Students' Evaluating of Online Learning Quality at Al Baha University and Their Satisfaction with Online Courses

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Abstract

The study aims to explore students' perceptions of the quality of online courses offered for them at Al-Baha University. The current study mainly explores the quality of online learning courses, students' satisfaction with online learning courses, and the effect of students' perceived quality of online learning on their satisfaction with these courses. The quality of online courses was measured based on the following factors: learning outcomes, assessment and measurement, learning resources material, learner interaction, and online course technology. An online survey was used to collect data. Seventy-nine graduate students participated in the study. Findings showed that the overall quality of online education was high, and students were predominantly satisfied with their online courses. Additionally, the study found that gender, learning outcome, learning resources, learner interaction, and online technology were significant predictors of students' satisfaction. The study includes recommendations for implementing online courses as well as suggestions for future studies.

Keywords: perceptions, student satisfaction, online learning quality, Saudi Arabia, university

1. Introduction

1.1 Overview of the State of Online Learning

For the last two decades, technological advancements have affected almost all sectors of life. In higher education institutions, they have resulted in the formulation of online learning platforms that allow students to learn from their homes. Online learning has several benefits compared with the traditional face-to-face mode of learning.

According to Bączek et al. (2021), online students reported the main advantages of online learning as (1) learning at their own pace, (2) feeling comfortable with their surroundings, and (3) continuous access to the class materials. Despite these benefits, some researchers argue that online learning reduces student interaction capability due to limited social interactions (O'Doherty et al., 2018). Learners tend to become less satisfied with this mode of learning over time. In addition, online courses increasingly demonstrate receding student retention rates (Bawa, 2016).

After the emergence of the COVID-19 pandemic, learning institutions worldwide were forced to embrace online learning to control spread of the virus. During this period, these educational institutions established various measures to evaluate learners' experiences in online learning environment.

The current study mainly explores the quality of online learning, students' satisfaction with online learning, and online learning quality factors that might affect students' satisfaction with online learning. The findings of the study can help policymakers, educational organizations, and faculty members to enhance the learning experience by implementing improved methods, which will lead to achievement of the learning objectives.

The following section reviews previous research studies on university students' perceptions of online learning. It mainly explores two themes: the quality of online learning and students' satisfaction with online learning.

1.2 Quality of Online Learning

Key stakeholders in online learning, such as educational organizations, faculty, and students, continue to face the challenge of sustaining a high-quality process. Several scholars have explored various aspects of quality and students' perception of online learning (Abushamleh & Qusef, 2021; Gul et al., 2019; Olmos-Gómez et al., 2021; Simpson, 2012). This section explores previous literature covering the quality of online learning. It also highlights

how past research findings relate to the current study.

Olmos-Gómez et al. (2021) conducted a study to examine the educational quality of higher education among students and professors in Naples, Italy. The participants of the study included 501 students and 121 instructors. The study used a quality and satisfaction questionnaire that followed the ethical guidelines of the Helsinki Declaration. It further used a series of t-tests to relate satisfaction with educational quality. The findings revealed that instructors were satisfied with the enhanced accessibility of informative materials online. According to the authors, improved IT infrastructure was necessary to improve the students' experiences. Further findings revealed that students were satisfied that the online facilities facilitated the planning of academic activities. Their ability to participate in various activities, via these platforms, further enhanced their experiences. Thus, improving the quality of online learning increases the perceived satisfaction of professors and students. In another study, Simpson (2012) investigated the factors related to quality of online education that contributed to students' satisfaction with online learning and online courses. The 764 participants in this study were divided into three groups according to their institutions and whether their courses had been peer-reviewed. The study used a 5-point Likert-type scale questionnaire survey to collect data. The analysis was conducted through a t-test, a one-way ANOVA, and a simple linear regression. Findings showed that a wide variety of factors affect the quality and perception of online education and further determined that various predictors influence the quality of online education and students' perceptions. Comfort with online courses had positive influence on students' satisfaction, whereas age, gender and number of past online courses taken had no significance on students' satisfaction levels.

Furthermore, Abushamleh and Qusef (2021) conducted a study that investigated the quality of online education at a university in Jordan. The participants included 201 students from the university. It was conducted through the administration of questionnaires formulated by the SERVQUAL model. The findings showed that student satisfaction and service quality dimensions had a positive relationship. The researchers, therefore, concluded that students' satisfaction levels were higher when the quality of online learning was higher and vice versa.

Likewise, Gul et al. (2019) studied whether the quality of online education affected the levels of students' satisfaction with online learning. The participants included 520 students from higher education institutes in Khyber, Pakistan. The data analysis was conducted by using a regression analysis. The findings indicated that there was a positive correlation between students' satisfaction and a quality of online learning. They also showed that service quality had a significant impact on student satisfaction levels in online learning.

Based on the above review of literature, the findings of conducted research studies revealed that learning institutions could use various elements to enhance the quality of online learning. For instance, they could use technology to enhance learners' ability to access various learning materials. Learning institutions could also use IT infrastructure to enhance learners' experiences, which could also improve students' perceptions of the e online learning platforms. Other factors that determine students' perception of quality include the comfort of using online learning platforms, students' gender, and age (Afacan Adanir, 2020; Bahar & Asil, 2018; McGorry, 2003).

Further analysis revealed that the quality of online learning was positively correlated to students' perceptions (Ralston-Berg &Nath, 2008). The findings of the previous studies are particularly useful to this study, since they would suggest the factors that would determine the quality of online learning

1.3 Students' Satisfaction with Online Learning

Online learning has dramatically increased throughout the decades, and the prevailing COVID-19 pandemic has undoubtedly accelerated this ongoing process. What was once just a step in technological advancement towards a more-educated world, recently became a requirement by governments and learning institutions to prevent the spread of COVID-19. The drastic change from the traditional face-to-face learning mode has raised concerns about students' satisfaction with the new online learning mode. This section explores previous research articles covering the online learning related issues that the educational institutions might face and how these institutions should address them

Barnes (2017) studied students' perception and satisfaction with online courses and whether their perceptions were the same regardless of different variables ranging from major, gender, age, and the number of online courses taken. The participants included over 350 students from a regional university located in the state of Texas, in the United States. The study utilized a survey consisting of statements that the students were required to agree or disagree with. The analysis used a contingency table and chi-square tests to validate the research findings. Study findings revealed that students' perceptions determined their level of satisfaction with online learning. Thus, students who perceived online learning as a superior learning methodology were more satisfied than their counterparts who perceived it as an inferior method. Further findings indicated that the age of the students affected their satisfaction rates. Notably, older students, due to their maturity, enjoyed the flexibility of online learning more than their

younger counterparts. Other factors that influenced the students' perceptions of online learning included the nature of the course. If the course was technical and limited materials were available, the students' satisfaction rate was lower.

In a different study, Hashemi (2021) examined how the students' level of satisfaction with online learning and COVID-19 affected their academic performance. The participants included 1,231 students between 18 and 30 years of age, from private and public universities in Afghanistan (867 males, 364 females). The study method was a survey questionnaire that implemented the 5-point Likert-type scale with three sections that the students were expected to answer. The analysis utilized descriptive and inferential statistical analysis to interpret the results. The findings indicated that COVID-19 negatively affected the academic performance of the students. Further findings showed that the students were dissatisfied with the online learning platforms implemented during the COVID-19 pandemic. Factors contributing to this dissatisfaction included reduced teacher-student interaction, inadequate support, and frequent interruptions by power blackouts during sessions. The study findings also indicated that female students were less satisfied with the online learning platforms than their male counterparts because they were restricted from accessing various technological tools used for learning. Ultimately, the findings confirmed a strong positive correlation between Afghan students' academic performance and their level of satisfaction.

Another study by Wei and Sri Ramalu (2011) examined the relationship between student satisfaction and the quality of the service offered. The participants included 100 students from a Malaysian university (27 males, 73 females). The study was conducted by administering a structured field survey that required the students to rate their level of satisfaction towards the quality of services at the university. Findings showed that higher quality services were associated with a higher level of student satisfaction, and vice versa. The results revealed that if the university offered better quality services, students were more likely to be satisfied.

Moreover, Himat et al. (2021) evaluated Afghani students' satisfaction of online learning during the COVID-19 pandemic. The participants included 340 students from Kandhar, selected through random sampling (291 males, 49 females). It was conducted through a survey in which the students were given questionnaires with a Likert-type scale where they were to rate from "strongly agree" to "strongly disagree". The findings showed that students' satisfaction was low due to various factors ranging from a lack of access to the internet and a preference for learning in the traditional classroom setting.

Furthermore, Caliskan et al. (2017) conducted a study that investigated students' satisfaction levels with distance education through the courses they were taking. The participants included 107 undergraduate students from different faculties in a private university. It was conducted through a survey method known as the Distance Education Satisfaction Survey. The tests carried out in the analysis were t-tests and a one-way ANOVA test. The findings showed high satisfaction levels in students taking online distance courses. They also revealed that the students preferred online courses due to the orientation process given before learning commenced.

Harvey et al. (2017) conducted a study that examined whether expectations of online learning varied based on gender. The participants included 834 students from a Mauritius university who were taking online courses. A mixed-methods approach of surveys and focus groups was used. The analysis used structural equation modeling and factor analysis in interpreting the results. Researchers discovered that instructor empathy, reputation of the university, and physical facilities were the three major factors that contributed to student satisfaction. In addition, there was no significant difference in satisfaction levels among students based on their gender. In another study, Surahman and Sulthoni (2020) investigated students' satisfaction levels with online courses in higher education. The participants of the study were 139 male and 84 female students from 26 universities in Indonesia. The researchers used a 19-statement questionnaire to collect data from students. Data analyses revealed that the levels of satisfaction among participants ranged from 60% reporting satisfied or very satisfied, to 40% reporting dissatisfaction. The findings of the study showed that this dissatisfaction could be attributed to the instability of the learning management system used, lack of feedback, and unclear material assignments given by instructors. The study suggests that in order to improve students' satisfaction levels with online learning, both policymakers and instructors need to take actions such as improving the learning management system. Also, instructors should provide students with both constructive feedback and interactive learning opportunities.

Sterling (2015) examined students' satisfaction with their online class experiences and whether the opportunities and actual human interactions with instructors and students during their online course influenced the satisfaction levels. The participants were 253 students who had enrolled in 21 different classes. A questionnaire was used to gather quantitative data; additionally, students' responses to the open-ended and close-ended questions were analyzed through qualitative analysis. The findings revealed a significant relationship between human interaction and students' satisfaction with online courses.

Alkharabsheh and Awwad (2021) conducted a study that examined students' satisfaction with online learning and the obstacles that influenced their experiences and perceptions. The participants included 386 students from the University of Jordan. It was conducted through administration of an online survey through Google Forms. The findings showed that the majority of students were not satisfied with the online learning experience due to technical problems or lack of a computer skills usage and ownership.

Al Soub et al. (2021) conducted a study that examined the levels of chemistry students' satisfaction with their e-learning courses during the COVID-19 pandemic. The participants included 126 students from the Aqaba University of Technology in Jordan. It was conducted through that the use of a Likert-type scale questionnaire concerning various factors, including website improvement, interactions with e-learning, techniques, and instruction. The results were analyzed using interferential and descriptive approaches. The findings showed high levels of student satisfaction while learning chemistry during the pandemic. They also showed that gender acted as one of the variables that influenced these levels. Females reported being more satisfied than males.

Ansar et al. (2020) conducted a study to investigate students' perceptions of online learning during the COVID-19 pandemic. The participants included 600 students at various universities in Pakistan. The students were from the fields of art, medicine, and engineering. The study was conducted through the administration of questionnaires that contained 23 questions aimed at identifying students' satisfaction levels. The results were analyzed using ANOVA tests, chi-square method, independent sample t-tests, and descriptive statistics. The findings showed that 81% of the students were dissatisfied with online learning. They also attributed these results to concerns ranging from examination fairness, communication between the students and instructors, difficulty in understanding concepts, and the assessment methods used in evaluating student results.

Rhema et al. (2013) conducted a study to examine students' experiences with and perceptions of e-learning. The participants included engineering students from the departments of Petroleum Engineering and Electrical Engineering from the University of Al-Jabal Al-Gharbi and the University of Tripoli in Libya. The researchers administered a Teleconference Evaluation Questionnaire, which consisted of nine statements that the participants rated on a scale from 1 to 5. The findings showed that all students were interested in online learning, which correlated to their positive perceptions of using technology for learning purposes. They also revealed that students and instructors from the two universities believed in its benefits, which may have contributed higher levels of satisfaction with technology.

Bawaneh et al. (2020) conducted a questionnaire-based study to examine students' satisfaction with e-learning in the ongoing COVID-19 pandemic. The participants included 107 volunteer students from the University of United Arab Emirates. Analysis was conducted through a one-way ANOVA test, calculations of mean, and standard deviation. The findings showed the students' satisfaction levels varying in degree from different independent variables, including major residential location, gender, GPA, and educational level. The findings showed a higher satisfaction level with the variable of academic level as compared to the other independent variables.

This above review investigated students' level of satisfaction with online learning. The results were varied; some students were satisfied, while others were not. One of the most significant determinants of students' level of satisfaction and subsequent satisfaction rate was the age of the students. It was established that the higher the student's age, the greater the satisfaction with the online assessment system, perhaps due to greater maturity. Dissatisfied students blamed reduced teacher-student interaction, inadequate support, and frequent interruptions by power blackouts during sessions for their negative perceptions about e-learning platforms. In contrast, those who were satisfied with the system appreciated the flexibility associated with online learning platforms. Further analysis revealed that instructor empathy affected the students' perception of e-learning. The findings are helpful to this study since they highlight the factors that determine students' satisfaction rate and their subsequent perception of e- learning, which is the main objective of this study.

Additionally, the previous literature review portrays mixed perceptions of e-learning. For instance, most students preferred traditional modes of learning as opposed to e-learning platforms. This was perhaps because they missed connecting physically with their colleagues. Others were satisfied with the volume of digital learning materials available online. According to them, this was better than attending a physical library. Another reason for students' satisfaction with e-learning platforms was the ability to check and obtain results online. All these dynamics are relevant to the current study, since they can explain the determinants of students' perception of e- learning.

2. Study Method and Design

The present descriptive study was quantitatively designed to address graduate students' satisfaction with and perception of online learning.

2.1 Instruments

A seven-domain questionnaire was used in this study. These domains were : (a) students' background with online learning; (b) learning outcome, which investigated students' perception concerning the delivery of objectives and assessment at the beginning of a course; (c) assessment and measurement, which examined students' perception regarding the course assessment methods; (d) learning resources, which investigated students' opinion on the delivery of resources related to the class content and their personal learning; (e) learner interactions, which explored the extent to which students find teacher-interaction important; (f) online technology, which examined students' opinions on the online platform; and (g) satisfaction, which assessed overall student satisfaction. This questionnaire, which consists of 35 questions, has been validated and accurately depicts the main points of students' perceptions regarding online learning.

To measure students' perceptions of the quality of online learning, an instrument was adopted with permission from Simpson (2012) and permission was obtained from Strachota (2006) to use a survey that measures students' satisfaction with online courses. Both surveys measure participants' agreement according to given stances, ranging from strongly disagree to strongly agree. Each response corresponded to a specific score, which was further totalized for both the descriptive and the inferential statistical analyses.

2.2 Research Questions

- How do Al Baha graduate students in the College of Education evaluate the online learning quality dimensions (learning outcomes [LO], assessment measurement [AM], learning resources materials [LRM], learner interactions [LI], and online course technology [OCT])?

- What are the levels of satisfaction with online learning of Al Baha graduate students at the College of Education?

- What are the impacts of online learning quality dimensions (LO, AM, LRM, LI, and OCT) on Al Baha graduate students' satisfaction with online learning at the College of Education?

2.3 Participants

The participants were 37 male and 42 female master's level students majoring in art education, curriculum and instruction, instructional technology, educational leadership, and special education in the College of Education at Al Baha University.

2.4 Data Collection

Data were collected electronically at one time point using an adapted self-reporting questionnaire. A total of 37 male and 42 females were recruited via email. The questionnaire was sent to all graduate students in the College of Education who took classes during the second semester of the 2020-2021 academic year.

2.5 Statistical Analysis

Statistical analyses were conducted via Intellectus Statistics which is an online software for analyzing data. Demographic data and questionnaire results were all descriptively analyzed via means, standard deviation, and cumulative percentage. To test the reliability of the adopted questionnaires, Cronbach's alpha values were calculated. Lastly, a linear regression model was applied to verify the demographic factors that were associated to overall students' satisfaction. Alpha level was set at 0.05.

Table 1 shows the Cronbach's alpha coefficients for the instruments' constructions.

Table 1. Cronbach's alpha coefficients

Study Constructs	Cronbach's Alpha
Satisfaction	0.94
Learning Outcome	0.78
Background	0.89
Assessment and Measurement	0.94
Learning Resources	0.89
Learner Interactions	0.87
Online Technology	0.94

3. Results

Cronbach's alpha coefficient was applied to these questionnaires and results were classified as follows: (a) > .9 excellent, (b) > .8 good, (c) > .7 acceptable, (d) > .6 questionable, (e) > .5 poor, and (f) ≤ .5 unacceptable (George & Mallery, 2018). The items related to satisfaction displayed a Cronbach's alpha coefficient of 0.94, indicating excellent reliability. The items belonging to the learning outcome category exhibited a Cronbach's alpha coefficient of 0.78, indicating an acceptable reliability. Questions within the background domain exhibited a Cronbach's alpha coefficient of 0.89, indicating good reliability. The items for assessment and measurement had a Cronbach's alpha coefficient of 0.94, demonstrating an excellent reliability. Questions regarding learning resources had a Cronbach's alpha coefficient of 0.89, which indicates good reliability. The items for learner interactions had a Cronbach's alpha coefficient of 0.87, indicating good reliability. Lastly, questions concerning online technology had a Cronbach's alpha coefficient of 0.94 – also indicating excellent reliability.

Demographic results are as shown in Table 2. The study sample comprised 37 male and 42 female master's students. The descriptive results are summarized in Table 3.

Table 2. Demographic data

Variable	N	%	Cumulative %
Gender			
Male	37	46.84	46.84
Female	42	53.16	100.00
Academic Major			
Special Education	16	20.25	20.25
Curriculum and Instruction	15	18.99	39.24
Art Education	22	27.85	67.09
Instructional Technology	14	17.72	84.81
Educational Leadership	12	15.19	100.00
Age Nominal			
1	4	5.06	5.06
2	37	48.10	53.16
3	38	46.84	100.00

Table 3. Questionnaire results summary

	Mean	SD
Background	4.33	0.81
Learning Outcome	4.48	0.62
Assessment and Measurement	4.32	0.90
Learning Resources	4.44	0.78
Learning Interaction	4.57	0.66
Online Technology	4.53	0.71
Satisfaction	4.61	0.62

The first research question:

To answer the first research question, "How do Al Baha graduate students in the College of Education evaluate the online learning quality dimensions (LO, AM, LRM, LI, OCT]?", will now be discussed.

Regarding students' background, about 93.67 % of respondents either strongly agreed or agreed that information regarding design navigation and faculty information was clearly shown in their first online class. In regard to technology support, 89.87% either strongly agreed or agreed that it was available, while 78.48% either strongly agreed or agreed that student support was available for online courses.

Concerning learning outcomes, about 92.4% of student respondents found it important to have the learning objectives of the course provided, while 86.08 % agreed that the descriptions of the objectives were clear. Out of the respondents, 87.35% felt that the objectives of the online course closely resembled what they expected to learn, and 93.67% considered the course objectives helpful tools to guide their learning activities. Only 2.54% of them did not find it important to be provided with the course assessment method at the beginning of a course.

In regard to assessment and measurement, 84.81% of students strongly agreed or agreed that the course assessment methods were clearly explained at the beginning of the course. Results also showed that 87.34% of respondents strongly agreed or agreed that the online assessment methods were clearly described and varied, 83.28% strongly agreed or agreed the course included a variety of assessment methods, and 88.61% of students agreed that the methods were closely related to the course's objectives.

Concerning learner interactions, 96.2% of students strongly agreed or agreed that interaction with an instructor throughout the course is important, while 92.4% of students strongly agreed or agreed that instructors interacted with them in a timely fashion, and 92.4% of students strongly agreed or agreed that interaction with instructors helped them achieve the course objectives. The amount of interaction with this online course was helpful in achieving the course objectives, according to the 88.6% of students who strongly agreed or agreed, while 94.94% of students strongly agreed or agreed that being provided with course technology enhances learning. Respectively, regarding online technology, 93.67% of students strongly agreed or agreed that the technology for the online course was readily available during the course, 93.67% of students strongly agreed or agreed that the online resources functioned well, 92.41% of students agreed that the course technology was helpful in reaching the course's objectives, and 89.87% of students strongly agreed or agreed that the online learning materials helped them throughout the learning process.

The second research question:

The answer to the second research question, "What are the levels of satisfaction of Al Baha graduate students at the College of Education with online learning?", will now be discussed.

The findings revealed that 92.4% of students strongly agreed or agreed that the online learning materials helped them throughout learning. Similarly, 88.6% of students strongly agreed or agreed that online courses improved their skills, 87.34% of students strongly agreed or agreed that instructors were available when assistance was needed, and 94.94% of students strongly agreed or agreed that they could feel the instructor's presence. Students had a high degree of self-reported computer knowledge, and 98.74% of students strongly agreed or agreed that that they were confident in their ability to use computers and that they find it easy to work with technology. Overall satisfaction was high, with 96.2% of students strongly agreeing or agreeing that they are satisfied with online courses, 94.94% of students strongly agreed or agreed that online courses met their learning needs, and 92.41% of students strongly agreed or agreed that online courses are as effective as face-to-face courses.

The third research question:

To answer the third research question, "What are the impacts of online learning quality dimensions (B, LO, AM, LRM, LI, and OCT) on Al Baha graduate students' satisfaction with online learning at the College of Education?", will now be discussed.

A simple linear regression was calculated to predict the impacts of online learning quality dimensions. The linear regression model was statistically significant, as shown in Table 4. As $F(7,71) = 87.46$, $p < .001$, $R2 = 0.90$, indicating that approximately 90% of the variance in satisfaction is explainable by gender, learning outcome, background, assessment and measurement, learning resources, learner interactions, or online technology. Specifically, being a female significantly predicted satisfaction, $B = 0.15$, $t(71) = 3.19$, $p = .002$. Based on the results of this study, being a female increased the mean value of satisfaction by 0.15 on average. Learning outcome significantly predicted satisfaction, $B = 0.24$, $t(71) = 3.45$, $p < .001$ – indicating that a one-unit increase of learning outcome increased the value of satisfaction by 0.24. Also, a one-unit increase in learner interactions ($B = 0.32$, $t(71) = 4.21$, $p < .001$) increased the value of satisfaction by 0.32. Lastly, online technology significantly predicted satisfaction, $B = 0.52$, $t(71) = 6.61$, $p < .001$, demonstrating that a one-unit increase of online technology increased the value of satisfaction by approximately 0.52, on average.

Table 4. Regression analysis results

Variable	B	SE	95% CI	B	T	P
Intercept	0.28	0.20	[-0.12, 0.68]	0.00	.39	0.170
Gender (Female)	0.15	0.05	[0.06, 0.25]	0.12	.19	0.02
Learning Outcome	0.24	0.07	[0.10, 0.37]	0.24	.45	<0.001
Background	*-0.03*	0.05	[-0.13, 0.06]	0.04	0.67	0.506
Assessment & Measurement	0.05	0.05	[-0.06, 0.15]	0.07	.91	0.366
Learning Resources	-0.16	0.08	[-0.32, 0.01]	-0.20	1.88	0.065
Learner Interactions	0.32	0.08	[-0.32, 0.01]	0.34	.21	<0.001
Online Technology	0.52	0.08	[0.37,0.68]	0.60	.61	<0.001

Note. Results: $F(7,71) = 87.46$, $p < .001$, $R2 = 0.90$.

Conversely, background was not a statistically significant predictor of, $B = -0.03$, $t(71) = -0.67$, $p = .506$. Based on this sample, a one-unit increase in background did not have a significant effect on satisfaction. Also, neither assessment and measurement nor learning resources significantly predicted satisfaction ($B = 0.05$, $t(71) = 0.91$, $p = .366$; $B = -0.16$, $t(71) = -1.88$, $p = .065$, respectively).

4. Discussion

The present study evaluated the quality of online education from the students' point of view, their satisfaction toward online courses, and factors that can predict their satisfaction. According to the current study findings, the overall quality of online education was appropriate, and students were predominantly satisfied with their online courses. Statistically significant predictors of satisfaction included: (a) female gender, (b) learning outcome, (c) learning resources, (d) learner interaction, and (e) online technology.

Gender is a known predictor of online satisfaction. The present study demonstrated that being a female significantly predicted satisfaction towards online education. Al Soub et al. (2021) also observed similar findings, as females tended to be more satisfied with online chemistry courses than males. While their findings comprised only online chemistry courses, the present study expands their results and demonstrates that gender is also a predictor of satisfaction for humanities courses.

Besides gender, learning outcome, provided resources, and learner interaction were also detected to be predictors of students' satisfaction. The extent to which students were satisfied with online learning correlates to learning outcome, the resources provided to them, and their interactions with the course instructor. In line with findings from the current study, Roach and Lemaster (2006) demonstrated that student satisfaction was fundamentally related to course delivery, which includes the course's resources and the format upon which their studies were based. The authors further revealed the importance of student interaction with instructors, given that students were inclined to be satisfied with professors who were active responders (Roach & Lemaster, 2006). Likewise, the present study revealed that satisfaction of students from the Graduate College of Education was positively associated with their interactions with their instructors. Interaction provides safety and direction to students, which possibly explains some of the findings. Accordingly, Sterling (2015) has also demonstrated that students' satisfaction is positively associated with human interactions. In addition to these predictors, online technology enhanced satisfaction in the current study sample.

Online technology, which refers to accessibility and ease of use, was also a predictor of satisfaction. Students' perceptions towards technology play a significant role in the extent to which they are satisfied with online learning. For instance, Rhema et al. (2013) observed that students exhibited positive perception regarding e-learning. Indeed, students felt confident and enjoyed using computers in their studies. Students were also aware of the benefits of e-learning.

In this regard, user-friendly technologies that positively modulate the perceptions of students might be necessary to increase their overall satisfaction. The present study, as a whole, gives insight into factors that contribute to students' satisfaction.

The main recommendation involves applying some of the present study's findings to the online classroom environment. One can neither predict nor control the age and gender of enrolled students, but one may recommend the use of user-friendly platforms accompanied by highly interactive instructors, as they were positively associated with satisfaction in this study and in previous reports. While the present study is limited to one group of students, it calls for the need of future reports addressing different groups of online learners.

It is likely that the aforementioned aspects, including technological ease of use, continuous instructor interaction, and outcomes, are crucial for effective online learning, which provides an adequate amount of knowledge to worldwide students (Garnjost & Lawter, 2019; Roach & Lemasters, 2006; Sterling, 2015).

5. Conclusion

The present study demonstrated that student satisfaction towards online learning was associated with being female, as females tended to be more satisfied. Also, the availability of learning resources, for both genders, was associated with better satisfaction. Additional variables, such as students' outcome, the extent to which the learner interacted with the instructor, and online technology, regardless of gender, were all associated with higher satisfaction scores for students enrolled at the Graduate School of Education at Al Baha University. Despite this study being limited to one group of online learners, it could be recommended that all online instructors be highly responsive to students and provide all the necessary resources students may need to achieve success, including using user-friendly online platforms.

From the findings, females were more satisfied with online learning platforms than their male counterparts. The findings were consistent with previous studies that show gender as a predictor of online satisfaction. Instructor interaction also positively influenced students' satisfaction rates, enhancing their overall perception rates. This is because interaction allows instructors to direct students closely. The user-friendliness of technologies used was also positively correlated to the perception of students.

Based on these findings, learning platforms should be enhanced to improve the learning experiences of male learners. For instance, game-like menus can be added to the platforms to increase the satisfaction rates of males. Institutions must also ensure that their e- learning platforms are user-friendly to make them more attractive to users. Instructors should be encouraged to be more interactive, since their interaction was positively associated with satisfaction. While the present study is limited to online students from the Graduate School of Education at Al Baha University, they highlight pertinent issues affecting learners' perceptions of e- learning. However, there is a need for further studies to ascertain whether the findings hold for other groups of online learners.

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