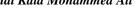**Deanship of Scientific Research**

An Exploration of Online Test Anxiety During COVID-19: EFL Learners' Perspectives

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Abstract

Objectives: This study aimed to explore the perspectives of Saudi EFL learners towards online test anxiety during COVID-19 outbreak, which was caused by the sudden transition from face-to-face testing to online testing.

Method: This study employed a survey-research design, utilizing a close-ended and open-ended questionnaire to collect data from 77 English major students at the University of Bisha. At the time of data collection, these participants had already taken online exams for at least three semesters during the pandemic.

Results: The results indicate that students' test anxiety was higher before taking the online test but gradually decreased during and after the test, showing a statistically significant difference with p = 0.022. The study also reveals that students with slow internet connections experienced more anxiety than those with fast internet services (p < 0.001). Additionally, female students exhibited higher levels of anxiety compared to males (p = 0.027).

Conclusions: The study concludes that the overall average anxiety level before, during, and after test-taking is 2.78, indicating that the participants' online test anxiety level is moderate.

Keywords: COVID-19, online tests, EFL students, pandemics, psycholinguistics, test anxiety.

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استكشاف قلق الاختبار عن بُعد خلال أزمة فيروس كورونا: وُجُهات نظر متعلِّمي اللغة الإنجليزية بِوَصفِها لغةً أجنبيَّة

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ملخَّص

الأهداف: هدفت هذه الدراسة إلى تقصى آراء الطلبة السعوديين الذين يدرسون اللغة الإنجليزية بِوَصفِها لغةً أجنبيَّةً حول قلق الاختبار عن بُعد خلال تفشي فيروس كوفيد-19، الذي نجم عن التحوُّل المفاجئ من الاختبارات التقليدية إلى الاختبارات عن بُعد.

المنهجية: صُمِّم استبيان مغلق ومفتوح لجمع البيانات من عينة مكوَّنة من 77 طالبًا وطالبة يدرسون اللغة الإنجليزية بِوَصفِها لغةً أجنبيَّةً في جامعة بيشة بالمملكة العربية السعودية، وكانت هذه العينة قد اختبرت عن بُعد لمدة لا تقل عن ثلاثة فصول دراسية خلال كوفيد 19.

النتائج: أشارت نتائج هذه الدراسة إلى أن متوسط مستوى القلق العام قبل إجراء الاختبار وفي أثنائه وبعده بلغ 2.78؛ مما يشير إلى أن مستوى قلق الطلبة الناتج عن الاختبار عن بُعد متوسط.. كما أشارت الدراسة إلى أن قلق الطلبة من الاختبار عن بُعد كان أعلى قبل إجراء الاختبار، لكنه انخفض تدريجيًّا في أثناء الاختبار وبعده. (.022 =p) ، كما أظهرت الدراسة أن هناك فروقًا كبيرة ذات دلالة إحصائية. وأظهرت الدراسة أيضًا أنَّ الطلبة الذين تتوفَّر لهم خدمات إنترنت بطئية يواجهون قلقًا أكثر من نظرائهم الذين لديهم خدمة إنترنت سريعة (001.< p) علاوة على ذلك أشارت الدراسة إلى أن الطالبات أكثر قلقا من الطلاب.(027.=p)

الخلاصة: توصَّلت الدراسة إلى أن مستوى القلق العام للطلبة قبل إجراء الاختبار عن بُعد وفي أثنائه وبعده هو (2.78)): مما يشير إلى أن مستوى قلقهم من الاختبار عن بُعد متوسط.

الكلمات الدالة: كوفيد 19، طلبة اللغة الإنجليزية بِوَصفِها لغةً أجنبية، الاختبارات الإلكترونية، الأوبئة، علم اللغة النفسي، قلق الاختبار.

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1.   Introduction

The Coronavirus (also known as Covid-19), which began in China at the end of 2019, went viral at the beginning of 2020, causing many changes in all aspects of daily life. The field of education was no exception. Given this fact, and to slow its spread, the Ministry of Education in Saudi Arabia announced the suspension of face-to-face lectures on March, 8th, 2020. Following this, all schools and universities transformed education and assessment into online learning and assessment (Alzamil, 2021; Moqbel, & Al-Kadi, 2023). Exams of the second semester in May and June 2020 were conducted virtually in all the Saudi universities as many Saudi regions were under lockdown.

Regarding the exams in the first and second semesters of 2021, the decision was left to university presidents to decide whether to conduct exams online or face-to-face, provided that they apply strict precautionary measures. The University of Bisha, where the current study was conducted, decided to conduct practical/science exams face-to-face and theoretical/humanities exams online. Therefore, most English students took the final exams online for three consecutive semesters from the beginning of the pandemic till the collection of the responses of the current study, i.e., April 2021.

Countries with high income, including the Kingdom of Saudi Arabia, transformed university education from the conventional learning model to fully online learning without much difficulty (Bashir et al., 2021; Wahid & Farooq, 2020; Hassan et al., 2020). Comparably, low-income countries faced many problems due to the unavailability of electronic devices, electricity, internet bandwidth, and other facilities required for online learning (Adarkwah, 2021; Adrah & Elmarash, 2020; Nasser et al., 2020). Taking tests differs from lectures because the materials of lectures are recorded or uploaded, and students learn them at their own pace. However, the exams need to be taken on the spot rather than at students' pace.

Since the outbreak of Covid-19 and the transition from face-to-face learning to online mode, there has been much research on learning, teaching, and testing English online (Moqbel, & Al-Kadi, 2023; Wahid & Farooq, 2020). Numerous studies in the Saudi EFL context focused on students' attitudes and use of online learning (Ali et al., 2023; Al Shammari, 2021; Almekhlafy, 2020; Anas, 2020). Other studies highlighted the challenges that students/teachers face (Ja'ashan, 2020; Mahyoob, 2020), the impact of online learning on students' motivation (Ali et al., 2023; Oraif & Elyas, 2021), anxiety (Mohammed & Mudhsh, 2021), students' perceptions towards online learning (Al-Nofaie, 2020; Al-Sofi, 2020; Aljohani et al., 2021), language strategies (Mohammed, 2021; Shamsan et al., 2021) and informal digital learning (Mohammed & Ali, 2021). However, the study of Saudi EFL students' online test anxiety has remained an unexplored area of research. To fill this gap, this investigation aims to uncover Saudi EFL students' anxiety experienced while taking online tests during the Covid-19 pandemic. More specifically, it seeks to answer the following research questions:

1.   What is the online test anxiety level among Saudi EFL learners during the outbreak of Covid-19?

2.   Is there any significant difference between students' anxiety levels before the test, during and after the test?

3.   Is there any significant difference between students' anxiety levels concerning gender, internet speed, grade, and test-taking venues?

2.   REVIEW OF LITERATURE

Test anxiety is a personal trait experienced in a specific situation with worry and emotional stimulus (Sarason & Sarason, 1990). Test anxiety is one of the other forms of anxiety that cause students tension, worries, and thinking of things irrelevant to tests and manifest in bodily symptoms (Sarason, 1984). When test anxiety reaches a high level, it impedes students' concentration on the tests and causes them to forget the learned information (Tsai & Li, 2012). There are many reasons for anxiety: insufficient preparation, spending the whole night studying before the test, time mismanagement, inability to organize information, and poor study habits (Birjandi & Alemi, 2010).

Students' anxiety while taking English language tests has been undertaken by various studies (e.g., Alla et al., 2020; Aydin, 2012; Bashitialshaaer et al., 2021; Burgucu et al., 2011; Gopang et al., 2015; Himat & Nazari, 2019; Wahid & Farooq, 2020). Quite recently, Alla et al. (2020) investigated Ukrainian EFL students to find the difference between online anxiety and conventional anxiety levels during the Covid-19 pandemic. The study found that students' anxiety generally increased, but a slight decrease occurred in online test anxiety. Lassoued et al. (2020) conducted a study to investigate the

343

challenges of online learning and applying online tests. Their research sample comprised 100 university teachers and 300 students from Algeria, Egypt, Palestine, and Iraq. They found online learning and online testing unsuitable because of power cuts, lack of spaces due to small houses, and lack of or unavailability of electronic devices and internet services. Similarly, Himat & Nazari (2019) studied test anxiety levels among EFL students at Kandahar University, Afghanistan. Himat and Nazari developed a quantitative questionnaire and administered it to 180 male and female EFL students. The results showed that students had high anxiety before and after the test and, consequently, failed the final tests.

In the Turkish context, Burgucu et al. (2011) conducted a study to investigate the test anxiety factors and the impact of test anxiety on Turkish EFL learners' test performance. The sample of the study was highly conventional test anxiety. The results showed that female students experienced test anxiety slightly higher than men, but there is no significant difference. The study indicated a statistically significant difference between students' levels, though. In the Turkish context, too, Aydin (2012) investigated the relationship between the test anxiety of Turkish EFL students and their attitudes towards the validity of the content, the time limit, test instruction clarity, the length of the test, test techniques, and the test environment. The researcher administered a questionnaire to 480 EFL students. The study found that the time limit, lack of information about test techniques before the test, uncomfortable environment, and unclear test instructions are sources of test anxiety for EFL students. The researcher recommended that teachers and examiners should be aware of anxiety causes like exam instruction, test techniques, and test formats to reduce students' test anxiety.

Some other studies were conducted in the Saudi, Pakistani and Yemeni contexts. For instance, Wahid and Farooq (2020) investigated EFL teachers' satisfaction with online assessment during the Covid-19 outbreak. The study pursued a qualitative method and interviewed 25 EFL teachers from King Khalid University, Saudi Arabia and 25 EFL teachers from Cluster University, India. The study found that Saudi universities transferred to online learning using *Blackboard* without difficulties, but Indian students and teachers faced problems with online learning, particularly in rural areas. They also found that poor students had difficulty accessing online tests. The researchers recommended that governments support them in getting electronic devices and internet connections. Likewise, Gopang, Bughio, and Pathan (2015) investigated Pakistani EFL students' fear of negative evaluation, communication apprehension, and test anxiety. They found that test anxiety scored the highest, followed by the fear of negative evaluation and then communication apprehension. They also found no significant difference between males and females concerning language anxiety. Razak et al. (2017) studied 155 Yemeni EFL students' anxiety. They aimed to find the effects of anxiety based on gender differences and academic achievements. They did not find a significant difference between male and female students on this count, but they found that females experienced higher-level anxiety than males. They also did not find any significant difference between students' anxiety and achievement.

Touched on the above, there is a scarcity of research on online test anxiety that Saudi EFL learners have experienced during the pandemic period. Therefore, the current investigation intends to fill the above-mentioned gap by addressing the research questions quantitatively and qualitatively.

3. METHODOLOGY

This study adopted a survey design in which a questionnaire was used to collect data from the sample about their anxiety during the online tests. The respondents were all Saudi EFL students at the University of Bisha.

3.1 Participants

The study recruited 77 students majoring in English (49 females and 28 males) who took online final exams during the Covid-19 period throughout three consecutive semesters. At the time of the study, they had no previous experience studying or taking any face-to-face classes at the university. Besides, they never appeared in the face-to-face formative or summative exams since the closure of the University of Bisha and the transfer to online learning on March 8, 2020. The participants were from three English departments at the College of Arts, Bisha, the College of Science and Arts, Balgarn, and the College of Science and Arts, Al-Nammas. The questionnaire was sent randomly to all English-major students regardless of their levels. They were aged between 19 and 24. Fifty-three of them took the exams from their villages and 24 from different

localities in the city. Forty-three students had access to fast internet and 34 had a slow internet connection.

3.2 Instrument

The study used a questionnaire of three sections to collect data from the participants. The first section contained biographical information comprising students' gender, grade, internet speed, and the place of taking the test (urban or rural). The second section was modified from Test Anxiety Scale developed by Sarason (1978). The original version consisted of 37 items testing anxiety levels. The author modified it to suit the online test anxiety. Items in the original version which are irrelevant to online learning were excluded. Based on the experts' feedback in the pre-implementation phases, 16 items were approved for the current investigation. Six items were based on test anxiety level before taking the online test. Another six items were on test anxiety level while taking online tests, and four items were on test anxiety level after taking an online test. The third section contained open-ended items on the difference between face-to-face test anxiety and online test anxiety. The researcher translated the questionnaire into Arabic and it was revised by an expert colleague from the English Department. It started with an introduction about the questionnaire's aim, stressing that it was purely for research purposes and would only be used by the researcher.

3.3 Procedures of Data Collection and Ethics

The questionnaire was administered in the middle of the final online exam during the Covid-19 outbreak. Initially, the questionnaire was sent to the chairman of the Department of English and then to the dean of the College of Arts and the dean of Scientific Research Deanship for approval to administer the questionnaire to all English-major students at the university. After the approval of the Scientific Committee, the questionnaire was sent from the dean of the Scientific Research Deanship to the deans of the three colleges with English departments. As it was the first time for such a study to be conducted during the final tests at the University of Bisha, collecting students' responses to the questionnaire was very difficult. Instructors were not convinced to distribute the questionnaire to students during the final exam, specifically in the last three days. Some students, too, were reluctant to respond to the questionnaire during the final exam. Therefore, the researcher depended only on volunteers who agreed to respond to the questionnaire of their free will. Thus, the researcher had access to only 77 male and female respondents from the three English departments in the main campus and its branches. The questionnaire was sent out via Google Forms. For ethical reasons, the questionnaire started with a consent question asking the participants to fill in the questionnaire. If they approved their participation in the study, the form led them to the main questionnaire; and if not, the form led them to submit or exit the form without seeing the questionnaire sections.

3.4 Data analysis

After the respondents responded to the questionnaire, the responses were downloaded and all the Arabic translations were removed. The background items were coded from 1 to 2. For example, the city was coded 1 and the village was coded 2. As the second section obtained responses on the five-point Likert scale, the responses were coded from 1 for 'strongly disagree' to 5 for 'strongly agree'. The data were analyzed using SPSS (version 24). Frequency, mean, standard deviation, ANOVA test, and correlation were also found. Regarding the last section of the questionnaire, students' open responses were analyzed using content analysis. The answers were grouped under themes. 'Part' was used to refer to the participant, and 'no.' was attached to the 'Part' to show students' numbers.

4.   RESULTS

As Table 1 shows, the largest percentage of respondents (63.6%) were females, and the majority completed the test in a village (68.8%). Nearly half of the participants (55.8%) had access to a fast internet connection and the same number of them (55.8 %) received a grade 'A' on the test. Those who received either a 'C' or a 'D' were combined for the purpose of this study because the numbers in both categories were small (only 15.6 percent across after combining those two groups).

Table 1: Frequencies and Percentages for the Descriptive Variables

Variables	No.	%
Gender		
Female	49	63.6%
Male	28	36.4%
Location		
Village	53	68.8%
City	24	31.2%
Internet Speed		
Fast	43	55.8%
Slow	34	44.2%
Grade		
A	43	55.8%
B	22	28.6%
C or D	12	15.6%

RQ1. What is online test anxiety level among Saudi EFL learners during Covid-19 outbreak?

Scores in the 1-2 range indicate low anxiety, 3 indicate moderate anxiety and 4-5 show high anxiety. The overall average anxiety level across *Before, During* and *After* was 2.78, indicating that the participants experienced a moderate level of anxiety.

RQ2. Is there any significant difference between students' anxiety level Before the test, During the test, and After the test?

The descriptive statistics for the study variables are summarized in Table 2. Cronbach's alpha was .88 for the *Before* scale, .92 for the *During* scale, and .88 for the *After* scale.

Table 2: Descriptive Statistics for the Study Variables

Variable	Alpha	Items	Range	Mean	SD
Before	0.88	6	1.00-4.83	2.85	0.12
During	0.92	4	1.00-5.00	2.79	0.13
After	0.88	4	1.00-5.00	2.71	0.13

Correlations among the Study Variables

The findings in Table 3 reveal that the relative scores for individuals are very consistent with correlations among before, during, and after online tests ranging from .849 to .863. The p-value for all three correlations was $p < .0001$. While it was seen above that the reported anxiety level dropped over time, the high correlations indicate that the relative levels of anxiety across individuals remained fairly constant.

Table 3: Correlations among the Study Variables (n=77)

	Before	During	After
Before	1		
During	0.863	1	
After	0.849	0.839	1

$P < .0001$ for all three correlations.

Predictors of Levels of Online Test Anxiety

Change over Time

The findings in Table 4 show that participants reported higher anxiety before the test and that their anxiety decreased from *before* to *during* and from *during* to *after* the test. However, only the difference from Before to After was significant. Table 4 reports the paired t-tests for each of these comparisons.

Table 4: Paired t-tests for Differences among Anxiety levels Before, During and After the Test (n-77)

Comparison	Mean A	Mean B	A-B	*T*	*p*
Before (A) to During (B)	2.85	2.79	0.06	0.90	0.19
During (A) to After (B)	2.79	2.71	0.08	0.14	0.14
Before (A) to After (B)	2.85	2.71	0.14	2.04	0.02

RQ3. Is there a significant difference between students' anxiety level concerning gender, Internet speed, grade and/or place of taking online test?

Gender

As Table 5 indicates, females have a significantly higher level of anxiety, as averaged across time, than males (p=.02).

Table 5: t-test of Differences between Male and Female Participants in Anxiety Level (n=77)

	Female	*Male*
Mean	2.96	2.47
Variance	0.95	1.36
Observations	49	28
Pooled Variance	1.10	
Df	75	
T	1.96	
P	0.03	

Location

As Table 6 displays, the participants who took the test in a village had a slightly higher average anxiety level than those who took it in a city; the difference was not significant (p=.23).

Table 6: t-test of Differences in Anxiety Level between those who took the test in a Village versus a City (n=77)

	City	Village
Mean	2.65	2.84
Variance	1.28	1.09
Observations	24	53
Pooled Variance	1.15	
Df	75	
T	-0.74	
P	0.23	

Internet Speed

The speed of the internet connection played a major role in the level of test anxiety reported by participants. Those who had access to a fast internet connection were less anxious than those who had to rely on a slow internet connection (p<.001).

Table 7: t-test of Differences in Anxiety Level between Those Who had Access to a Fast Internet (n=77)

	Fast	Slow
Mean	2.32	3.37
Variance	0.79	0.98
Observations	43	34
Pooled Variance	0.87	
Df	75	
T	-4.94	
P	<.001	

Grade

While there is a slightly lower anxiety level (see Table 8) for those who received grades of B or B+ on the test, the differences are not significant as shown in Table 9.

Table 8: Anxiety Level by Grade (n=77)

Grade	Count	Average	Variance
A	43	2.86	0.97
B	22	2.62	1.49
C-D	12	2.81	1.28

Table 9: ANOVA of Differences in Anxiety Level by Grade

Source of Variation	SS	MS	*F*	*P*
Between Groups	0.84	0.42	0.36	0.70
Within Groups	86.00	1.16		
Total	86.83			

Results of the open-ended section

Responses to the open-ended questions revealed that fifty-three (68.83%) of the respondents' anxiety was lower during online tests compared to conventional tests. Seventeen students (22.08%) stated that their anxiety increased during online tests and seven students (9.09%) reported that their anxiety in online tests was comparable to what they experienced in conventional tests.

Table 10: Classification of Students' Responses to the Open-ended Section

Theme	Frequency	Percentage
Anxiety got decreased during online test in comparison to conventional test	53	68.83%
Anxiety was increased during online test	17	22.08%
Anxiety in online test is similar to the one they experience in conventional test	7	9.09%

Based on the respondents' answers to the open-ended questions, three themes were identified:

Anxiety Decreased

The decrease in students' anxiety during the online test occurs because they take exams without the disturbance and anxiety caused by the presence of invigilators, classmates and administrators. Some of the participants' responses are:

Part 6:

Studying remotely makes me feeling comfortable and not very anxious, and saves your time and effort, as well as you

can eat while you are experiencing comfortably, and you can also think about the answer calmly and not disturb, and while the attendance tests in the halls make it difficult for you to think about the answer and make you annoyed by the sounds, as well as my focus on the questions is disturbed.

Part 29:

There are some factors that decreased anxiety during the online test: my existence in the usual place, the presence of small numbers of people in the place where I took the tests, the unavailability of invigilators to remind you with the remaining time of the test or reading some unimportant instructions during the test time, the fewer opportunities to find pessimistic students before the test.

Part 35:

In a conventional test, I feel anxious because the exam hall is full of students and the invigilators in the exam hall lose my concentration as they enter and exit out of the hall, but in online tests, nothing of the mentioned issues disturbs me.

Part 74:

The anxiety decreases in online test because I answer the questions in quietness.

When taken as a whole, the respondents generally experienced anxiety during the conventional tests because of unnecessary noise that some invigilators make in the test hall (Parts 1 & 3), such as reading instructions aloud and reminding the examinees of the remaining time. Additionally, some students in the exam halls inquire with a loud voice about unnecessary issues. With these distractions, the examinees' anxiety increased and thus, they had a lapse of concentration (Part 3). The respondents who felt that online tests helped them reduce their anxiety mentioned some factors that lowered their exam anxiety. For instance, (a) they took the online test at their convenience in quiet and comfortable rooms, and (b) they could drink or eat while taking the exam (Parts 2 & 4). Moreover, they did not meet the students who customarily annoy them before or after the test. They also referred to an important factor - online testing generally helped them relax: they saved time and effort that they unavoidably wasted when travelling to the exam centres (Part 5). This is reinforced by another student's comment who stated that online tests could finish at any time. Hence, online test-takers could exploit their time according to their preferences. On the other hand, even if they finished conventional tests early, they were not allowed to leave the hall before passing half of the exam time.

Anxiety Increased

On the other hand, some students thought that taking the tests online increased their anxiety. Some of their answers are:

Part 3:

I feel like I get more anxious when it's online because there's a timeline and you can't ask the teacher to give you more time like you

do in class.

Part14:

The anxiety increased because in some courses the instructors' explanations did not match with the test questions. Moreover, I cannot go back to the previous questions.

Part 18:

I feel more anxious because some unintended mistakes may lose the scores.

Part 15:

The anxiety increased because I could not answer properly, the test questions were more complex than in conventional tests which lead to getting low scores.

Part 77:

My anxiety in the online test increased because I am afraid from losing the internet connection or the exam websites hang during the test.

Some students believe that teachers tend to make online exams more difficult than conventional ones and this increases their anxiety (Part 15). Other students felt anxious because of the time limit (Part 3). Some others attributed their increased anxiety to loneliness; in the classroom, they usually meet classmates before the exam and this might reduce their anxiety. Some of the respondents felt that online tests increased their anxiety. They mentioned some technical issues applied by teachers during the final online tests, arguing that their anxiety increased during the online exam because of prohibiting backtracking (Blackboard Management System does not allow students to go back to check their previous answers) (Part 14). They also mentioned the 'one attempt' option as a factor for their anxiety. They answer only one time and were not allowed to have another try even if they submitted the test in five minutes or less. They also counted 'showing one question at a time' option as another factor for increasing their anxiety. They were unable to review all questions at one time, but they get questions one by one.

Anxiety in Online Tests is the same as in Conventional Tests

A few participants reported that they felt the same degree of anxiety in both online and class tests. Some of their responses are outlined below:

Part 7:

I feel the same anxiety for both online and in class test.

Part 15:

I don't find big difference between online test and classroom test. I get very anxious in both exams.

Part 72:

In conventional test, the anxiety I feel is natural, but in online test the anxiety occurs because of my fear of losing internet connection.

The findings suggest that some students felt that test anxiety remained the same in conventional and online tests, and this requires further research. Future researchers can follow different methods to investigate such cases. They can observe students and/or interview them in addition to administering the questionnaire.

5. DISCUSSION

The current study revolves around three queries regarding Saudi EFL students while taking online tests due to Covid-19 spreading worldwide. The quantitative results indicated that the respondents generally experienced a moderate level of anxiety in online testing. This shows that online test level did not cause higher anxiety among Saudi EFL learners. This is supported by responses to the qualitative section which shows that 53 (68.83%) respondents experienced low anxiety because of online tests, 17 students (22.08%) experienced high anxiety because of online tests, and 7 students (9.09%) responded that the anxiety in online tests is similar to what they experienced in conventional tests. This finding aligns with Alla et al. (2020) who found that Ukrainian EFL students' test anxiety decreased in online tests during the Covid-19 pandemic.

Moreover, the study also explored students' anxiety levels before, during, and after the test. The quantitative results showed that students' test anxiety was higher before the online tests. However, it gradually decreased during and after the test, which showed a significant difference between *before*, during, and *after* the test ($p=.022$).

As the results show, the relative scores for individuals are very consistent with correlations among *Before, During*, and *After* online tests ranging from .849 to .863. The p-value for all three correlations was $p<.0001$. While it was seen that the reported anxiety level dropped over time, the high correlations indicate that the relative levels of anxiety across individuals remained constant. This finding partially confirms Himat & Nazari's (2019) finding that students' anxiety was high before taking the test. Himat & Nazari's study further reported that students' anxiety was high even after taking the test. In this study, students' anxiety gradually decreased while and after the test. This finding can be explained by relating students' anxiety in this study to technical issues. Responses to the open-ended questions support this as the respondents who experienced anxiety said it was because of fear of internet disconnection. If the test went smoothly without internet disconnection, their anxiety decreased after the test.

Finally, the current study correlated students' anxiety level with different variables, namely gender, grade, and place of

taking the test. The qualitative findings showed that the speed of the internet connection played a major role in test anxiety. Students who had access to a fast internet connection experienced much less anxiety than those who had to rely on a slow internet connection ($p<.001$). This result shows that students with slow internet experience higher anxiety, which is also supported by the responses to the open-ended questions. Perhaps this is because of their fear of internet disconnection. Even some students whose anxiety decreased because of online tests said they only worried about losing the internet connection. Internet disconnection is among the primary problems that challenge online learning and testing (Adarkwah, 2021; Adrah & Elmarash, 2020; Bashitialshaaer et al., 2021; Nasser, Bin-Hady, and Ahmed, 2020).

The study found that participants who took the test in a village had a slightly higher average anxiety level than those in a city. However, the difference was not statistically significant (p=.23). This finding could be attributed to the fact that students in villages encounter technical problems like poor internet speed and unavailability of services (Bashitialshaaer et al., 2021). Based on the researcher's experience teaching online, the location variable (village vs. city) is an important factor as some students in a range of remote areas have difficulty connecting to the internet. The deny access to the Internet likely increases students' anxiety during the exam. This study did not show a significant difference, but differences may exist if recruiting participants from contexts where poor internet connection abound.

Moreover, the study reported that students who received moderate grades (B) have higher anxiety than those who received higher grades (A) or lower grades (C or D). This requires more investigation to determine why students with moderate grades tend to be more anxious than those with higher and lower grades. Furthermore, this study found that female students experienced higher anxiety than male students, with a significant difference (p=.02). This finding is different from Burgucu et al. (2011), who found that female students experienced lower anxiety than male students; however, the difference is not significant. Nonetheless, Gopang, Bughio, and Pathan (2015) found no significant differences between male and female test anxiety.

6.   CONCLUSION

This study shed light on students' online test anxiety. The findings generally showed that students were moderately and constantly anxious when taking online tests. The anxiety level is higher before taking the test and decreases gradually during the test. After the test, it becomes lower than before in the case of online tests. The gradual decrease in anxiety during and after the test shows a significant difference. While the average anxiety level drops from before followed by during, and after the test, only *before* to *after* is significant at p<.05. The study also showed that students with slow internet were more anxious than students with a fast internet connection (p<.001). Another important finding was that female students were more anxious than their male counterparts (p=.027). An additional interesting finding was the absence of a significant difference between students who took tests in different settings, such as a city or village; neither were any differences visible between students with high and low grades. In brief, only the internet speed and gender show significant differences as factors in online test anxiety. Based on the findings, conventional exams should be updated after the COVID-19 pandamic. Also, the exam halls should be equipped with digitized cameras to reduce the chaos that students experience during conventional tests and to minimize the number of exam invigilators and make use of such cameras. Additionally, teachers should be directed to provide clear instructions at the beginning of each exam to lessen students' queries during tests that result in noise that casue more anxieties during tests.

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