19 pandemic among Afghan and Turkish students.

The independent t-test analysis was conducted to analyze this hypothesis (H_{2c}). Again, before the t-test, normality using the Shapiro-Wilk test and homogeneity of variances using Levene's test for equality of variances were tested on impact for both countries i.e., Afghanistan and Turkey as so to determine the model fit for the data. Both countries were not normally distributed in 'satisfaction of students during the COVID-19 pandemic' score (Afghanistan–W[200]=0.965, p<0.001; Turkey–W[200]=0.950, p<0.01) (Table 15). However, by applying the theory of central tendency, it can be observed that the sample size for both countries is more than 30; hence the data is considered to be normal. Hence, the analysis continued.

For the assumption of 'Levene's test for equality of variances', F-test indicated that there is a statistically remarkable difference in variance between the two countries (F=8.61, p<0.01), hence t-test with unequal variances assumed was used (Table 16). A t-test indicated that there is a statistically notable difference in satisfaction with online learning among Afghan and Turkish students (t[384]=-4.87, p<0.001). Hence, H_{2c} is accepted. The mean scores also support this result, showing that Turkish students were more satisfied and happier with online learning during the COVID-19 pandemic (M=2.92, SD=0.95) as compared to Afghan students (M=2.50, SD=0.95).

A clustered bar chart was designed to portray the differences in attitude, level of satisfaction, and perceived impact of academic performance among Afghan and Turkish students (Figure 1). Overall, it can be observed that Turkish students have a higher bar on all three scales i.e., attitude, level of satisfaction, and perceived impact. Hence, it supports the findings of the study.

From the descriptive analysis, the study found an equal distribution of respondents in terms of gender, age, and educational level across both countries i.e., Afghanistan and Turkey. On the contrary, the study found that students' attributes particularly toward the online learning process were found to be different among Afghan and Turkish students. This finding is supported by the study conducted in China by Chen et al. (2020), which discovered that students' personal factors had no direct effect on their satisfaction; rather, the availability of online applications did affect the students' level of satisfaction.

Evaluations of the Hypotheses

A comprehensive analysis was conducted to find the statistical significance of differences in these certain students' attributes (hypothesis 1). The results found that there is a statistically significant association between countries and attributes like online learning participation before and during the COVID-19 pandemic,

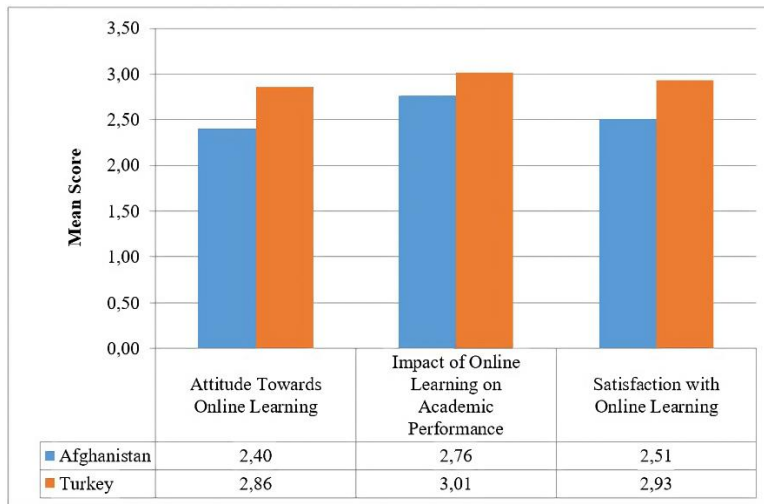


Figure 1. Comparison of mean scores of attitudes towards online learning, the impact of online learning on academic performance, & satisfaction with online learning between Afghan & Turkish respondents (n=400) (Source: Authors)

Table 17. Summary of the main results

H	Description	Result
H1	There is no association between online learning patterns and country.	PA
H1a	There is an association between physical classes before the COVID-19 pandemic and country.	R
H1b	There is an association between online learning participation before pandemic and country.	A
H1c	There is an association between online classes during the COVID-19 pandemic and country.	A
H1d	There is an association between access to a device for online learning during the pandemic and country.	R
H1e	There is no association between types of electronic devices and country.	A
H1f	There is an association between the numbers of semesters studied online during the pandemic and country.	A
H1g	There is an association between students currently studying online and the country.	A
H2	There is no difference in the impact of the online learning process among Afghan and Turkish students.	A
H2a	There is a difference in attitude towards online learning among Afghan and Turkish students.	A
H2b	There is a difference in the impact of online learning on academic performance during the COVID-19 pandemic among Afghan and Turkish students.	A
H2c	There is a difference in satisfaction with online learning during pandemic among Afghan & Turkish students.	A

Note. H: Hypothesis; PA: Partially accepted; R: Rejected; & A: Accepted

and the number of semesters studied online and currently studying online, as hypotheses 1b, 1c, 1e, and 1f are accepted. However, there is no association between online classes before the COVID-19 pandemic and access to an electronic device for online learning in different countries, as hypotheses, 1a and 1d are rejected (Table 17).

Additionally, the two countries did not differ in the number of students attending physical classes before the COVID-19 pandemic (Figure 2).

This finding is consistent with the study of Himat et al. (2021), which found that Afghan students prefer traditional classrooms to virtual classrooms. It is also compatible with the study of Hebebcı et al. (2020), which found that Turkish students also prefer onsite classes and believe that online education has a negative impact on their academic performance because they could not have the same level of understanding in online learning as compared to onsite classes.

On the contrary, from the beginning of COVID-19, the number of students participating in online learning was statistically different in Afghanistan and Turkey.

According to Figure 3, the number of students attending online education before the COVID-19 pandemic is different between the two countries as well. This finding is in accordance with the study of Noori (2021), who found that the online education system has not been thoroughly evaluated for the COVID-19 pandemic due to the lack of stable internet connections and the lack of infrastructure in cities in Afghanistan. On the contrary, the lack of qualification of Turkish teachers (not students) to use online learning procedures was the only cause of the low academic performance of Turkish students.

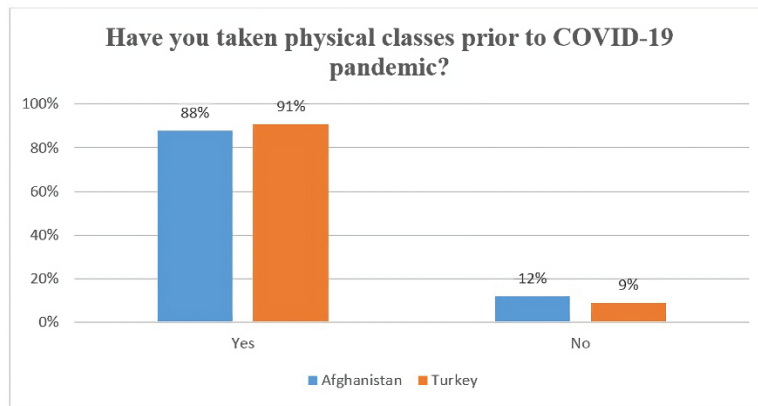


Figure 2. Physical class before the COVID-19 pandemic (Source: Authors)

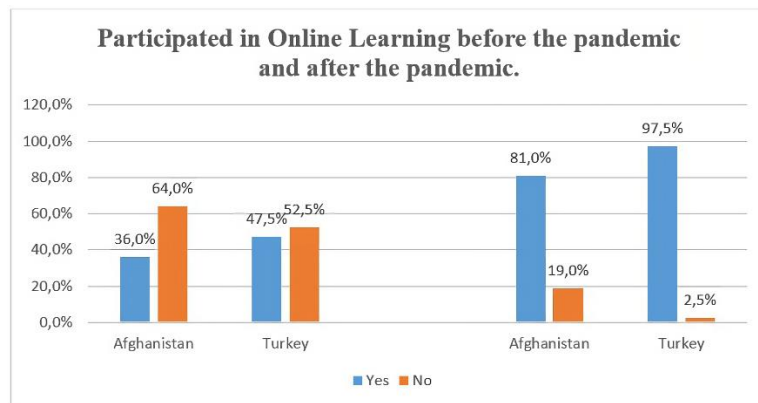


Figure 3. Participated in online learning before and during the pandemic (Source: Authors)

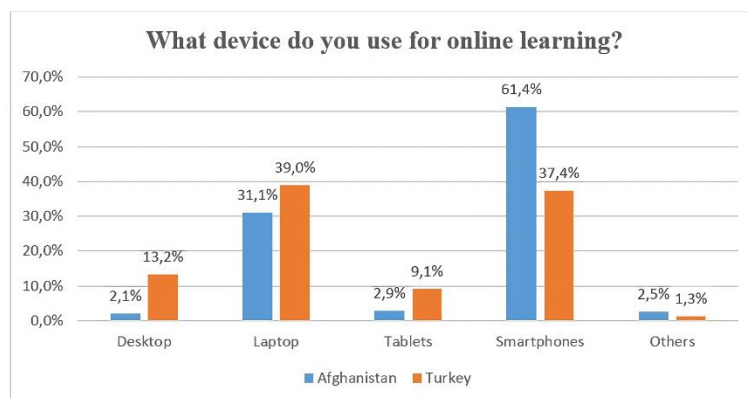


Figure 4. Devices used for online learning (Source: Authors)

The study also found that even though Afghan and Turkish students equally have access to electronic devices for online learning during the pandemic (Table 8), it is evident from (Figure 4) that Afghan students mostly used a smartphone during online classes while Turkish students used smartphones and laptops during online sessions.

This finding is consistent with the study of Himat et al. (2021) who found that the majority of Afghan students lacked access to desktops and laptops. As Sarwari et al. (2021) mentioned, Afghanistan is a war-torn country that has poor infrastructure, and students might only be available to use a smartphone during online classes due to their wide availability to everyone in general. This finding is further consistent with the study of Hebebcı et al. (2020), who argued that practical use of online learning is difficult for Turkish students as they find it hard to understand online delivered lessons and lose the opportunity to socialize during group tasks.

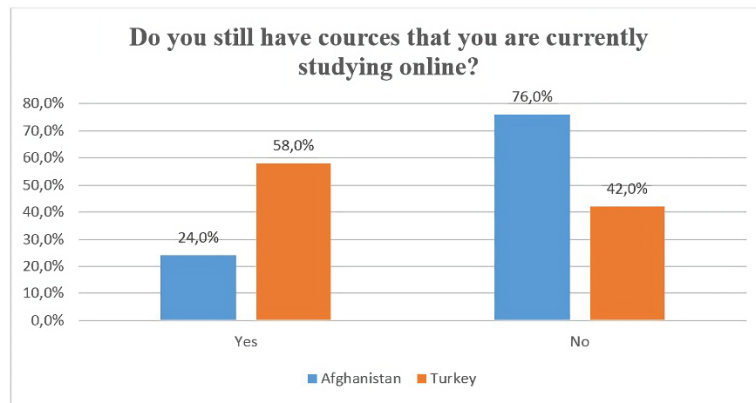


Figure 5. Currently studying online (Source: Authors)

According to the uses and gratifications theory, smartphones are used for gaining knowledge, data collection, time management, and keeping documents and data. These devices are also used as an instrument in business such as business transactions or business conversations. They are used to socially interact or connect with communities or friends and family. Mobile phones are also utilized for entertainment purposes or passing bore time. They are also used for security and safety purposes in case of an emergency. Collectively, this media technology used in communication and information seeking may compete with other technologies to satisfy desires and needs for gratification (Wang et al., 2018).

The study also found that the differences in the number of semesters studied online were primarily due to different classifications of students currently studying in different semesters in Afghanistan and Turkey. In particular, Afghan students in our sample belonged to the final year or seventh and eighth semesters of their bachelor's degree, while Turkish students belonged to the second year or third and fourth semesters of their bachelor's or master's degree. This finding is consistent with the study of Orfan and Elmyar (2020), which highlighted that those cultural norms and economic discrimination in Afghan society affected the student's academic performance. As a result, a large number of final-year students only remained enrolled in online education in Afghanistan.

An important and interesting finding in the study shows that there is a statistically significant difference in the number of students currently studying online among Afghan and Turkish students (**Figure 5**). It was found that educators in Turkey were still involved in online learning, while in Afghanistan, they were not, possibly switched back to the physical classes learning method. As consistent with the study of Hashemi and Kew (2021), once again, economic and infrastructure constraints in Afghanistan had caused a shortage of digital devices, a high cost of internet, and a lack of pedagogical training on the usage of technological devices and applications, which in turn caused low engagement in online classes and a significant shift from online learning to the traditional classroom.

Due to the COVID-19 pandemic's rapid spread around the globe, everyone in their homes has been quarantined, and students were not able to continue online learning. However, distance learning is an effective solution to continue education during the COVID-19 times. Based on the findings of this study, during the COVID-19 pandemic students depended on media not only for entertainment and leisure options but also according to the media dependency theory, for receiving information about the situation and mechanism of online learning. **Figure 6** indicates that the majority of students in both countries had access to a device for online learning.

In accordance with media dependency theory, the results showed that students depended on these devices (**Figure 7**) to participate in their online classes, read PowerPoint lecture slides, and took notes on their devices to support their independent study time. Students' primary simultaneous tasks depended on these devices to listen to the lecture, process information presented by teachers, and take notes (Farley et al., 2013).

It is common knowledge that individuals exchange knowledge when they chat. Therefore, students should not be afraid to express their thoughts because they do not want to be seen as rude or self-conscious. It is better if they are already thinking about what they are going to talk about when they meet. Subject matter grows when it's discussed in depth by several people (Reimers, 2021). Anyone who takes part in the event. It

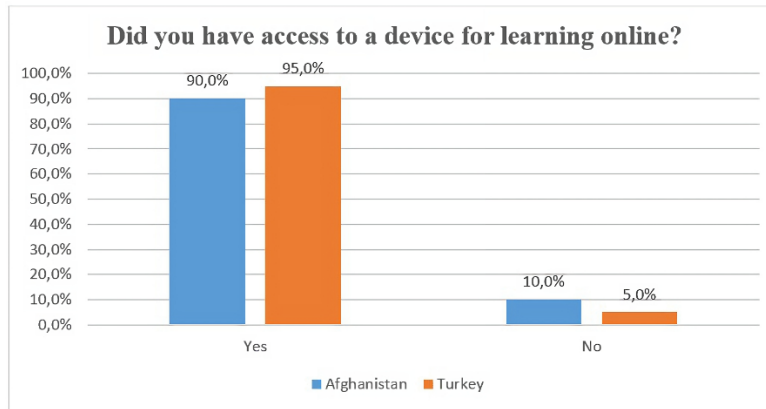


Figure 6. Access to a device for online learning (Source: Authors)

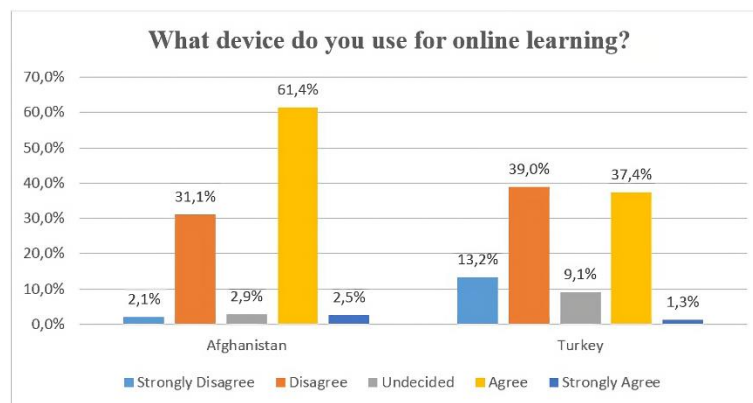


Figure 7. Devices used for online learning (Source: Authors)

has been shown that interacting with an instructor in this way increases students’ interest and participation in online courses. Students and teachers should keep the conversation going after class, and students are encouraged to do so. Learning does not come to a stop after a session is over. Conversations with classmates and teachers may help students remember what they have studied while stressing the significance of interpersonal skills (Manzoor & Safdar, 2020).

Based on **Figure 8**, the majority of students in Afghanistan stated that their instructors were not accessible during the online learning compared to in-person classes, while in Turkey the majority of students stated that their instructors were accessible during the online courses.

Accommodating one’s present situation and learning in the face of adversity is all that is required to get out of this situation and get back on track. Online learning has arisen as a glimmer of light throughout this pandemic. Online courses may be a cost-effective, high quality, and engaging way to acquire new knowledge. Participants in online courses must not simply show up, they must engage in the learning process and do so with a positive mindset. The effectiveness of what pupils learn is legitimately questioned due to the differences between online education and conventional classroom training. It is the student’s performance that determines the overall success of a class in the most significant way. Attendance and active participation are essential elements for getting the most out of online education.

According to the findings of this study (**Figure 9**), the majority of students in Afghanistan are not satisfied with their active participation in online classes compared to in-person classes, while in Turkey the majority of students were happy and satisfied with their active participation during the online classes. According to these findings, we can argue that for getting better results and positive academic performance from online learning, students must actively attend and participate in their online classes.

Through active participation, students develop a hunger for knowledge and want to study. The more time they spend together, the more they learn about one another. Students learn best when they interact with one another, inquire about the subject, and share their thoughts. Teachers are unable to provide individual

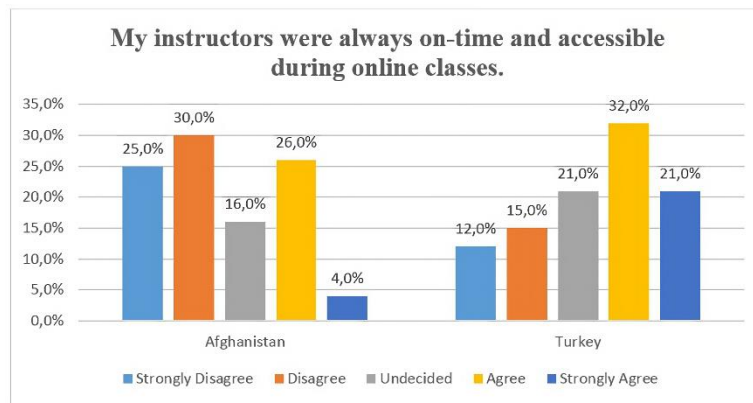


Figure 8. Accessibility of instructors during online courses (Source: Authors)

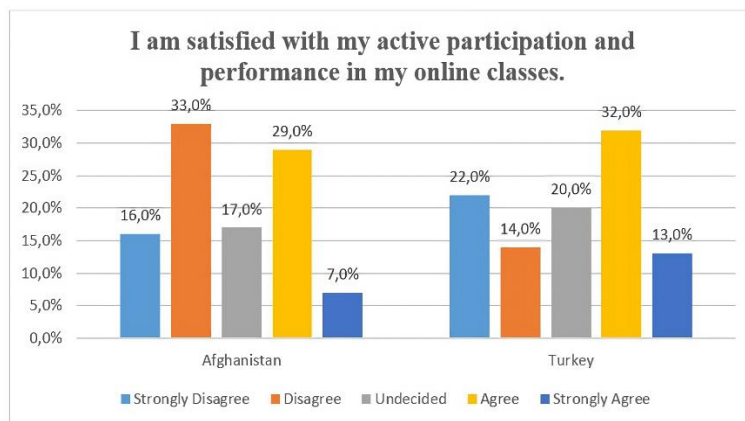


Figure 9. Participation in online courses during the COVID-19 (Source: Authors)

attention to students in an online class since it is different from a traditional classroom. However, talking to their instructors about the subject would be a start in the right direction. Sharing their views, ideas, and confusion can help them learn more effectively. Furthermore, once they are unsure about anything, they should speak up. Make the most of this by participating in as many of these activities as feasible. Their educational experience will be enhanced by the opportunity to cooperate and exchange ideas with others (Reimers, 2021).

The study found a considerable difference in attitude, perceived impact, and satisfaction with online learning during the COVID-19 pandemic among Afghan and Turkish students (hypothesis 2) (Figure 1). Hence, hypotheses 2a, 2b, and 2c are accepted. Turkish students had a better attitude toward online learning during the pandemic as compared to Afghan students (Figure 10).

It can be rationalized that the more the students have a better attitude or leaner toward online learning itself, the better their academic performance is. This finding has a connection with the studies of Himat et al. (2021), Noori (2021), and Tadesse and Muluye (2020), which found that Afghan students remarkably have reduced motivation levels and negative attitude toward online learning mainly due to a lack of infrastructure and economic constraints.

As we discussed, the more the students have a better attitude toward online learning itself, the better will be their academic performance, based on the findings of this study, Turkish students perceived a more significant impact of online learning on their academic performance during the COVID-19 pandemic (Figure 11) compared to Afghan students. This finding is consistent with the study of Elhadary et al. (2020), which mentioned various factors that affected students' academic performance in Turkey during the COVID-19 crisis, including difficulty in using online learning and educational applications and lack of teacher training. In the case of Afghan students, the finding is consistent with the study of Orfan and Elmyar (2020), which states that unequal access to electronic devices and applications, and the high cost of the Internet, hinder students' academic performance and lead to student dissatisfaction with online learning.

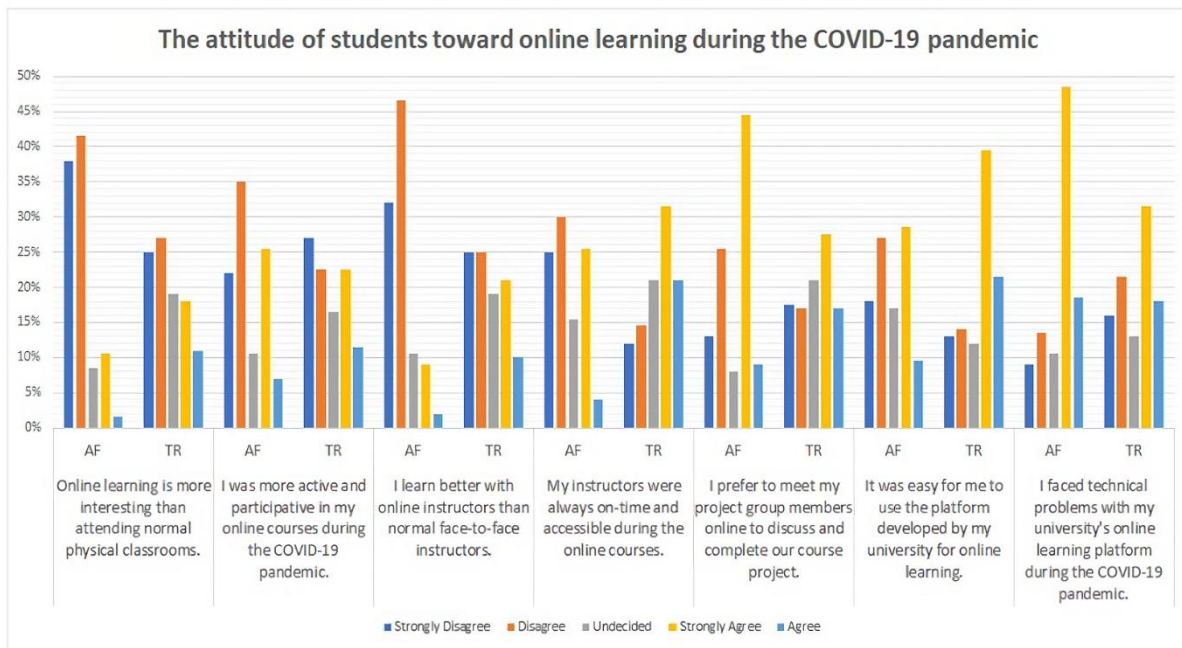


Figure 10. The attitude of students toward online learning (Source: Authors)

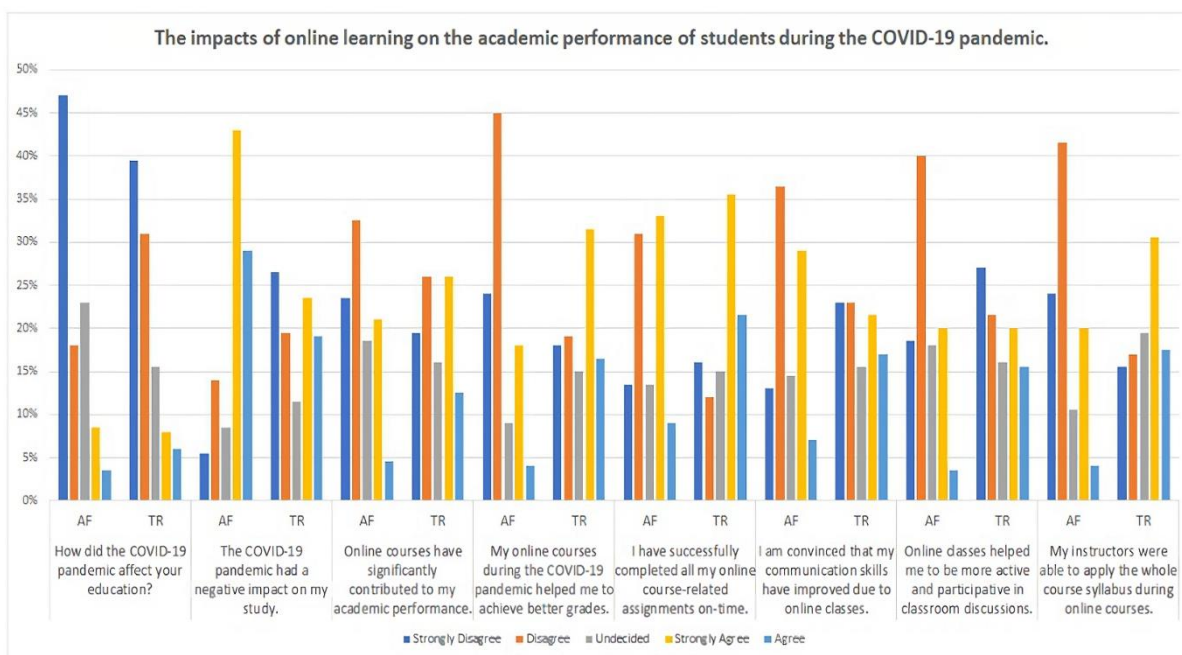


Figure 11. The impacts of online learning on students' academic performance (Source: Authors)

Socioeconomic demographics are taken into consideration when it comes to comparing the effects of teaching and online learning on the student's academic performances in two different countries and that is clear as knowledge gap theory states that there is a greater benefit to those located in higher socioeconomic demographics than to those located in lower socioeconomic demographics (Tichenor et al., 1970). However, according to the findings of this study, it could be different according to the students themselves as well.

As Figure 12 indicates, the majority of students in Afghanistan were more skilled with IT than the majority of students in Turkey.

Learning is more likely to take place when students participate actively in the courses, ask questions, and create a positive learning atmosphere. To get the most out of online learning options during COVID-19, student self-discipline is also essential.

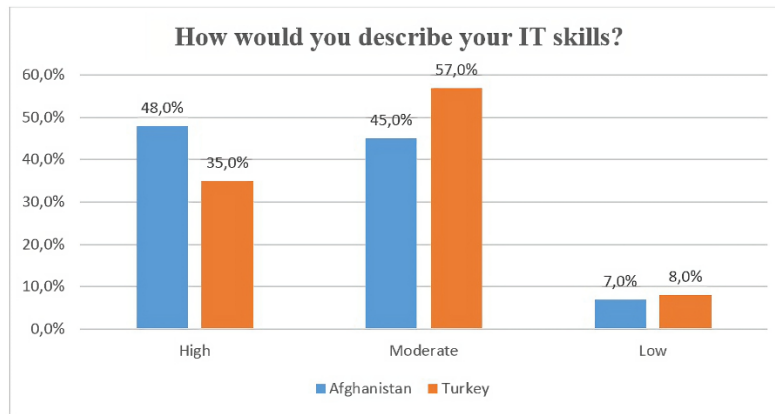


Figure 12. Respondents' IT skills (Source: Authors)

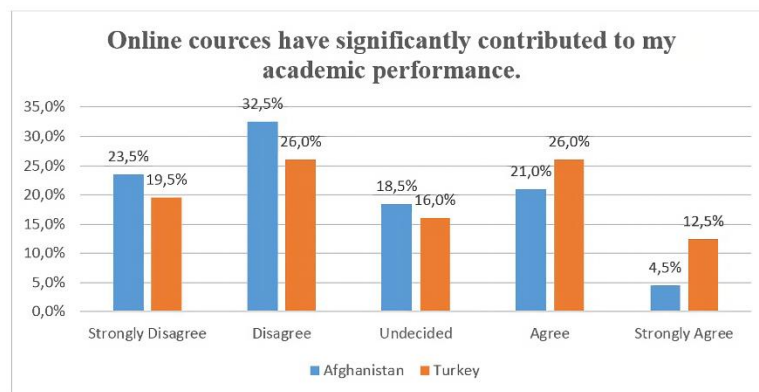


Figure 13. Contribution of online classes on student's academic performance (Source: Authors)

According to Figure 9, since a greater number of students in Afghanistan were not active and participative in online classes, this results that online courses did not contribute to their academic performance (Figure 10).

On the other hand, in Turkey, since the majority of students were active and participative in their online classes, this results that online learning contributed to their academic performance (Figure 13).

Lastly, the study found that Turkish students were found to be more satisfied with the online learning process during the COVID-19 pandemic, as compared to Afghan students that the majority of them are not happy and satisfied with online learning during the pandemic (Figure 14) due to the different factors, which we have discussed earlier on this chapter. It can be further confirmed that when students are more excited and happier about how they are being taught by their instructors, they will be more focused on their education, and this will have positive results on their academic performances. This finding is accordant with the study of Elhadary et al. (2020), which mentioned that despite many factors affecting the student's academic performance, both students and instructors in Turkey are satisfied with online learning. Moreover, this finding is consistent with the study of Hashemi (2021), which found that Afghan students were highly dissatisfied with online education due to low levels of understanding during the webinars and online delivered lectures.

From the discussion made above it becomes clear that the online learning experience is different for students from different cultures having different digital skills. These differences serve as the barrier to achieving the goals and objectives of online learning in an ideal manner. These obstacles can be removed by working on some areas. For example, improving digital skills, gaining cross-cultural awareness, and improving digital communication skills can help learners improve their academic performance in online classes. Concisely, the pandemic has set forth a new set of rules for digital communication and by adapting to these rules; students can ultimately get benefit from online learning.

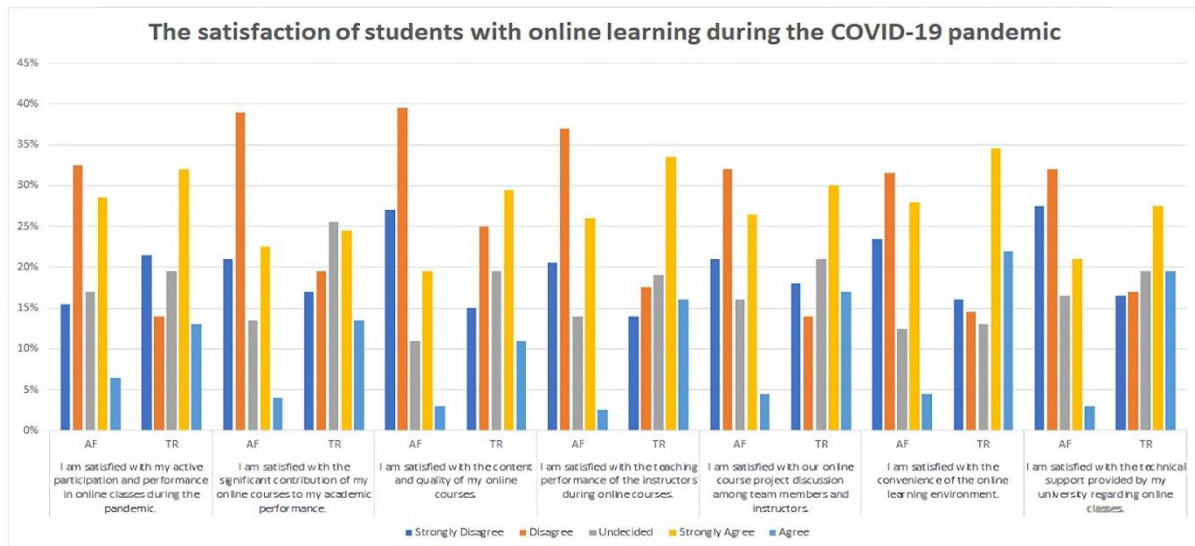


Figure 14. The satisfaction of students with online (Source: Authors)

Apart from these major issues, both Turkish and Afghan students faced some minor issues such as lack of understanding due to unqualified and untrained teachers from a technological viewpoint, non-availability of books, high cost of internet, and lack of assessment criteria that have somehow negatively affected the academic performance of the students. Additionally, procrastination plays a role in the ineffectiveness of online learning. Because of this, students must stop utilizing COVID-19 as an excuse to avoid studying and come to appreciate the importance of online education instead. This is an opportunity for students to broaden their horizons and hone their mental abilities via this course. It is possible to boost online learning by being attentive, active, and involved. The ability to maintain focus and self-control when studying online is a skill that every student should be able to develop (González-Pienda & Rodríguez, 2017).

CONCLUSION

Afghan and Turkish students have quite different learning procedures. There is a statistically significant association between countries and attributes like online learning participation before and during the COVID-19 pandemic, the number of semesters studied online, and currently studying online; therefore, the learning outcomes are different for different countries. Turkish students participated in online learning even before the pandemic Afghan students did and their online participation increased during the pandemic.

According to media dependency theory, the availability of different media to Turkish students before the pandemic allowed learners to use them more efficiently during the pandemic. In addition, Afghan students were less dependent on digital media for learning purposes before the pandemic; therefore, their access to different media for learning remained low during the pandemic. In addition, the number of semesters studied online was higher in the case of Turkish students; they were still found to be enrolled in online courses compared to Afghan students.

The two countries did not differ in the number of students attending physical classes before the COVID-19 pandemic and students in both countries had the access to electronic devices for attending online classes before the pandemic. Despite having access to electronic devices to take online classes, the number of Afghan students attending online classes was lower compared to Turkish students largely because their dependency on digital media before the pandemic was less compared to Turkish students.

Additionally, a difference in the choice of an electronic device to take online classes was also seen. Afghan students relied solely on smartphones to access classes whereas the majority of Turkish students used both laptops as well as smartphones to take online classes. According to the uses and gratification theory, in underdeveloped countries, like Afghanistan, most people have only access to smartphones because smartphones are easily available at cheap prices for people and everyone uses a smartphone to fulfil many gratifications like knowledge, interaction, communication, etc. Moreover, the knowledge gap theory also

explains this difference in trend for students from both countries. According to this theory, society plays a pivotal role in determining the behavior of people. Afghan society is technologically less advanced than Turkish society, which made Afghan students follow conventional learning procedures.

An important and interesting finding in the study shows that there is a statistically significant difference in the number of students currently studying online among Afghan and Turkish students. It was found that students in Turkey were still involved in online learning, while in Afghanistan, they were not, possibly switching back to the physical classes learning method. The study also found that the differences in the number of semesters studied online were primarily due to different classifications of students currently studying in different semesters in Afghanistan and Turkey.

There is a considerable difference in attitude, perceived impact, and satisfaction with online learning during the COVID-19 pandemic. Turkish students had a better attitude toward online learning during the pandemic as compared to Afghan students. Furthermore, the more the students have a better attitude toward online learning itself, the better their academic performance will be; Turkish students perceived a more significant impact of online learning on their academic performance during the COVID-19 pandemic compared to Afghan students. Afghan students did not have the economic and technological resources to participate in online learning during the COVID-19 pandemic, which in turn negatively affected their academic performance of these students. Additionally, since Afghanistan is a war-torn country that has a serious infrastructure problem, the online education system in response to the COVID-19 pandemic was not much appreciated, and the technical knowledge gap among Afghan students also impacted their attitude toward online learning, which prohibited them from properly utilizing digital learning technologies.

The higher performance of Turkish students learning online can also be explained by the uses and gratification theory. As Turkish students were handy in using different technological gadgets before the pandemic, the outcomes produced by these gadgets for Turkish were better compared to Afghan students. The more people depend on the media, the stronger the media's influence is on them. Limited access to different media for Afghan students shaped their learning outcomes by lowering their academic performance.

This is the reason that satisfaction from online learning was less among Afghan students compared to Turkish students. Turkish students were more satisfied with the online learning process during the COVID-19 pandemic, as compared to Afghan students who are not happy and satisfied with online learning during the pandemic.

Recommendations

Governments should consider the scope of their infrastructure and the economic status of their people before making any decision. Those who live in higher socioeconomic demographics have greater benefits than those living in lower socioeconomic conditions. Thus, during the difficult period of the COVID-19 pandemic, it was necessary to close down the schools, but having online classes instead of the temporary closing of schools would have a more adverse effect on the outcome i.e., the academic performance of the students, particularly in countries like Afghanistan, where there is a lack of technology and infrastructure, and the cost of living is already too high.

Furthermore, educational institutions must conduct pedagogical training sessions for the instructors to support them in the easy and quick use of the technology. Such training will allow the instructors to apply those teaching activities that better comply with the limited scope of online teaching. This will resolve the problem of the technology knowledge gap and reduce the understanding and motivation levels of the students, hence indirectly contributing to better academic performance.

In addition, the school administration and educators must develop a comprehensive assessment plan as well as a pre-defined course outline for a better understanding of students. Such a plan will increase the support for both teachers and students in maintaining the quality of education even during the hard times of the COVID-19 pandemic. Moreover, writing articles or other resources on the subject of online learning, and holding various classes about the benefits of online learning may also improve the experience and the attitude of students toward online education itself. Students may also engage in extracurricular activities in which they may explore a wide range of materials and expand their creative abilities.

The schools and universities administrations, educators, and the government should ensure the availability of books online or at least presentation slides so that the students would learn with ease on their own. Since the students are more familiar with and used to books in traditional classes, the non-availability of books would be a major setback for their academic performance. Most importantly, students' engagement is improved when their parents provide them with a dedicated learning location that is free of other distractions. They must provide a conducive learning atmosphere in which students can open up to their peers and instructors without fear of being bullied or distracted.

Self-discipline is also essential for students to get the most out of online learning options during the COVID-19 pandemic. Since students are dependent on media to continue their education during the pandemic, they should also have strategies to manage this dependency, to not affect their academic performance negatively. For example, overuse of social media, as well as addiction to the internet, may have a negative impact on their academic performance and lower learning satisfaction of students in online learning. If students manage to have self-discipline, their uses for online learning options become more refined and gratification for online learning options grows in the process.

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