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# Impact of University Facilities on Student's Academic Achievement from Students' Perspectives: A Case Study of Taibah University

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**ABSTRACT**

**Purpose.** This research identifies the level of the facilities the university provides to students at Taibah University in Madinah and seeks to establish whether the facilities level influences academic achievement from a student perspective. It also explores the effect of the following variables: Gender, Qualifications, and Specialization. **Method.** The descriptive correlational approach was employed to achieve the study's primary objective. The study population is (74877) male and female students, and the study sample, selected by random sampling, included (382) male and female students. The study instrument was a questionnaire consisting of (49) items focusing on the two areas of interest: the facilities universities provided and academic achievement. The statistical package program (SPSS) was used to analyze the study findings. **Findings.** The results revealed that university facilities' overall level achieved a high mean (3.636). Also, the level of academic achievement was high, attaining an average of (4.016). A positive relationship was demonstrated between the level of university facilities and academic achievement. Moreover, there were no statistically significant differences correlating with the chief variables examined in the study (gender, Qualifications, and Specialization). **Implication for Research and Practice.** The research recommended enriching the curricula by diversifying student activities within the college and university to fulfil the students' varied needs.



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## Introduction

Taibah University, a Saudi public university located in Madinah, was established in 2003 after merging the Medina branches of Imam Muhammad bin Saud Islamic University and King Abdulaziz University. The mission of this newly formed university is to build a society that promotes sustainable development and knowledge economies through outstanding education, quality research, and community partnership. Its vision is to establish the university as an internationally recognized institution dedicated to excellence in teaching, research and community service. The university nurtures values like responsibility towards individuals, academic community and society; respect & appreciation for all faculty and staff; transparency and accountability; achieving quality & excellence through creative and innovative ideas in research and teaching; supporting leadership characteristics at all levels. (The general strategic plan of Taibah University 1445 AH)

With the view to attain its vision, mission, and values, Taibah University has dedicated itself to achieve strategic goals like excellence in teaching and learning; community development through active partnership; continuous improvement of services; creating an inclusive environment; and enhancing university ranking nationally, regionally & internationally. The leaders at Taibah University are keeping themselves abreast of developments and standards that would help them to create an exciting learning environment, among which university facilities are of top priority to ensure academic achievements of students.

University facilities determine students' intellectual competence and clearly define their academic future. Undoubtedly, with all their components and fields (system management, learning environment, infrastructure), university facilities directly influence and contribute to enhancing students' academic achievements. Hence, looking at the importance of university facilities in shaping the lives and careers of students, the current study was designed to study the impact of university facilities on students' academic achievements, particularly from the point of view of male and female students at Taibah University in Madinah. The study was based on the premise that students need ample outlets to develop their experiences effectively and in a positive environment.

In order to test the empirical validity of premise, the specific objectives of this study included: to detect the level of the available facilities at Taibah University from the participants' perspective; to detect the level of academic achievement among Taibah University students from their viewpoints; to determine whether there are statistically significant differences between the averages of the study sample's responses on the level of university facilities at Taibah University due to the variables of type, qualifications, and specialization; to determine whether there are statistically significant differences between the averages of the study sample's estimates of the level of academic achievement of Taibah University students due to the variables of gender, qualifications, and specialization; and to determine whether there is a correlation between the averages of the participants' responses on the level of university facilities at Taibah University and the averages of academic achievement among Taibah University students from their point of view

Based on these objectives, the following research questions were used as directions of the study:

1. What is the level of the availability of university facilities at Taibah University from the students' perspective?
2. Are there statistically significant differences at the significance level 0.05 ≥ ά between the averages of the study sample's estimates of the level of *university facilities* at Taibah University due to the variables of type, Qualifications, and Specialization)?
3. What is the level of academic achievement of Taibah University students from their point of view?
4. Is there a statistically significant correlation at the significance level 0.05 ≥ ά between the averages of the study sample's estimates of the level of university facilities at Taibah University and the averages of the study sample's estimates of the students' academic achievement level?

## Literature Review

- *Role of Education System and Vision*

The education system is vital to any country's economic, industrial and social progress (Sharma & Sharma, 2015). It develops human mental and cognitive abilities and moral values. These capabilities, knowledge and values improve the country's living standards and preserve the continuity of progress and competitiveness (Mukhamedov et al., 2020; Woessmann, 2016). While globalization strongly affected the higher education industry, it also intensified competition among higher education institutions as they adopt market-oriented strategies to differentiate themselves from their competitors (Krstić, Filipe, & Chavaglia, 2020). Among the objectives of the strategic vision laid down in the Saudi National Transformation Program are improving, recruiting, training and developing teachers; improving the learning environment to stimulate creativity and innovation; improving curricula and teaching methods; developing student values and basic skills, developing financing methods; improving financial efficiency; and educating students to meet national development and labour market requirements (Allmnakrah & Evers, 2019; Kingdom of Saudi Arabia, n.d.).

The Saudi Vision 2030 also stresses the importance of achieving quality in all sectors of the country (Allam, 2020; Bataeineh & Aga, 2022). It is based on three axes: a vibrant community, a thriving economy, and an ambitious nation. This vision also aspires to transform the Saudi economy from a traditional economy that depends on oil to another that depends on learning and producing knowledge, i.e., a knowledge economy. In this vision, a high priority is given by the Ministry of Education to develop modern curricula based on clear and precise standards. These include involving parents in the educational process, training students, facilitating their transition between educational tracks, helping them choose a suitable profession, and bridging the gap between educational outcomes and labor market requirements (Kingdom of Saudi Arabia, n.d.).

One of the unique programs under Vision 2030 is the Quality-of-Life Program, launched in 2018. It aimed to improve the quality of the lifestyles of residents and visitors in Saudi Arabia by building and developing the environment necessary to create more vital options that enhance positive lifestyles and increase the interaction of citizens and residents with society. This entails that the Saudi administration considers universities as important state institutions whose vision should aim at achieving environmental balance and providing

vital services to benefit the student in order to enhance their positive energy in the educational process (Mousa & Ghulam, 2019; Yusuf & Jamjoom, 2022). Moreover, after the pandemic, creating the environment, utilizing all available capabilities in an organized manner, and keeping pace with changes in the surrounding environment had become more challenging to achieve the goals of the institution and its future aspirations (Abdulrahim & Mabrouk, 2020). The universities, therefore, need to build an appropriate educational system by creating a suitable educational climate and deliver such facilities in the universities which lead to academic achievements of students and develop their creativity.

- *Facilities and Academic Achievement*

Past studies have examined the role and contribution of higher education providers that have continually emphasized upon providing facilities for students to meet their needs and ensure a competitive edge through their academic achievements (Bonfield et al., 2020; Darawong & Sandmaung, 2019; De Wit & Altbach, 2021; Newman, Couturier, & Scurry, 2010; Purcell, Henriksen, & Spengler, 2019; Rabin, 2014; Williamson, 2021). Rabin (2014), for instance, posits that successful leaders learn from three kinds of experiences during their careers –first from coursework and training (course-based skill-building, virtual classroom events, books, and articles, about 10%), second, from developmental relationships (communities of practice, networking, routing, about 20%), and third, challenge tasks (increase in scope, horizontal moves, new initiatives, transformation, errors, ethical dilemmas, about 70%).

Newman et al. (2010) stated that the university, in many ways, is the one that provides services that will achieve the goals of colleges and universities and includes many functions, such as creating a skilled and educated workforce, encouraging civic participation, and establishing social ties among students. Likewise, Ahmed (2010) identified both internal and external factors that affect students' academic achievement in higher education. The internal factors that determined students' academic achievements included students' own abilities, motivation, whereas external factors included a safe environment and a user-friendly learning management system, besides support services and facilities accessible to students. Wunti (2014) defined school facilities as "engines of learning growth" as they support the teacher and the learner to achieve effective learning that achieves the goals of education.

## Problem Statement

The general strategic plan of Taibah University 1445 AH emphasized upon the procurement of a few facilities and resources. First and foremost, the university plans to install a complete technical infrastructure for its specialized programs in science and technology, which should include multiple and diverse research centers. Secondly, the university had already planned to establish appropriate number of supporting deanships to run the basic functions of the university. Thirdly, initiatives have been taken to localize the culture of strategic planning, expansion of entrepreneurship and investment systems. This has led to completion of projects of building infrastructure for Yanbu and Al-Ula regions and several minor projects like setting up of student clubs, workshops and academic forums. Additionally, the university has ensured comprehensive risk management for all long and short-term activities in university's academic, administrative

and research sectors. Besides, there are various other facilities to develop and initiatives to be taken like community partnerships for students and employees, and simplifying university policies and aligning them with the principles of government procedures.

Despite all these initiatives and planning, conversely, very few have been materialized and attained, particularly micro-level issues have been ignored. For instance, there are shortcomings reflected in Taibah university such as shortage of classroom buildings, labs, college administrative offices of deanships, many of which have been delayed due to incomplete construction projects. There is no progress in building the Medical City and University Hospital, the plan of which was initiated in previous years. The retention rate of eminent professors and faculty is also very low, and there is also a severe lack of research and academic assistants. Academically, the university departments are not able to devise effective techniques for assessing the academic achievement of students nor there is any method to evaluate the performance of the teaching personnel.

The university although talks about stablishing research centers, there is very limited access to prestigious scientific publications for the faculty. Similarly, due to a weak online education initiative, there is very little cross-disciplinary collaboration. Owing to these shortcomings, Taibah University fails to provide basic academic services and facilities to its faculties, students, departments and research centers, thus creating difficulties for students to realize their academic dreams and aspirations. In this context, it is therefore necessary to examine the level of the availability of university facilities at Taibah University from the students' perspective; and also rate the level of academic achievement of Taibah University students (Taibah University's broad strategic strategy, 1445 AH).

## Methodology

- *Research Design*

The study adopted a quantitative research design, through which data was collected on a 5-point Likert scale. The quantitative data was aimed at finding out the extent to which university facilities contributed to academic achievement of students of Taibah University. This kind of design is highly recommended when the data needs to be rationalized through empirical findings. Moreover, quantitative research design is suitable to "identify unknown phenomena and then collect data to make it acknowledged" (Gall, Borg, & Gall, 1996). Therefore, the study also adopted the descriptive correlational approach for its relevance to the nature of the current study.

- *Data Collection Instruments*

A questionnaire based on a 5-point Likert scale ranging from very little (1) to very much (5) was used to find out the extent to which university facilities contributed to students' academic achievement, as perceived by students of Taibah University. The questionnaire was designed after reviewing previous studies and surveying some experts' opinions of Arabic and English experts. The questionnaire consisted of three main sections: the first section collected the demographics about age, gender, qualifications and scientific achievements; the second section contained statements related to university facilities divided into three parts: system management (10 statements), learning environment (13

statements), and infrastructure (13 statements); and the third section focused on the information related to student's academic achievement and their majors, and included (13) items.

- *Sampling and Participants*

The study population comprised all students of Taibah University in Madinah, studying bachelor's, diplomas, master's and doctoral degrees in each specialization. The total population from different colleges (n=74877) comprised male and female students. For the current study, the sample selected was according to the recommendations of Krejcie and Morgan (1970), which was (382) male and female students. Table (1) shows their distribution based on demographics information.

**Table 1.**

*Demographic Information of The Study Sample*

| Independent Variable | Level Or Category | (N=382) | Percentage |
|---|---|---|---|
| Gender | Male | 82 | 21.5% |
| | Female | 300 | 78.5% |
| Qualification | Bachelor's | 292 | 76.4% |
| | diploma | 25 | 65% |
| | Master's | 45 | 11.8% |
| | PhD | 20 | 5.2% |
| Scientific Specialization | Humanities and Social Sciences | 107 | 28% |
| | Medical majors | 133 | 34.5% |
| | Scientific majores | 142 | 37.2% |

- *Data Analysis*

After the study tool was prepared, its validity and stability were verified, and the questionnaire was approved in its final form. The data was subjected to statistical analysis using the statistical package (SPSS). Operationally, the aim was to measure the average score obtained in the questionnaire items describing the level of university facilities (system management, learning environment, infrastructure) at Taibah University. To answer the first and third questions, the arithmetic means and standard deviations of the study sample's responses to the questionnaire items were calculated, and the second and fourth questions were answered through Multivariate Analysis of Variance and Three Way ANOVA. To answer the fifth question, the Pearson correlation coefficient and (Cronbach alpha) equation was used to measure the reliability of the tool using the statistical package program (SPSS)

## Results and Discussion

The validity and reliability of the tool was measured by presenting it to four arbitrators from related disciplines to express their opinion regarding the study tool and its arbitration regarding the clarity of the statements, its affiliation with the field, and the addition of any items they deem important that were not included in the questionnaire. It was revealed that 90% of the arbitrators' opinions were considered a criterion for judging the validity of

the statement, and the necessary modification was made in light of the results of the arbitrators' opinions. The final version was approved with (90%) agreement. The final version of the questionnaire comprises (49) items.

Likewise, the tool's reliability was also measured by calculating the reliability coefficients using two ways: the first used the test-retest method, which was applied to a pilot sample (n=50) of male and female students. Two applications of the tool were made, with two weeks between each application. The Pearson correlation coefficient was calculated between the results of the two applications. The reliability coefficients for the fields of university facilities ranged between (0.904-0.915) and (0.873) for the measure of the overall level of university facilities. The value of the correlation coefficient for the level of overall academic achievement was (0.851). As for the second method, Cronbach's alpha method was used. To identify the internal consistency of the items, the values of the reliability coefficients for the university facilities ranged between (0.934-0.965) and (0.913) for the scale of the level of university facilities as a whole. These values prove that the tool fulfills the reliability condition.

After collecting the study tool from the sample and analyzing its data, the Five Likert Scale was used, and accordingly, the following criteria were used to judge the values of the means: from (1) to (1.80), the response is very low, and from (1.80) up to (2.60) the response is in a small degree; greater than (2.60) to (3.40) the response is in a medium degree; greater than (3.40) to (4.20) the response is in a high degree; and greater than (4.20) to (5) the response is in a very high degree.

The next step was to examine the data in the light of the five research questions.

**First Research Question**: "*What is the level of university facilities at Taibah University from the students' point of view?*", the researcher calculated the arithmetic means and standard deviations of the study sample's responses to the areas related to the level of university facilities at Taibah University, as seen in Table 2.

**Table 2.**

*The Arithmetic Means and Standard Deviations of The Study Sample Estimates According to The Fields of University Facilities*
*. Domain Arithmetic Mean Standard d*

| Rank | No | Filed | Mean | SD | Level |
|---|---|---|---|---|---|
| 1 | 1 | System management | 3.73 | .9300 | high |
| 2 | 2 | Learning environment | 3.68 | .9480 | high |
| 3 | 3 | Infrastructure | 3.49 | 1.102 | high |
| The overall average | | | 3.63 | .9200 | high |

It is clear from the Table 2 that the overall responses of the sample members on the study tool obtained a mean of (3.63), with a standard deviation of (0.920), at a high degree level. The field system management came first with the highest arithmetic mean (3.73) and a standard deviation of (.930), with a high degree. In contrast, the field of infrastructure came last, with an arithmetic mean of (3.49) and a standard deviation of (1.102), and to a high degree. This result may be attributed to the university's commitment to implementing

its strategic plan and its ability to translate the vision and conscious understanding of its mission; desire to achieve its goals. It is also attributed to the university's ability to achieve organizational developments and investing technology effectively despite the administrative and technical burdens.

These results reiterate the belief that the university is keen to develop teaching and learning processes evident in the facilities that the university provides and the development of system management it adopts. These results also reflect upon the various financial capabilities, services and programs the university provides to create the appropriate climate to help its students improve their academic achievement. This result differed from Al-Harethi's (2022) study, which showed a moderate overall score. It also differed with Dalloul and Najm (2019), as it showed that the quality of the school environment in secondary schools in the southern governorates of Palestine was medium from the student's point of view.

As the next step, the arithmetic means and standard deviations for all domains were extracted along with their items, as illustrated in Table 3.

**Table 3.**

*Arithmetic Means and Standard Deviations of The Responses of The Study Sample to The Items in The Field of System Management.*

| No | Item | Mean | SD | Rank | Level |
|---|---|---|---|---|---|
| 8 | Application of information and communication technology for educational purposes | 3.91 | 1.085 | 1 | high |
| 2 | Provide technological tools and programs to communicate with others | 3.88 | 1.145 | 2 | High |
| 3 | Effective availability, storage and management of information | 3.85 | 1.157 | 3 | High |
| 4 | The presence of merging e-learning with traditional education | 3.82 | 1.167 | 4 | High |
| 6 | It provides communication channels with university students through chat forums and messages | 3.81 | 1.122 | 5 | High |
| 1 | Provides lectures on the Blackboard system | 3.74 | 1.121 | 6 | High |
| 5 | Conducting live webinars | 3.73 | 1.245 | 7 | High |
| 9 | Availability of technological systems to raise administrative transactions and requests | 3.71 | 1.075 | 8 | High |
| 7 | Provides fast and high-quality internet | 3.58 | 1.252 | 9 | High |
| 10 | Availability of computer labs at all times and for each student | 3.31 | 1.338 | 10 | Medium |
| | System management | 3.733 | 1.130 | | High |

It is clear from Table (3) that the arithmetic means of the respondent's responses to the items in the field of system management ranged between (3.31 - 3.91), with standard deviations ranging between (1.338 - 1.075). Item No. (8), which states "the application of

information and communication technology for educational purposes." ranked first with an arithmetic mean of (3.91) and a standard deviation of (1.085), and to a high degree. This result may be due to the interest shown by Taibah University in providing the appropriate university environment to face the rapid developments in technology and the adoption of modern systems, as there was an urgent need to introduce modern technology to achieve the desired goal of the educational learning process.

The university used advanced strategies, which motivated students to achieve the goal expected of them. This included providing devices and aids that ensured the application of information and communication technology for educational purposes. The item No (10), which reads: "Availability of computer labs at all times and for each student," ranked last, with an arithmetic mean of (3.31), a standard deviation of (1.338), and a medium degree. This result might be related to the university's requirement to build new, larger laboratories due to pressure on their utilization from all university-level students using laboratories since the educational approach had advanced dramatically. The university turned to e-learning under the current circumstances. The researcher points out the need to leave the usual traditional routine practices and develop the infrastructure that leads to the use of technology with ease. This result is supported by Morris (2012), who claims that using tools such as computers, smartphones, and internet searches is becoming more common nowadays. Morris also emphasized that teachers and students should use the new technology in their classrooms. Jamian and Baharom (2012) emphasized that the application of technology in the teaching and learning process certainly facilitates effective learning and the ability to draw students' interest in pursuing classroom activities.

Table (4) exhibits the arithmetic averages of the respondent's responses to the items in the field of learning environment ranged between (3.28-3.93), with standard deviations that ranged between (1.291-1.099) with a high degree. Item No. (9), which states that "course instructors provide clear and accurate course descriptions," came first, with an arithmetic mean of (3.93) and a standard deviation of (1.099) and a high degree. This may be due to the administration's endeavor to achieve the desired educational goals to obtain accreditation. Course descriptions are the most significant thing that must be prepared accurately by the faculty since these are subject to continuous evaluation by the accreditation agency, ensuring that course learning outcomes are aligned with the program and institutional learning outcomes

Item No. (5), which reads: "The availability of fast structures that allow movement between the halls quickly," and Item No. (1) and its text, "There is a diversity of activities through the academic courses," appear in the last place, with an arithmetic mean of (3.31) (3.28) and standard deviations of (1.433) (1.291), respectively, with a moderate degree. This indicates a shortage in the number of structures and that they are used only when necessary. Moreover, the faculty members' focus remains on the curriculum more than on activities, especially in light of the teaching of the male faculty member via screens, which does not allow them to focus on the activities. This finding is supported by the research conducted by Rayan (2013), who pointed out that the classroom is where students develop the knowledge and skills needed to achieve their future aspirations. Soare (2013) also showed that learning environments accurately predict the quality of learning that students receive.

**Table 4.**

*Means And Standard Deviations of The Responses of The Study Sample to The Items in The Field of The Learning Environment.*

| No | Item | Mean | SD | Rank | Level |
|---|---|---|---|---|---|
| 9 | Availability of clear and accurate course descriptions from course instructors | 3.93 | 1.099 | 1 | High |
| 12 | The course instructor uses technology in delivering the course and communicating with students | 3.92 | 1.048 | 2 | High |
| 13 | The university library provides various learning resources and a mechanism that facilitates access to information | 3.86 | 1.103 | 3 | High |
| 3 | Availability of effective air conditioning equipment in classrooms | 3.86 | 1.187 | 4 | High |
| 7 | There is proportionality and consistency in the number of students in the classroom | 3.82 | 1.067 | 5 | High |
| 10 | Classrooms are arranged and organized in an attractive manner that helps participation and speed of achievement | 3.68 | 1.242 | 6 | High |
| 11 | There is continuous cooperation and support from the course instructors to complete the tasks promptly | 3.66 | 1.114 | 7 | High |
| 4 | Provide a positive, healthy environment at the university | 3.66 | 1.244 | 8 | High |
| 2 | Provide adequate ventilation in classrooms | 3.64 | 1.199 | 9 | High |
| 8 | It provides a strategy for the professor to follow to develop my knowledge management skills | 3.63 | 1.214 | 10 | High |
| 6 | Having a good and positive relationship with the course instructors | 3.60 | 1.188 | 11 | High |
| 5 | Availability of fast structures that provide movement between halls quickly | 3.31 | 1.433 | 12 | Moderate |
| 1 | There is a diversity of activities throughout the academic courses | 3.28 | 1.291 | 13 | Moderate |
| | Learning environment | 3.6802 | 948970 | | High |

Table 5 illustrates the arithmetic means of the respondents' responses to the items of the field of infrastructure ranged between (3.16-3.86), and with standard deviations that ranged between (1.456-1.244), ranking a high level, while Item No. (12), which stipulates "the availability of cleanliness and order in all university facilities," ranked first, with an arithmetic mean of (3.86) and a standard deviation of (1.244), and to a high level. This result may be due to the university's administrative staff's care and follow-up to the services provided to students, including the availability of cleanliness and arrangement of university facilities, giving them a suitable and comfortable environment, encouraging them to achieve creativity.

The Quality and Accountability Department at Taibah university remains keen to follow up to evaluate the services provided to students closely. This is consistent with the

study (Bowers & Burkett, 1987), which similarly talk of quality measures like teaching and learning, cleanliness, safe, healthy and comfortable environments in terms of ventilation, heat, lighting, quietness and acoustics. Item No. (8): "The provision of counseling psychological counseling centers for students" came in the last place with an arithmetic mean of (3.16), and a standard deviation of (1.456) ranked with a moderate degree. This fact necessitates the university to focus on counseling students and providing specialists for self-realization. To meet the students' tendencies to achieve the university's administrative and educational goals and advance the educational process, a desire to improve their academic achievement can be easily achieved without obstacles. What supports this result from the theoretical literature is what was indicated by Domenech (2012) that classroom management should include all matters related to the classroom, including organization, high areas, materials and teaching aids. Suleman and Hussain (2014) also agrees with this finding stating that classroom arrangement facilitates effective teaching and encourages sound learning.

**Table 5.**

*Means and Standard Deviations of The Responses of The Study Sample to The Items In The Field of Infrastructure*

| No | Item | Mean | SD | Rank | Level |
|---|---|---|---|---|---|
| 12 | The availability of cleanliness and order in all university facilities | 3.86 | 1.244 | 1 | High |
| 13 | Periodic and rapid maintenance work that does not affect the progress of students' achievement | 3.75 | 1.184 | 2 | High |
| 11 | Consistency of administrative offices in form and function to serve students | 3.70 | 1.295 | 3 | High |
| 2 | Availability of integrated laboratories and laboratories that are easy to use | 3.55 | 1.239 | 4 | High |
| 5 | It offers high, fully equipped conference rooms | 3.54 | 1.254 | 5 | High |
| 1 | Provides integrated health facilities | 3.53 | 1.269 | 6 | High |
| 10 | It provides flexible and available halls to accommodate students' different projects | 3.51 | 1.267 | 7 | High |
| 3 | It provides open fields for practicing various activities | 3.49 | 1.269 | 8 | High |
| 9 | Availability of sufficient parking spaces for all students and employees of the university | 3.44 | 1.390 | 9 | High |
| 6 | Availability of green spaces | 3.39 | 1.426 | 10 | Medium |
| 7 | Availability of recreational facilities and programmes | 3.30 | 1.363 | 11 | Medium |
| 4 | Provides comprehensive housing at a low cost | 3.24 | 1.368 | 12 | Medium |
| 8 | Provide psychological counseling centers for students | 3.16 | 1.456 | 13 | Medium |
| | Field of infrastructure | 3.4958 | 1.102 | | High |

**Second Research Question**: "*Are there any statistically significant differences at the significance level 0.05 ≥ á between the mean estimates of the study sample for the level of university facilities at Taibah University due to the variables of Type, Qualifications, and Specialization?*"

Arithmetic means and standard deviations of the study's responses were calculated related to the level of university facilities at Taibah University from the students' point of view, according to the variables of Gender, Qualifications, and Specialization, as illustrated in Table 6.

**Table 6.**

*Means and Standard Deviations from Students' Point of View According to The Variables of Gender, Qualifications, and Specialization.*

| Variable | Levels | N | | First field: | Second field | Third field | Total(M)&SD Questionnaire |
|---|---|---|---|---|---|---|---|
| Gender | M | 82 | Mean | 3.654 | 3.654 | 3.654 | 3.654 |
| | | | SD | 8880. | 9030. | 1030. | 8680. |
| | F | 300 | Mean | 3.739 | 3.671 | 4.460 | 3.631 |
| | | | SD | 9430. | 9620. | 4830. | 9350. |
| Qualification | Bachelor's | 292 | Mean | 3.727 | 3.646 | 3.447 | 3.606 |
| | | | SD | 9510. | 9610. | 1.128 | 9410. |
| | diploma | 25 | Mean | 4.032 | 3.990 | 3.993 | 4.005 |
| | | | SD | 0.865 | 9520. | 9800. | 9010. |
| | Master's | 45 | Mean | 3.611 | 3.622 | 3.396 | 3.543 |
| | | | SD | 8390. | 8980. | 1.033 | 8390. |
| | PhD | 20 | Mean | 3.730 | 3.915 | 3.803 | 3.816 |
| | | | SD | 8900. | 8150. | 8210. | 7050. |
| Scientific Specialization | Humanities and Social Sciences | 107 | Mean | 3.772 | 3.741 | 3.615 | 3.709 |
| | | | SD | 0.905 | 9190. | 1.033 | |
| | Medical majors | 133 | Mean | 3.753 | 3.658 | 3.478 | - |
| | | | SD | 8210. | 8760. | 1.040 | |
| | Scientific majors | 142 | Mean | 3.685 | 3.653 | 3.422 | - |
| | | | SD | | | 1.203 | |

Table 6 shows significant differences in the arithmetic means and standard deviations of the study sample's estimates of the level of university facilities at Taibah University according to Type, Qualifications, and Specialization variables because of the different categories of Gender (males, females), Qualifications (Bachelor's, Diploma, Master's, PhD) and Specialization (humanities and social sciences, medical majors, scientific majors), and to determine the source of the apparent differences.

Next, a three-way multiple analysis of variance was performed to determine the source of differences between the averages in the estimates of the study sample. Table (7) shows the three-way analysis of variance on the tool as a whole according to its variables.

**Table 7.**

*Three-Way Multiple Variance Analysis of The Effect of Gender, Qualification, and Specialization on University Facilities*

| Source of Variance | Fields | Sum of Squares | Degrees of freedom | Mean Squares | p-value | Statistical Significance |
|---|---|---|---|---|---|---|
| Gender | System management | .0430 | 1 | 0.043 | 0.050 | 0.824 |
| | Learning Environment | 0.152 | 1 | 0.152 | 0.165 | 0.684 |
| | Infrastructure | 0.297 | 1 | 0.297 | 0.241 | 0.624 |
| Qualification | System management | 3.994 | 3 | 1.331 | 1.526 | 0.207 |
| | Learning Environment | 4.941 | 3 | 1.647 | 1.791 | 0.148 |
| | Infrastructure | 8.083 | 3 | 2.694 | 2.187 | 0.089 |
| Specialization | System management | 1.696 | 2 | 0.848 | 0.972 | 0.379 |
| | Learning Environment | 1.225 | 2 | 0.612 | 0.666 | 0.514 |
| | Infrastructure | 0.705 | 2 | 0.352 | 0.286 | 0.751 |
| The Error | System management | 316.758 | 363 | 0.873 | | |
| | Learning Environment | 333.761 | 363 | 0.919 | | |
| | Infrastructure | 447.278 | 363 | 1.232 | | |
| Averaged Total | System management | 329.971 | 381 | | | |
| | Learning Environment | 343.104 | 381 | | | |
| | Infrastructure | 462.878 | 381 | | | |

Table 7 shows that there are no statistically significant differences at the significance level 0.05 ≥ ά due to the effect of Gender, Qualifications, and Specialization in all domains and the total score. They are similar in all circumstances, which is reflected in the standardization of their estimates. This made their responses one and under unified working conditions, and the researcher indicates that despite the different nature of study in the faculties (humanities and social sciences, medical majors, scientific majors), this has provided enough time for students to know the nature of university facilities and benefit from their various facilities.

This result differed from the result of Al-Harethi (2022), which showed that there were statistically significant differences in the degree of university environment reality due to the gender variable in favor of (male), and statistically significant differences attributed to the academic specialization variable in favor of theoretical college students. however, these results agree with the results of Lawrence and Vimala (2012), which found no significant differences in the school environment among ninth-grade students regarding gender. It also agreed with the results of Al-Hellabi's study (2013) where no statistically significant differences were seen due to the specialization variable between the mean scores of female students on the university environment questionnaire, involving variables like central library academic level and specialization.

**Third Research Question:** "*What is the level of academic achievement of Taibah University students from their point of view?*"

In order to answer this question, the researcher calculated the arithmetic means and standard deviations of the study sample's responses to the items related to the level of academic achievement at Taibah University from the perspective of the students as a whole, as shown in Table (8).

**Table 8.**

*The Means and Standard Deviations of The Items in The Field of Academic Achievement Are Arranged in Descending Order According to The Means*

| No | Item | Mean | SD | Rank | Level |
|---|---|---|---|---|---|
| 1 | I develop my skills in order to raise my academic achievement | 4.21 | .9100 | 9 | Very High |
| 2 | I work hard in my academic achievement to reach a high level | 4.17 | .9290 | 2 | High |
| 3 | I strive to achieve the best in my life | 4.15 | .9610 | 3 | High |
| 4 | I continue to solve the academic problems that face me with determination and persistence | 4.12 | 1.018 | 10 | High |
| 5 | I have the ability to organize daily work | 4.11 | 1.022 | 6 | High |
| 6 | I take advantage of all the opportunities available to me in the courses | 4.10 | .9780 | 4 | High |
| 7 | I always achieve the best in my academic performance | 4.06 | .9230 | 7 | High |
| 8 | I strive to achieve goals in a positive way | 4.05 | 1.093 | 1 | High |
| 9 | Exploiting the time in order to accomplish what is required of academic work | 4.01 | .9810 | 8 | High |
| 10 | Cast costly opportunities with confidence | 3.95 | 1.001 | 5 | High |
| 11 | Complete the work you started without getting bored | 3.90 | 1.039 | 13 | High |
| 12 | I take responsibility when academic problems arise and find a solution to them | 3.85 | 1.152 | 12 | High |
| 13 | I challenge my colleagues when performing a task | 3.54 | 1.354 | 11 | High |
| | Academic achievement | 4.016 | .8129 | - | High |

It is clear from Table (8) that the arithmetic means of the responses to the items in the field of academic achievement ranged between (3.54-4.21), with standard deviations ranging between (0-910-1.354) and a high level. Item No. (9), which states, "I develop my skills in order to raise my academic achievement," ranked first, with an arithmetic mean of

(4.21), a standard deviation of (0.910), and a very high degree. This result may be due to the high number and variety of courses that students receive in this field through the Deanship of Educational Development, which contributes to meeting their tendencies, takes into account their abilities and skills, and is based on encouraging them and providing them with scientific knowledge and concepts, which is reflected in raising the level of their academic achievement.

The researcher pointed out the importance of training courses in developing technical and research skills and investing creativity in work. The rest of the items obtained a high level. Item No. (11), which reads: "I challenge my colleagues when performing a task," ranked last, with an arithmetic mean of (3.54) and a standard deviation of (1.354), with a great degree of practice. This result may be due to the ability of students to interact effectively with each other and develop a spirit of joint teamwork among students within the faculties in their scientific and research projects. Additionally, they can build continuous and effective cooperation with specialists to improve and enhance business within the university campus. I agreed with the study of Dalloul and Najm (2019) that the level of academic achievement among secondary school students in the southern governorates of Palestine, from their point of view, was very high.

**Fourth Research Question.** "*Is there a statistically significant correlation at the level of significance 0.05 ≥ ά between the averages of the study sample's estimates of the level of university facilities at Taibah University and the averages of the study sample's estimates of the level of academic achievement from the students' point of view?*

**Table 9.**

*Pearson Correlation Coefficient Between the Averages of the Study Sample's Estimates on the Fields of the Level of University Facilities at Taibah University and Between the Averages of the Study Sample's Estimates of the Level of Academic Achievement*

| Source of Variance | statistic | First field: | Second field | Third field | Total(M)&SD Questionnaire |
|---|---|---|---|---|---|
| Academic achievement | Correlation coefficient value | .561**0 | .656**0 | .533**0 | .628**0 |
| | Statistical significance | .0000 | .0000 | .0000 | .0000 |
| | The number | 382 | 382 | 382 | 382 |

**. Correlation is significant at the 0.01 level (2-tailed).

## Discussion

Universities are among the most important institutions in every country, as they play a chief role in shaping students' personalities cognitively, skillfully and emotionally. No one can deny the pressing need for educational leadership that possesses efficiency and a high ability to manage the university's affairs, develop their performance and improve the educational and learning process, not only through developing the university curricula, scientific research, program content and methods. This study highlights how higher education institutions can equip themselves with good facility services, not only to run the educational activities but also ensure good academic achievements of students. the study examined the importance of appropriate facilities at both institutional and individual (faculty and students) levels. Leaders, professors, and educators should take consistent initiatives and measures to innovate new facilities and resources to bring about beneficial

changes and to attain the mission, vision and objectives of the institution. Facilities and resources improve the knowledge and abilities of the faculty and staff, and the university turns into a dynamic environment for learning and academic achievements for students.

It is clear from this study that there is a positive, statistically significant relationship between the averages of the study sample's estimates on the fields of the level of university facilities at Taibah University and between the averages of the study sample's estimates of the level of academic achievement. In general, this result agrees with the result of the study (Lay & Al-Issawy, 2019), which concluded that the educational building is the most important basic of the educational process and an influencing factor for the success of the educational process and increasing the level of educational attainment among students. the results are also consistent with the studies by Zaid et al. (2019) and Dalloul and Najm (2019), who found that the physical learning environment positively affected students' achievement and that the students' attitude mediated the relationship between the physical learning environment and student achievement.

The results of Al-Hellabi (2013) also showed a statistically significant correlation between the mean scores of female students on the university environment questionnaire and the life skills questionnaire while it differed from the study (Lawrence & Vimala, 2012), which revealed no significant relationship between the school environment and the academic achievement of ninth-grade students. This result can be explained by the fact that there are differences in the environment and the academic stage of the students. This fact is also supported by Stewart, Evans, and Kaczynski (1997) who suggested that an organized and comfortable environment not only affects student achievement but also promotes positive behavior and increases the quality of interaction among students. Likewise, Allmnakrah and Evers (2019) reiterated that improvement in students' academic achievements can close the gap between the outputs of higher education and the requirements of the job market and help them make careful career decisions. Yusuf and Jamjoom (2022) anticipate long-term changes as suggested in by Saudi Vision 2030 through enhancing university facilities and advancing the students' achievements. A recent study Bataeineh and Aga (2022) also advocated for better facilities to achieve sustainability in higher education in accordance with the Saudi Vision 2030.

## Conclusion

The study identified and investigated the relationship between the level of facilities provided by the university and the level of academic achievement among the students of Taibah University in Madinah from their point of view. Adopting the descriptive correlation method, a questionnaire tool was used to achieve the objectives of the study. The SPSS program was used to analyze the results of the study. A number of results were reached, the most important of which is that the overall estimates of the respondents on the study tool measuring the level of facilities provided by the university was high. At the same time, the level of academic achievement was high too. The study's results also showed a positive relationship between the provision level of university facilities and the level of academic achievement. However, no statistically significant differences for the variables (gender, academic qualifications, and specialization) were found. The study recommends enriching the curricula by adding activities and strategies and diversifying student activities within the college and university to meet the different needs of students.

The study is beneficial in many ways: first, it will give useful insights to the researchers in educational administration in the Kingdom of Saudi Arabia about the relationship between the availability of adequate facilities in the university and students' academic achievement. Second, the results may also benefit decision-makers in the Ministry of Higher Education in achieving the education objectives; developing university facilities in Saudi universities, which contributes to creating a spirit of competition and is reflected in improving the level of academic achievement of students.

The subject faced a few limitations as well. First, the study only focused on level of university facilities and its relationship to academic achievement; second, the sample was limited to the Taibah University students in Madinah; and lastly, the study was confined to the academic year 2023. The study makes a few recommendations: (1) Enriching the curricula by adding activities and strategies and diversifying student activities within the college and university to meet students' different needs; the study's results confirmed the need for this in the field of the learning environment; (2) Providing suitable places and facilities. And ensuring that IT laboratories are available at all times for each student should be expanded, as the study results confirmed the need for this in learning management; (3) Ensuring the availability of green spaces and recreational facilities and programmes; The study's results confirmed the need for this in the field of infrastructure; (4) Supporting the university's senior management for students in various colleges. Providing counseling psychological counseling centers for students; The study's results confirmed this need in infrastructure; (5) Increasing support and paying more attention to the issue of university facilities at Taibah University and rehabilitating the infrastructure, particularly in line with recent developments, is reflected in students' academic achievement levels.

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