

Article

# Students' Perceptions towards the Role of Online Teaching Platforms in Enhancing Online Engagement and Academic Performance Levels in Palestinian Higher Education Institutions

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**Abstract:** The present research aimed to determine the role of online teaching platforms in enhancing learning and teaching as perceived by bachelor students of English specialization. This study also sought to examine the association between students' engagement and their academic performance during online learning. In doing so, a quantitative approach was used to collect data, and 423 bachelor students from three Palestinian higher education institutions (Al Quds Open University, An Najah National University, and Arab American University) completed a closed-ended questionnaire. The study's outcomes demonstrated that the students' attitudes toward the role of online teaching platforms in enhancing their learning can be classified as positive and negative, and these attitudes varied among the respondents due to problems and challenges during online learning and previous experiences, skills, and learning style. Moreover, about 58.6% of students were dissatisfied with their online learning and had negative attitudes toward online teaching platforms. Therefore, more future studies relating to the design of online courses, resources that are available on the platform, and online teaching strategies that are considered fundamental components for fostering students' engagement at higher education institutions should be taken into account. Moreover, further studies involving more universities with samples from different specializations will confirm or contrast the findings of the current study.

**Keywords:** online teaching platforms; online engagement; academic performance; students' perceptions; e-learning; higher education institutions



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## 1. Introduction

E-learning, defined as an online learning paradigm that utilizes information technology, has become an increasingly popular method of education in recent years [1]. It enables students to engage in synchronous or asynchronous learning experiences, connect with instructors and classmates, and utilize various communication and information technology tools regardless of location. The incorporation of digital technology with instructional techniques has resulted in significant educational innovation, making e-learning a critical component of higher education curricula worldwide [2,3].

E-learning has not been acknowledged as a replacement for traditional learning methods [4]. Rather, it is viewed as a complementary approach that can leverage various learning theories to facilitate student learning. Behaviorism, for example, is one such learning theory that has been applied to online activities, enabling students to receive immediate feedback in the form of scores or other types of assessment [5]. Constructivism, on the other hand, emphasizes the importance of interaction between students, teachers, and content, allowing students to contextualize the material and learn through active engagement [6–8].

Student engagement is crucial for successful online learning experiences, and it is influenced by various factors, such as instructors' incorporation of technology-based pedagogy and tasks that promote interaction [8,9]. Social stimuli, such as breakout rooms, discussion

boards, forums, wikis, and resource-sharing systems, are important for stimulating student engagement [10]. The level of online engagement also depends on effective interaction between teachers and students, which can be challenging to achieve due to the diverse ways in which students interact with online courses [11,12].

Thus, e-learning has become a critical component of higher education curricula worldwide, providing students with a flexible and accessible learning experience. Incorporating various learning theories and promoting student engagement through effective interaction and technology-based pedagogy can enhance the online learning experience and contribute to successful learning outcomes.

Dwivedi et al. [8] have highlighted the importance of the teacher's role in online learning, which positively influences students' desire for learning. Effective online instructors encourage student engagement with timely, active, continuous support that promotes their personal connection [13,14]. The engagement and academic performance of students are significantly influenced by the online learning platform. Goh et al. [15] reported that using an e-learning platform resulted in better learning performance and satisfaction, while Tick [16] argued that students who use e-learning platforms in their learning are generally more engaged in the lesson, which significantly affects their academic achievement.

The challenge of maintaining academic success, achievement, and engagement at higher education institutions (HEIs) remains global. Therefore, studies that investigate the relationship between students' engagement and academic performance in online learning settings should be emphasized [17]. Thus, monitoring online student engagement can help instructors and students adapt their teaching and learning methods based on how motivated, engaged, and interested the students are [18].

Furthermore, Barba, Kennedy, and Ainley [19] stated that students who demonstrated higher levels of behavioral engagement were more likely to succeed and obtain better grades. Additionally, higher student participation can lead to more in-depth learning [12]. Students' performance also improves with increased interaction and participation in online discussion forums [20]. In the study of Goh et al. [15], university students' academic performance was influenced by their e-learning experiences.

According to Jumareng et al. [21], learning platforms strongly emphasized the transition from teacher-centered to learner-centered learning. Therefore, the instructor must know how to handle ICT tools effectively to use interactive strategies to improve engagement and communication in online education. Therefore, rather than simply presenting the material, online teaching and learning should aim to support the students' needs and expectations. Luan et al. [22] argued that an online learning platform can positively impact students' educational development and improve their capacity for independent learning. Studies also showed that the increased number of students using e-learning implies that their performance improved significantly through online learning platforms [23].

Qays et al. [24] have reported that online learning environments require improvement in terms of students' participation and experiences. In response, students are encouraged to utilize social media, digital tools, and programs to improve their learning opportunities. Holzweias et al. [25] suggested that students' positive impressions of online learning are related to activities that facilitate reflection and knowledge sharing with others.

In contemporary education, universities utilize technology and ICT tools to mitigate students' weaknesses and enhance their engagement. Altinay [26] argues that online collaborative learning can improve the quality of teaching in large classes. Therefore, educators must continue to explore strategies for promoting engagement and participation in university online courses, including online teaching and learning platforms. However, developing countries face difficulties in implementing e-learning systems due to digital gaps [27]. Even though there have been significant investments made in establishing e-learning systems at Palestinian universities for more than 15 years, Palestine's current political and economic issues are considered the key obstacles preventing the further growth of e-learning. In our research, Palestinian higher education institutions such as Al Quds Open University, which is regarded as the leading university in introducing open education

system initiatives in the Palestinian context since 2008; An Najah National University, which has been promoting online teaching and learning since 2012; and Arab American University, the largest private university in Palestine, have introduced e-learning since 2018, in which university teaching is continuously shifted into online teaching, whether completely or partially utilizing online platforms such as Moodle and Zoom. However, educators must be aware that education can become fully synchronized at any time due to unstable conditions. Hence, they should employ innovative strategies and methods to enhance students' online engagement.

Given the value of online teaching platforms in e-learning settings, the current study aims to identify students' attitudes toward online teaching platforms, evaluate the role of online teaching platforms in enhancing students' engagement levels, examine the association between students' online engagement and academic performance levels, and determine the correlation between students' perspectives toward their instructors' roles in their online learning and engagement. The research questions guiding the study are as follows:

1. What is the role of online teaching platforms in enhancing Palestinian university students' learning according to the students' perspectives?
2. To what extent do students' year(s) of study, university, and the type of online course influence their perspectives on the role of online teaching platforms in enhancing engagement and academic performance levels?
3. Is there a significant relationship between students' engagement and their academic performance levels?
4. Is there a significant relationship between students' attitudes toward online teaching platforms and their engagement?
5. Is there a significant relationship between students' perspectives toward their instructors' roles in online learning and their engagement?
6. Is there a significant relationship between students' perspectives toward their instructors' roles in online learning and their academic performance levels?

The following hypotheses were developed based on the research questions:

**H1:** *There are no statistically significant differences at  $\alpha \leq 0.05$  in the role of online teaching platforms in enhancing students' learning from their point of view due to year(s) of study, university, and the kind of online course variables.*

**H2:** *There is a positive relationship at  $\alpha \leq 0.05$  between students' engagement and their academic performance levels.*

**H3:** *There is a positive relationship at  $\alpha \leq 0.05$  between students' attitudes toward online teaching platforms and their engagement.*

**H4:** *There is a positive relationship at  $\alpha \leq 0.05$  between students' perspectives toward the instructor's role in online learning and their engagement.*

**H5:** *There is a positive relationship at  $\alpha \leq 0.05$  between students' perspectives toward the instructor's role in online learning and their academic performance levels.*

## 2. Literature Review

In recent years, there has been an increasing interest in exploring students' experiences and perceptions of online learning, particularly in light of the COVID-19 pandemic. For example, Lei and Medwell [28] found that students appreciated the flexibility of Online Collaborative Learning (OCL), access to materials, and the ability to receive feedback from peers and teachers. However, some students also reported difficulties in developing initial contact with others, maintaining group participation, accessing the Internet, and dealing with economic background problems. Warren et al. [29] investigated the impact of blended

learning on students' academic self-efficacy and found that it increased their satisfaction and improved their experiences. Farrell and Brunton [30] highlighted the importance of various psychosocial and structural factors, such as peer groups, stimulating online teachers, and self-belief, as well as an interactive online course structure and balancing life commitments, in promoting successful student engagement. Tarhini et al. [31] argued that positive student experiences in e-learning systems are crucial for student satisfaction, and Aparicio, Bacao, and Oliveira [32] emphasized that student satisfaction is a crucial determinant of the success of e-learning. Additionally, Sabbah and Yildiz [33] pointed out the importance of effective online course design in enhancing students' satisfaction, performance, knowledge, and skills, while Demuyakor [34] drew attention to the importance of incorporating modern pedagogies to improve student satisfaction. Gopal, Singh, and Aggarwal [35] found that the quality of the instructor, course design, and feedback significantly enhances students' satisfaction and performance in online classes, and Virtanen et al. [36] discovered that students' satisfaction is a crucial predictor of their academic experience in online learning.

In addition, it is worth mentioning that students' perceptions and attitudes are critical factors in the success of the transition to online education. Aderibigbe [37] found that students' engagement level through the online discussion forum was high, while Friska [38] came to the conclusion that most students have a positive attitude toward e-learning in general. However, Adnan and Anwar [39] confirmed that online learning might be ineffective in countries such as Pakistan, where most students struggle to access the Internet due to technical and economic problems.

Thus, to promote successful online learning and teaching experiences, higher education institutions need to shape students' perceptions and prepare them to learn through various types of online learning. Conversely, Coman et al. [40] found that Romanian university teachers and students were unprepared for the abrupt shift to entirely online learning and teaching, emphasizing the importance of proper preparation and training. In contrast, an empirical study conducted in the National Capital Territory of Delhi revealed that even though the students view e-learning as equivalent to face-to-face learning, the study demonstrated a similar experience of being educated through traditional teaching [41].

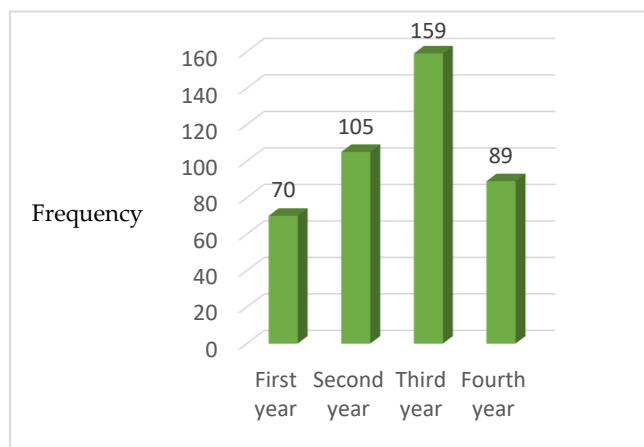
Research has shown that planning for meaningful interaction is essential for maintaining engagement in online learning. Ramaha and Karas [42] suggested the use of an interactive avatar for asynchronous e-learning systems that can detect students' motivation, maintain engagement, provide feedback, reward performance, provide different levels of difficult tasks, praise efforts, encourage persistence, and provide assistance. Understanding how students access, attend, and participate in online classes is also crucial for improving their academic success. In this vein, Nieuwoudt [43] found a significant positive relationship between final grades and the number of hours students spent on the Learning Management System (LMS). Similarly, Dumford and Miller [11] reported that the more online courses a student takes, the less collaborative learning the student engages in. The COVID-19 pandemic has also highlighted the influence of technology dependence and digital literacy on students' achievement. Essel et al. [44] conducted a descriptive correlational study that showed that students with low information and communication technology (ICT) experience experienced more significant technology-induced stress and techno-complexity. Another study based on transactional distance theory and Bloom's taxonomy theory showed significant support for the interdependent relationship between transactional distance and Bloom's taxonomy theories in using online learning platforms to improve students' academic achievement and satisfaction [45].

### 3. Materials and Methods

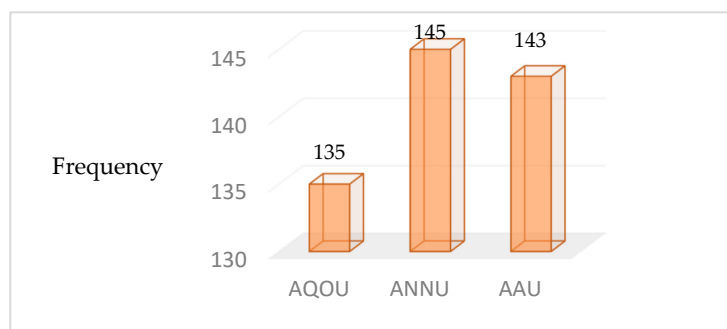
#### 3.1. Participants

A sample of 423 students from three Palestinian universities (An Najah National University (ANNU), Arab American University (AAU), and Al Quds Open University (AQOU)) responded to closed-ended questions using random sampling; to do so, researchers posted an online survey, an invitation letter outlining the study's goals and who was eligible

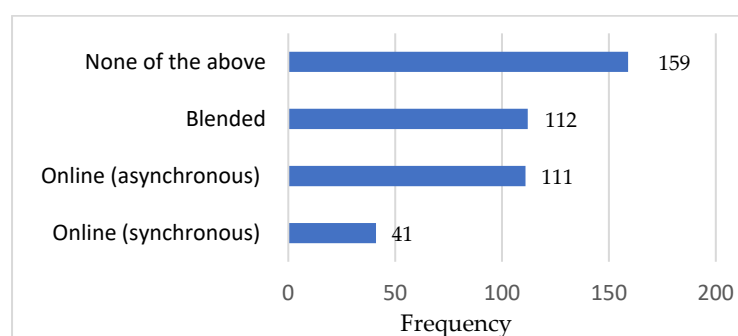
to participate, and a consent form on the students' academic portal with support from the head of the English department. In addition, survey was distributed in person to students to reach the final group of 423 students. Demographic information about the participating students is presented in Figures 1–3.



**Figure 1.** Sample distribution by year of study variable.



**Figure 2.** Sample distribution by university variable.



**Figure 3.** Sample distribution by kind of online course variable.

According to the figure, the third-year students had the highest frequency (159) and percentage (37.6%), followed by 105 students in second year (24.8%), 89 in fourth year (21%), and 70 in first year (16.5%).

According to Figure 2, 145 respondents—constituting the majority (37.6%)—are from ANNU, followed by 143 AAU students (33.8%) and 135 AQOU students (31.9%).

Figure 3 illustrates that majority of the participants (37.6%) did not have a specific online course, while 112 students had blended online courses (26.5%), 111 had asynchronous online courses (26.2%), and 41 had online synchronous (9.7%).

### 3.2. Instrument

The data were collected through a survey instrument designed and developed by the researchers, based on the research questions and the previous literature such as studies of Dumford and Miller [11], Friska [38], Adnan and Anwar [39], Coman et al. [40], Essel et al. [44], Sørsum [46], Cranfield et al. [47], Hussein et al. [48], Yasin et al. [49], Borg et al. [50], and Abou-Khalil et al. [51]. The survey was distributed to the participants during the second and summer semesters of the academic year 2021–2022.

### 3.3. Research Validity and Reliability

In order to ensure the validity of the survey instruments, two experts in the field of language and literature didactics from Granada University in Spain were consulted to review the accuracy of the questions. Following the feedback provided by the experts and the necessary revisions by the researchers, the questionnaire was finalized. Moreover, the reliability of the questionnaire was assessed by calculating the Cronbach alpha coefficient; the reliability of each domain and the whole questionnaire was 0.795, 0.856, 0.771, 0.732, and 0.847, respectively, which is an acceptable reliability index. Obviously, reliability values range between 0.73 and 0.84, indicating that the tools are reliable and that researchers can draw meaningful conclusions from the data and analysis.

### 3.4. Procedures

The study was conducted in several stages. Firstly, the researchers developed a data collection tool in English language based on the research questions and related studies, which consisted of five dimensions covering students' background information, attitudes towards online teaching platforms, the roles of online teaching platforms in enhancing engagement levels, online platforms, and academic performance levels, and their perspectives towards the role of the instructor in online learning. Secondly, the developed survey was sent to two experts in educational sciences from Granada University (Spain) to validate the accuracy of the questions and survey items. Thirdly, the researchers obtained permission from ANNU, AAU, and AQOU to facilitate the researcher's task and collect data from bachelor students of English specializations, and obtained participants' agreement to participate in the study via a consent form that addressed ethical issues such as voluntary participation, data security, and anonymity. Fourthly, the online survey form was submitted to each university's portal and webpage, accompanied by an invitation letter that explained the research's main objective. In addition, the survey was distributed in person to students, resulting in a final sample of 423 participants from ANNU, AAU, and AQOU. Finally, the researchers used IBM SPSS Statics version 25 to record and analyze quantitative data. To analyze the data, the researchers used various statistical treatments, including computational averages, means, standard deviations, and percentages of responses of study sample individuals to the questionnaire as a whole and to each of its paragraphs; an independent T-test; a one-way ANOVA; and the Sheffee Test. Additionally, the researchers calculated the alpha-Cronbach coefficient to assess the reliability of the study's instruments and used the Pearson Correlation Test to examine the relationship between the dimensions.

### 3.5. Data Analysis

The researchers reviewed the data of survey before entering it into the computer for data analysis. The impact degree ranged between "very high" and "very low" using a 5-point Likert scale, with percentages of 80% and more, 70–79.9%, 60–69.9%, 50–59.9%, and 50% and less, respectively. In addition, all the students' responses were between "strongly disagree" and "strongly agree," and the researchers represented the results into scores 1, 2, 3, 4, and 5, accordingly.

## 4. Results

### 4.1. Results Related to the First Question

To answer the first question, the researchers measured mean and SD differences between repeated measures with the same instrument for each dimension and the total degree, as shown in Tables 1–4 below.

**Table 1.** Mean and Standard Deviation of the respondents' answers (dimension one).

No.	Items	Mean	Std. Deviation	Response Rate	Impact Degree
1	In an online course, I spend more time doing tasks than in an in-person course.	3.2435	1.23334	64.8	Medium
2	When I'm taking an online course, I spend a lot of time fixing technical problems.	3.3712	1.21281	67.4	Medium
3	The design of online learning activities encourages me to interact actively.	2.9220	1.13583	58.4	Low
4	During online classes, I find it difficult to express my ideas, comments, and answers.	3.0473	1.26852	60.8	Medium
5	Asynchronous classes (e.g., Moodle) are easier than synchronous classes (e.g., Zoom).	2.9551	1.09949	59	Low
6	Overload information of online course make learning more difficult.	3.3002	1.13002	66	Medium
7	I am satisfied with the online lectures I am taking.	2.7849	1.16365	55.6	Low
	Total degree	3.0892	0.54780	61.8	Medium

**Table 2.** Mean and standard deviation of the respondents' answers (dimension two).

No.	Items	Mean	Std. Deviation	Response Rate	Impact Degree
8	Reading everyone's responses kept me interested and helped me learn more.	3.2317	1.13047	64.6	Medium
9	The online platform increases the number of opportunities to engage in meaningful conversation with professors and other students.	3.1608	1.13858	63.2	Medium
10	Online platforms help me to interact with online course content in more than one format (e.g., text, video, audio, interactive games, or simulations).	3.3522	1.10633	67	Medium
11	I actively participate in and perform in online lectures because the materials are well organized, ranging from simple to complex, and from knowing to practicing"	2.9787	1.10878	59.4	Low
12	The wide range of online learning activities allows me to choose activities that are suitable for my level of English.	3.1277	1.15515	62.4	Medium
13	Breakout groups, discussion boards, discussion forums, wikis, and resource sharing foster my interaction with other students and help me comprehend content easily.	3.1820	1.12383	63.6	Medium
14	I share information and resources with other students and instructors easily.	3.3428	1.18571	66.8	Medium
15	Online platform encourages positive cooperation among students and instructors.	3.2246	1.12455	64.4	Medium
16	An online teaching platform encourages active learning and strengthens connections between students.	3.0426	1.19560	60.8	Medium

**Table 2.** *Cont.*

No.	Items	Mean	Std. Deviation	Response Rate	Impact Degree
17	Online platforms offer a variety of resources that aid in the development of my knowledge and comprehension in online courses.	3.1773	1.14753	63.4	Medium
18	My online teaching platform increases my interest for taking English classes.	3.0189	1.14562	60.2	Medium
	Total degree	3.1672	0.73094	63.2	Medium

**Table 3.** Mean and standard deviation of the respondents' answers (dimension three).

No.	Items	Mean	Std. Deviation	Response Rate	Impact Degree
19	Learning through an online platform increased my achievement level.	3.0284	1.21568	60.4	Medium
20	I have limited skill and knowledge in using online platforms, which affects my achievement on online exams.	3.0993	1.21389	61.8	Medium
21	The materials on the online platform help me in improving my online course achievement.	3.0567	1.13814	61	Medium
22	I don't have enough time to complete exams and submit assignments on time which results in a low achievement.	2.8534	1.31606	57	Low
23	Poor connectivity affects my achievement negatively in some online courses.	2.5248	1.16575	50.4	Low
24	Large assignments and information overload in online courses lead to poor performance	2.6478	1.21456	52.8	Low
25	My ability to learn independently has improved.	2.8298	1.27103	56.6	Low
26	My grades are improving because of the online platform.	3.4326	1.18024	68.6	Medium
	Total degree	2.9341	0.60744	58.6	Low

**Table 4.** Mean and Standard deviation of the respondents' answers (dimension four).

No.	Items	Mean	Std. Deviation	Response Rate	Impact Degree
27	My professor doesn't have enough resources and skills for online teaching.	3.3168	1.08146	66.2	Medium
28	My professor delivered online learning materials in a different way.	3.1584	1.16056	63.2	Medium
29	My professor gives me enough time to engage in and understand the online course material.	3.1537	1.14060	63	Medium
30	My professor provides regular feedback.	3.2151	1.16974	64.2	Medium
31	Our professors teach us how to use the online platform correctly and provide us advice	3.2080	1.04370	64	Medium
32	Online learning materials are sufficiently explained by professors.	3.2695	1.10071	65.4	Medium
	Total degree	3.2203	0.66292	64.4	Medium

Table 1 presents the findings related to the first dimension of the survey, which explored students' attitudes toward online teaching platforms. The results indicate that students had a medium average response to items 1, 2, 4, and 6, as well as to the total



degree, with an average ranging from 60.8% to 67.4%. In contrast, the average response to items 3, 5, and 7 was low, ranging from 55.6% to 59%. Based on these findings, it can be concluded that students' varied attitudes towards online teaching platforms are due to the problems they encountered during online lectures and their dissatisfaction with this new method of learning. Specifically, item 2 received the highest percentage of agreement, whereas item 7 received the lowest percentage.

In Table 2, the average response is presented as moderate for all items except for item 11, which shows a low level of agreement. The moderate average response ranges from 59.4% to 67.0%. These findings indicate that the students generally had a moderate level of agreement with the role of online teaching platforms in enhancing their online engagement levels. Conversely, item 11 had a low response rate of 59.4%. Based on the results of the second dimension, item 10 received the highest response, while item 11 had the lowest response.

Based on Table 3, it can be observed that the students' average response to items 19, 20, 21, and 26 falls within the medium range, varying from 60.4% to 68.6%. These findings suggest that students generally agree moderately that an online teaching platform can help them enhance their academic performance. Conversely, items 22, 23, 24, and 25 received low average responses ranging from 50.4% to 57.0%, indicating that the students have a low level of agreement on the effectiveness of the online teaching platform in enhancing their academic performance. Furthermore, the total degree of the role of the online teaching platform in enhancing students' academic performance is also at a low level, indicating that students have negative attitudes toward the ability of the online teaching platform to improve their academic performance. The item with the highest percentage is item 26, whereas the lowest percentage was scored by item 23.

Table 4 presents the findings of the fourth dimension, which indicates that all items had a medium average response ranging from 63% to 66.2%. These results imply that the students expressed moderate agreement with the professors' role in online learning in terms of their employment of online resources, skills, strategies, feedback, explanation, and guidance during online teaching. Item 27 had the highest percentage, which means that students had the highest level of agreement. Conversely, item 29 had the lowest percentage, indicating that students had the lowest level of agreement.

#### 4.2. Results Related to the Second Question

To address the second research question, the researchers conducted Means and one-way ANOVA analyses, as presented in Tables 5 and 6.

Table 5 displays the mean and standard deviation differences of the survey's various domains, segmented by students' year of study. Notably, the second domain had the highest mean value of 3.3187 for fourth-year students, indicating their positive attitude towards the role of online teaching platforms in enhancing engagement levels. Conversely, the third domain had the lowest mean value of 2.7857, which favored first-year students in their perception of the role of online teaching platforms in enhancing academic performance levels. In the first domain, the second-year students had the highest mean value of 3.1320, while the first-year students had the lowest mean value of 3.0571. Similarly, the second domain had the highest mean value of 3.3187 for fourth-year students and the lowest mean value of 3.0506 for first-year students. Likewise, the third domain had the highest mean value of 3.0955 for fourth-year students and the lowest mean value of 2.7857 for first-year students. In the fourth domain, the highest mean value was 3.3092 for third-year students, while the lowest mean value was 3.1190 for first-year students. Overall, the results indicate that fourth-year students had positive perceptions towards online teaching platforms, as evidenced by the highest mean value of 3.1531 across all domains. Conversely, the lowest mean value of 3.0031 was observed among first-year students, suggesting their negative perceptions.

**Table 5.** Means and standard deviation according to the study year variable.

Dimensions	Year of the Study	N	Mean	Std. Deviation
Dimension 1	First year	70	3.0571	0.50925
	Second year	105	3.1320	0.51989
	Third year	159	3.0863	0.57706
	Fourth year	89	3.0690	0.56124
	Total	423	3.0892	0.54780
Dimension 2	First year	70	3.0506	0.80119
	Second year	105	3.1489	0.61891
	Third year	159	3.1458	0.74448
	Fourth year	89	3.3187	0.75876
	Total	423	3.1672	0.73094
Dimension 3	First year	70	2.7857	0.52954
	Second year	105	2.8440	0.59236
	Third year	159	2.9686	0.61783
	Fourth year	89	3.0955	0.62756
	Total	423	2.9341	0.60744
Dimension 4	First year	70	3.1190	0.61787
	Second year	105	3.2302	0.62889
	Third year	159	3.3092	0.70358
	Fourth year	89	3.1292	0.64879
	Total	423	3.2203	0.66292
Total	First year	70	3.0031	0.47989
	Second year	105	3.0888	0.41801
	Third year	159	3.1275	0.48584
	Fourth year	89	3.1531	0.46500
	Total	423	3.1027	0.46545

**Table 6.** Results of the one-way ANOVA test.

Dimensions		Sum of Squares	DF	Mean Square	F	Sig. *
Dimension 1	Between Groups	0.302	3	0.101	0.333	0.801
	Within Groups	126.336	419	0.302		
	Total	126.637	422			
Dimension 2	Between Groups	3.101	3	1.034	1.948	0.121
	Within Groups	222.362	419	0.531		
	Total	225.463	422			
Dimension 3	Between Groups	4.900	3	1.633	4.538	0.004 *
	Within Groups	150.810	419	0.360		
	Total	155.710	422			
Dimension 4	Between Groups	2.724	3	0.908	2.082	0.102
	Within Groups	182.729	419	0.436		
	Total	185.452	422			
Total	Between Groups	1.038	3	0.346	1.604	0.188
	Within Groups	90.385	419	0.216		
	Total	91.423	422			

\* Statistically significant at level  $\alpha \leq 0.05$ .

Table 6 depicts the results of the statistical analysis, indicating that the hypothesis was not supported for the third dimension. Specifically, the findings reveal that there were statistically significant differences ( $\alpha \leq 0.05$ ) in the students' perceptions toward the role of online teaching platforms in enhancing their learning across different years of study on the third dimension. However, no significant differences were observed across other dimensions. To further investigate these findings, the researchers conducted the Scheffe

test to compare the different levels and identify where the differences occurred. The results proved that there were significant differences between the first and fourth years of study in the third dimension, with fourth-year students reporting higher positive perceptions towards the role of online teaching platforms in enhancing their learning, with mean difference score of  $-0.30979^*$ . However, there were no significant differences found in the other dimensions.

To examine the influence of the university variable, the researchers utilized Means and one-way ANOVA. Tables 7–9 present the results of these analyses.

**Table 7.** Means and standard deviation according to the university variable.

Dimensions	University	N	Mean	Std. Deviation
Dimension 1	Al Quds Open University	135	3.1545	0.52418
	An Najah National University	145	3.1399	0.53252
	Arab American University	143	2.9760	0.57042
	Total	423	3.0892	0.54780
Dimension 2	Al Quds Open University	135	3.4209	0.59930
	An Najah National University	145	3.1643	0.70859
	Arab American University	143	2.9307	0.78877
	Total	423	3.1672	0.73094
Dimension 3	Al Quds Open University	135	3.0398	0.55202
	An Najah National University	145	2.8733	0.65567
	Arab American University	143	2.8960	0.59764
	Total	423	2.9341	0.60744
Dimension 4	Al Quds Open University	135	3.4086	0.63046
	An Najah National University	145	3.1943	0.64401
	Arab American University	143	3.0688	0.67290
	Total	423	3.2203	0.66292
Total	Al Quds Open University	135	3.2560	0.41619
	An Najah National University	145	3.0929	0.44242
	Arab American University	143	2.9679	0.49107
	Total	423	3.1027	0.46545

**Table 8.** Results of one-way ANOVA test for dimensions 1–4.

Dimensions		Sum of Squares	DF	Mean Square	F	Sig. *
Dimension 1	Between Groups	2.780	2	1.390	4.713	0.009 *
	Within Groups	123.857	420	0.295		
	Total	126.637	422			
Dimension 2	Between Groups	16.687	2	8.343	16.784	0.000 *
	Within Groups	208.777	420	0.497		
	Total	225.463	422			
Dimension 3	Between Groups	2.253	2	1.126	3.083	0.047 *
	Within Groups	153.457	420	0.365		
	Total	155.710	422			
Dimension 4	Between Groups	8.171	2	4.085	9.679	0.000 *
	Within Groups	177.281	420	0.422		
	Total	185.452	422			
Total	Between Groups	5.784	2	2.892	14.184	0.000 *
	Within Groups	85.639	420	0.204		
	Total	91.423	422			

\* Statistically significant at level  $\alpha \leq 0.05$ .

**Table 9.** Results of Scheffe’s post hoc test between levels according to university variable.

Dependent Variable	University	University	Mean Difference
Dimension 1	Al Quds Open University	Arab American University	0.17847 *
	An Najah National University	Arab American University	0.16388 *
Dimension 2	Al Quds Open University	Arab American University	0.49017 *
	An Najah National University	Arab American University	0.23356 *
Dimension 3	Al Quds Open University	Arab American University	0.50785 *
	An Najah National University	Arab American University	0.14384 *
Dimension 4	Al Quds Open University	An Najah National University	0.21439 *
		Arab American University	0.33988 *
Total	Al Quds Open University	An Najah National University	0.16303 *
		Arab American University	0.28809 *

\* Statistically significant at level  $\alpha \leq 0.05$ .

Table 7 presents the mean and standard deviation (SD) differences across all domains with respect to the university variable. Notably, the second domain obtained the highest mean score of 3.4209, indicating that AQOU students have the highest average agreement toward the role of online teaching platforms in enhancing their engagement. Conversely, the lowest mean score of 2.8733 was found in the third domain, indicating that ANNU students have the lowest average agreement toward the role of online teaching platforms in enhancing their academic performance levels. For the first domain, the highest mean score was 3.1545 in favor of AQOU, while the lowest mean score was 2.9760 in favor of AAU. Similarly, in the second domain, AQOU students had the highest mean score of 3.4209, while AAU students had the lowest mean score of 2.9307. The third domain showed that AQOU students expressed the highest mean score of 3.0398, while ANNU students expressed the lowest mean score of 2.8733. Regarding the fourth domain, the highest mean score of 3.4086 was in favor of AQOU, while the lowest mean score of 3.0688 was in favor of AAU. Overall, AQOU students had the highest average score of 3.2560, while AAU students had the lowest average score of 2.9679.

Table 8 illustrates the mean values and statistical significance of all domains and the total degree. The findings indicate that the statistical significance levels are below 0.05, indicating that there are statistically significant differences in the first, second, third, and fourth dimensions as well as in the total degree. Thus, the hypothesis’s validity is rejected. Therefore, there are statistically significant differences at  $\alpha \leq 0.05$  in the students’ perceptions regarding the role of online teaching platforms in enhancing their learning as influenced by university variables in those dimensions. To examine the hypothesis, the researchers employed the Scheffe test (Table 9) to compare dimensions between levels to identify which levels exhibited differences.

Table 9 displays the mean differences across levels. The findings reveal significant differences in the first, second, third, fourth, and total degree dimensions, favoring AQOU students with higher-level perceptions of online teaching platforms’ role in enhancing their learning compared to ANNU and AAU students. Moreover, the results indicate significant differences between ANNU and AAU, with ANNU students demonstrating higher-level perceptions of the role of online teaching platforms in enhancing their learning than AAU students. However, other comparisons are not statistically significant.

Tables 10–12 present the differences in the total degree of the tool, where the researchers employed Means and one-way ANOVA to examine the online course variable.

**Table 10.** Means and standard deviation according to the kind of online course variable.

Dimensions	Kind of Online Course	N	Mean	Std.
Dimension 1	Online (synchronous [live]—such as Google meeting or zoom)	41	2.9930	0.67609
	Online (asynchronous—such as Moodle)	111	3.0837	0.56242
	Blended (in-person and online [any form of online]; synchronous and asynchronous)	112	3.1071	0.53159
	None of the above	159	3.1051	0.51394
	Total	423	3.0892	0.54780
Dimension 2	Online (synchronous [live]—such as Google meeting or zoom)	41	3.1220	0.88715
	Online (asynchronous—such as Moodle)	111	3.0295	0.79661
	Blended (in-person and online [any form of online]; synchronous and asynchronous)	112	3.3019	0.64712
	None of the above	159	3.1801	0.68180
	Total	423	3.1672	0.73094
Dimension 3	Online (synchronous [live]—such as Google meeting or zoom)	41	3.1067	0.56566
	Online (asynchronous—such as Moodle)	111	2.8356	0.57406
	Blended (in-person and online [any form of online]; synchronous and asynchronous)	112	3.0592	0.58461
	None of the above	159	2.8703	0.63658
	Total	423	2.9341	0.60744
Dimension 4	Online (synchronous [live]—such as Google meeting or zoom)	41	3.1057	0.61999
	Online (asynchronous—such as Moodle)	111	3.0240	0.70812
	Blended (in-person and online [any form of online]; synchronous and asynchronous)	112	3.4048	0.67477
	None of the above	159	3.2568	0.59290
	Total	423	3.2203	0.66292
Total	Online (synchronous [live]—such as Google meeting or zoom)	41	3.0818	0.54431
	Online (asynchronous—such as Moodle)	111	2.9932	0.50174
	Blended (in-person and online [any form of online]; synchronous and asynchronous)	112	3.2183	0.43059
	None of the above	159	3.1031	0.42439
	Total	423	3.1027	0.46545

**Table 11.** Mean differences between the levels of the online course variable.

Dimensions		Sum of Squares	DF	Mean Square	F	Sig. *
Dimension 1	Between Groups	0.459	3	0.153	0.508	0.677
	Within Groups	126.178	419	0.301		
	Total	126.637	422			
Dimension 2	Between Groups	4.249	3	1.416	2.683	0.046 *
	Within Groups	221.214	419	0.528		
	Total	225.463	422			
Dimension 3	Between Groups	4.698	3	1.566	4.345	0.005 *
	Within Groups	151.012	419	0.360		
	Total	155.710	422			
Dimension 4	Between Groups	8.838	3	2.946	6.989	0.000 *
	Within Groups	176.614	419	0.422		
	Total	185.452	422			
Total	Between Groups	2.845	3	0.948	4.485	0.004 *
	Within Groups	88.579	419	0.211		
	Total	91.423	422			

\* Statistically significant at level  $\alpha \leq 0.05$ .

**Table 12.** Scheffe’s Post Hoc Test between levels according to kind of online course variable.

Dimensions	Kind of Online Course	Kind of Online Course	Mean Difference
Dimension 2	Online (asynchronous—such as Moodle)	Blended (in-person and online (any form of online); synchronous and asynchronous)	−0.27246 *
Dimension 3	Online (asynchronous—such as Moodle)	Online (synchronous (live)—such as Google Meeting or Zoom)	0.27112 *
Dimension 4	Online (asynchronous—such as Moodle)	Blended (in-person and online (any form of online); synchronous and asynchronous)	−0.38074 *
Total	Online (asynchronous—such as Moodle)	Blended (in-person and online (any form of online); synchronous and asynchronous)	−0.22506 *

\* Statistically significant at level  $\alpha \leq 0.05$ .

Table 10 displays the mean and standard deviation (SD) for the kind of online course variable, and based on the mean scores for all kinds of online courses, the researchers included for comparison only the kind of online course that has the highest and the lowest mean average and excluded other mean scores. However, across all domains, blended courses received the highest mean score of 3.3019, while online courses (asynchronous, such as Moodle) received the lowest mean score of 2.8356. This suggests that students who took blended courses exhibited higher levels of agreement with the role of online teaching platforms in enhancing their engagement, while students who took online courses displayed the lowest level of agreement. In the first domain, blended courses received the highest mean value of 3.1071, while online synchronous courses (live), such as Google Meeting or Zoom, received the lowest mean value of 2.9930. Students who took blended courses had positive attitudes toward online teaching platforms, whereas those who took online synchronous courses had negative attitudes. In the second domain, blended courses received the highest mean score of 3.3019, while online asynchronous courses (such as Moodle) received the lowest mean score of 3.0295. Students who took blended courses displayed a high level of attitude toward the role of online teaching platforms in enhancing their engagement, while those who took online asynchronous courses showed a low level of attitude. For the third domain, online synchronous courses (live) (such as Google Meeting or Zoom) received the highest mean score of 3.1067, while online asynchronous courses (such as Moodle) received the lowest mean score of 2.8356. This indicates that students who took online synchronous courses expressed a higher average level of attitude toward the role of online teaching platforms in enhancing their academic performance than those who took online asynchronous courses. In the fourth domain, blended courses received the highest mean score of 3.4048, while online asynchronous courses (such as Moodle) received the lowest mean score of 3.0240. Students who took blended courses displayed a high-average level of perspective toward the instructors’ role in online learning, while those who took online asynchronous courses displayed a low-average level of perspective. Overall, students who took blended courses had the highest average score of 3.2183, while those who took online asynchronous courses had the lowest average score of 2.9932 across all domains.

Table 11 shows the mean differences between the levels of the online course variable. The results reveal that significant differences were observed in the second, third, and fourth dimensions, as well as in the total degree. Consequently, the hypothesis was rejected. The findings suggest that, at a significance level of  $\alpha \leq 0.05$ , there are statistically significant disparities in the students’ perceptions of the role of online teaching platforms in enhancing their learning based on the type of online course variable on those dimensions.

To further examine the differences between the levels and identify which levels showed variations, the researchers utilized the Scheffe test for dimensional comparisons (Table 12).

Table 12 presents the findings of a study that sought to identify differences in student perceptions between blended and online (asynchronous, specifically using Moodle) learning environments. The results show that the differences between the two types of learning environments were significant in the second and fourth dimensions, as well as the total degree, with blended learning receiving higher scores. Specifically, students who participated in blended courses expressed more positive perceptions of the role of online platforms in enhancing their learning. However, in the third dimension, students who used online (asynchronous, using Moodle) platforms had higher perceptions of the role of online teaching platforms in enhancing their learning compared to those who used online (synchronous, using platforms such as Google Meet or Zoom). The study did not find any statistically significant differences between the other comparisons.

#### 4.3. Results Related to the Third Question

In order to address the third research question, the researchers utilized the Pearson Correlation Test to examine the relationship between students' engagement and their academic performance levels, as depicted in Table 13.

**Table 13.** Results of the Pearson Correlation Test.

Dimensions	Mean	Std. Pearson Correlation Value
Students' Performance Levels	2.9341	0.60744 *
Students' Engagement	3.1672	0.456 *
		0.73094 *

\* Significance Value = 0.000.

Table 13 shows that there is a moderate positive correlation between the students' engagement and their academic performance levels since the value of the coefficient of the Pearson Correlation Test was 0.456 and lies between +0.30 and +0.49, and the statistical significance value was 0.000. Hence, there is a significant relationship  $\alpha \leq 0.05$  between students' engagement and their academic performance levels.

#### 4.4. Results Related to Question Four

To answer the fourth research question, the researchers used the Pearson Correlation Test to find out the correlation between the students' attitudes toward online teaching platforms and their engagement, as shown in Table 14 below.

**Table 14.** Results of the Pearson Correlation Test.

Dimensions	Mean	Std. Pearson Correlation Value
Students' Attitudes toward online Teaching platform	3.0892	0.54780 *
Students' Engagement	3.1672	0.400 *
		0.73094 *

\* Significance Value = 0.000.

Table 14 shows that there is a moderately positive relationship at the level of significance  $\alpha \leq 0.05$  between the students' attitudes toward learning through an online teaching platform and their attitudes toward the role of an online teaching platform in enhancing their engagement level since the coefficient value of the Pearson Correlation Test ( $r$ ) was 0.400, and the value of ( $r$ ) lies between 0.3 and 0.5.

#### 4.5. Results Related to Question Five

To answer the fifth research question, the researchers used the Pearson Correlation Test to find out the correlation between the students' perspectives toward the instructor's role in online learning and their engagement level. The results revealed that there was a strong

positive correlation at the level of significance  $\alpha \leq 0.05$  in favor of students' perspectives toward instructors' roles in online teaching. The coefficient value of the Pearson Correlation Test ( $r$ ) was 0.625, which is greater than 0.5.

#### 4.6. Results Related to Question Six

To answer the sixth research question, the researchers used the Pearson Correlation Test to find out the correlation between the students' perspectives toward the instructor's role in online learning and their academic performance levels. The results showed that there was a weak correlation at the level of significance  $\alpha \leq 0.05$  in favor of students' perspectives toward their instructors' role in online teaching. The Pearson correlation coefficient ( $r$ ) value was 0.354 and lies between 0 and 0.3.

### 5. Discussion and Conclusions

The most relevant results have allowed the researchers to achieve the objectives set at the beginning of this research. These are, on the one hand, to identify students' attitudes toward online teaching platforms, and on the other hand, to assess the role of online teaching platforms in enhancing students' engagement level, examine the association between students' online engagement and their academic performance levels, and to determine the correlation between students' perspectives toward their instructors' role in their online learning and engagement.

The researchers have started assuming that the varied attitudes of students are influenced by their specific knowledge and skills that allow them to integrate that knowledge and experience with new skills into their online courses. The researchers also attributed a large number of respondents' dissatisfaction with online education to poor organization and design of online learning activities, difficulties in maintaining interaction and comprehending online materials when using the Moodle platform, infrastructure issues, professors' insufficient skills in online teaching, a lack of regular feedback about their progress from their instructors, and a limited number of resources that a student could access. These results coincide with those found in several studies [37,39,40,46–49]. On the other hand, the research conducted by Khan et al. [41] emphasizes the positive influence of the design of online courses on students' satisfaction, performance, knowledge, and skills. Besides, Gopal et al. [35] and Yasin et al. [49] agreed that in order to improve the effectiveness of online teaching, instructors should prioritize self-efficacy when designing online courses. The participants' low attitudes toward their asynchronous classes were consistent with the findings of previous studies, such as the research conducted by Borg [50], who found that students reported higher levels of comfort using online synchronous classes than both in-person and online asynchronous classes.

In addition, the researchers emphasized that online teaching platforms can help students to interact moderately with online courses in different forms because they offer a variety of resources such as breakout rooms, discussion boards, discussion forums, and wikis that aid in the development of their knowledge and comprehension in online courses. This is consistent with the findings of Aderibigbe [37] and Abou-Khalil et al. [51], who found that students expressed positive perceptions toward the platform's engagement tools and resources and felt engaged in the courses through online discussions. Sørnum [46] also confirmed that students' motivation scored a higher percentage than autonomy and digital pedagogy in their ability to adapt to online learning. In contrast, Chen et al. [52] have stated that the Zoom platform needs to improve its communication and interaction, teaching functionalities, and student status management. In the same vein, Dumford and Miller [11] found a significant link between student engagement and the number of online courses taken. Farrell and Brunton [30] concluded that a successful online student engagement experience is influenced by various psychosocial and structural factors.

Furthermore, the researchers have begun to believe that there is a need to develop more materials for online learning, as well as specialized training courses and workshops to assist students in improving their online learning skills, experiences, and academic performance.



There appears to be broad agreement on the importance of student satisfaction in predicting academic experience in online learning [34–36,41,49,53–55].

The researchers assume that the instructors have the necessary skills, experiences, and resources to teach online courses, which is consistent with Almusharraf and Khanro [53], who found that the majority of students were satisfied with their instructors' support in terms of course activities, assessment, teaching pedagogies, and delivery of online lectures. On the other hand, Rajabalee and Santally [56] reported that students were dissatisfied with their instructors' role in online teaching.

The results also proved that students who took a higher percentage of online courses engaged less in collaborative learning. Moreover, students enrolled in AQOU demonstrated the highest level of agreement regarding the positive role of online teaching platforms in enhancing their engagement. This finding is consistent with the studies conducted by Borup et al. [57] and Conijn, Van den Beemt, and Cuijpers [58], who reported a positive relationship between MOOC activities and final grades in on-campus courses. Conversely, students at AAU showed the lowest level of agreement across all dimensions regarding the positive role of online teaching platforms in enhancing their learning, which could be attributed to their lack of experience with online learning compared to students at AQOU, which is an open university employing distance learning for all university degrees. This finding is supported by Nieuwoudt [43], who found a significant relationship between final grades and the number of hours spent by students on the Learning Management System (LMS). Similarly, Borg et al. [50] reported that in-person teaching was perceived as more effective than both synchronous and asynchronous online teaching. However, Friska [38] found that most students held a positive perception of e-learning in general, whether delivered synchronously or asynchronously and viewed it as a helpful aid to their learning process.

Additionally, students who took synchronous online courses expressed a higher level of agreement regarding the positive role of online teaching platforms in enhancing their academic performance than those who took solely asynchronous online courses. This finding is supported by Rinekso and Muslim [59], who found that the synchronous online discussion method of teaching was effective and should be used in teaching English synchronous courses. The results also stressed that the lack of skills, experience, and necessary requirements among students may have affected their attitudes toward the positive role of online teaching platforms in enhancing their academic performance and engagement. This finding is highlighted by Sweetman [60], who addressed the importance of establishing norms and expectations for students during synchronous class sessions and creating a framework for group work to enhance student engagement and performance.

Moreover, the results emphasized that students tend to engage and perform better in blended courses than in purely synchronous or asynchronous courses. The result is supported by Adnan and Anwar [39], who have pointed out that online learning may not be effective in underdeveloped countries, where most students face difficulties accessing the internet due to technical and economic challenges.

Further to that, the researchers stressed that online engagement could impact students' academic performance levels, and the success of this relationship is dependent on the integration of the online course, materials, instructor skills, and online teaching strategies. This finding aligns with previous research by Conijn, Beemt, and Cuijpers [58], who discovered a positive association between students' participation in a Massive Open Online Course (MOOC) and their MOOC completion. They also found that all MOOC activities were positively linked to final grades. Another study by Nieuwoudt [43] emphasized a significant relationship between the number of hours students spent on the Learning Management System (LMS) and their final grades. In contrast, Abou-Khalil et al. [51] focused attention on the importance of careful planning to support meaningful interactions and maintain online engagement. Similarly, Francescucci and Rohani [61] highlighted the positive impact of synchronous online learning on students' engagement, attendance, and participation.

In addition, the researchers confirmed the existence of students' positive attitudes and satisfaction are crucial predictors of their meaningful interaction, participation, and engagement in online learning courses. These results corroborate those of Rajabalee and Santally's [56] study, which found a significant and positive correlation between student satisfaction and engagement. Aristovnik et al. [54] also foregrounded the positive impact of online teaching methods on higher education students' attitudes and satisfaction. Likewise, Gopal, Singh, and Aggarwal [35] and Almusharraf and Khahro [53] stressed the importance of instructors' support in terms of course activities, assessment, teaching pedagogies, and delivery of online lectures in increasing students' attitudes, satisfaction, and engagement in their online learning. Aparicio, Bacao, and Oliveira [32] also pointed up the critical role of students' satisfaction with online learning systems in the success of e-learning.

Through examining students' attitudes towards online teaching platforms, the researchers conclude that students' dissatisfaction and their varied attitudes towards online teaching platforms based on their online learning experiences will provide higher education institutions in Palestine with new insights into the role of online teaching platforms and open the way for further contributions that focus on the development of students' online engagement and academic performance at Palestinian universities. We must also stress the strong correlation that was discovered between the instructor's role in online learning and students' engagement in online classes. With this, more specialized training in online teaching will contribute to better online engagement and academic performance, along with professional development, awareness programs, and the development of technical infrastructure problems.

It is important to note, however, that this study has several limitations. First and foremost, there are limitations in terms of the sample and size. To that end, the present research was carried out only at three Palestinian higher education institutions: Al Quds Open University, An Najah National University, and Arab American University. In addition, the study's population was limited to bachelor students of English specializations. Second, limitations in terms of the results. However, the current research investigated student attitudes towards the role of online teaching platforms in enhancing their engagement and academic performance level, and their perspectives towards the instructors' role in online teaching are examined. Nevertheless, the researchers confirm that these results can contribute to developing a full picture of what is happening in similar educational contexts. Third, limitations in terms of the existing literature.

The results discussed in this paper provide the following insights for future research. First, the researchers recommend exploring more recent systematic reviews that investigate student perceptions of online education and learner' teaching format preferences. Second, further studies involving more universities with samples from different specializations will confirm or contrast the findings of the current study.

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