

Necessary Adaptations for Students with Disabilities in Palestinian Universities

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Abstract

The purpose of this study was to determine the necessary adaptations for students with disabilities in Palestinian universities, from the point of view of (50) students with visual, hearing, and physical disabilities from Jerusalem and Bethlehem universities, who were purposefully chosen from the second semester of the year (2020-2021). The descriptive analytical approach was used, and data was collected using a questionnaire with 36 paragraphs spread over three areas: academic adaptations, environmental adaptations, and social adaptations (relationship with other students, relationship with the academic and the administrative body). The overall degree of necessary adaptations for students with disabilities in the four areas is high, and there are no statistically significant differences in the averages of adaptations due to the University variable, according to one of the results. Significant differences in the type of disability variable favored visual impairment. The study recommended that Palestinian institutions give close attention to the necessary adaptations for students with disabilities in all professions, particularly those involving hearing and physical difficulties.

Introduction:

Dr. Taha Hussein (1938), Minister of Education and the first president of Alexandria University, viewed education as a matter of equality and social justice, not charity; education is a right for everyone without discrimination or exception, and his dream remains unfulfilled for students with disabilities in all institutions of the universal education system; however, there is currently a strong basis for making progress at the level of improving the education of students with disabilities in all institutions of the universal education system. The term "inclusive education" was used to describe the development of a unified public educational system that includes all

students, including those with disabilities, on an equal basis (Ahmed, 2017). In general, the present trend is to eliminate the dual educational system (special education and general education) and replace it with a unified system (public general education) that satisfies the needs of students (Al-Qariouti, 2012). Universities have shifted their focus to educating all students, regardless of disability (Ahmed, 2017) The drafting and approval of the International Convention on the Rights of Individuals with Disabilities (2006) issued by the United Nations body aimed at enhancing their dignity and enjoyment of all rights is perhaps the most notable achievement made by the world to improve the situation

of students with disabilities and open the doors of universities to them (Mekdad and qatawneh, 2018) Persons with disabilities have the right to a university education under Article 24. Persons with disabilities have the right to university education, according to Article 2 of the Palestinian Higher Education Law No. 11 of 1998, and Article 14 of the Palestinian Law for Persons with Disabilities No. 4 of 1999 stipulates (The Ministries of Education and Higher Education must provide an environment that is adequate for the needs of the disabled in schools, colleges and universities).

In this context, students with disabilities have become an integral part of the educational system in any university in general, and Palestinian universities in particular (Dweikat, 2016). It can be said that the transition from school to university life necessitates adaptations related to compatibility with the new environment; if students without disabilities face many difficulties, there is no doubt that students with disabilities face problems exponentially, as these students rarely receive supportive counseling services (Ahmed, 2020). As a result, it has become mandatory for any university to strive to provide integrated alignments for these students from the start of their enrollment and admission until graduation, and to improve its efficiency in supporting its students with disabilities by adhering to international standards in any academic, engineering, environmental, social, or psychological alignments to ensure their success, participation in life, and support the transition towards a more independent life (Schaffner, 2004).

Problem statement:

There is an ongoing debate about the effectiveness of educational enrollment systems for students with disabilities in universities, and accordingly, the importance of this study is highlighted, which aims to identify the necessary adaptations and modifications for students with disabilities in the university education system in order to facilitate the completion of their educational program. In order for the process of enrolling students in the university environment to be a success, all those working at the university must believe in the importance of their education and make the necessary adaptations for them, including administrative, educational, psychological, environmental, and social adaptations (Schaffner, 2004).

So this study was developed to try to answer the following main question:

What are the adaptations needed for students with disabilities in Palestinian universities, from their point of view?

Questions:

- 1- What are the adaptations needed for students with disabilities in Palestinian universities, from their point of view?
- 2- Do the necessary adaptations for disabled students in Palestinian universities differ depending on the university and the type of disability, in their opinion?

Hypotheses of the study:

The following two hypotheses emerged from the second question:

- 1- There are no significant variations in the averages of the necessary adaptations for students with disabilities in Palestinian universities attributed to the University

variable at the level of significance ($\alpha < 0.05$).

- 2- There are no significant differences in the averages of the necessary adaptations for students with disabilities in Palestinian universities at the level of significance ($\alpha < 0.05$) due to the variable type of disability.

Terminology

Adaptations: accommodations provided by the teacher to the student that include help with the educational environment, teaching techniques, curriculum, and the relationship between these aspects. To avoid instructional errors (Abu Alia, et al., 2009) that can develop as a result of the interaction between the individual's self and the surrounding environment, which can include administrative, educational, social, psychological, and environmental adaptations (Convention on the Rights of Persons with Disabilities, 2006).

Procedurally: the mark that the examinee gets on the questionnaire.

Students with disabilities: they are students enrolled in Palestinian universities who have visual, physical or hearing disabilities and use special aids for learning and obtaining knowledge (Abu Al-Nasr, 2005).

Palestinian universities: According to the Palestinian Law No. 11 on university education (1998), The university is defined as "an institution that includes at least three university colleges and offers educational programs that end with the granting of a bachelor's degree, the university may offer postgraduate programs that end with the granting of a

Higher Diploma, Master's degree, or doctorate, and may offer educational programs that end with the granting of a diploma degree.

The Palestinian universities in the current study are al-Quds University and Bethlehem University.

Previous studies:

The study of **Abu shkheidem and ishtia (2020)** aimed to reveal the reality of the availability of facilitations at An-Najah National University from the perspective of 30 students with disabilities for the academic year 2019-2020, selected in a simple random manner and using a questionnaire consisting of 13 paragraphs and two open questions, the results indicated that there was a high level of overall availability of Environmental help, as well as substantial differences related to the gender variable, which favored males, the type of disability, which favored hearing, and the academic level, which favored baccalaureate students.

From the perspective of 140 students with disabilities, **Ahmed's study (2020)** aimed to identify the challenges faced by students with disabilities at Fayoum University, which were represented by structural, administrative, educational, psychological, and social challenges. One of the research results was that the challenges faced by students at the University came in the following order: structural, administrative, educational, psychological, and social challenges.

Al-Mekdad and Al-Qatawneh (2018) used a questionnaire with 34 paragraphs distributed over three dimensions (Academic Services, Administrative Services, and Construction Facilities) to

try to reveal the reality of the services provided by the administration of Mutah University to students with disabilities from the perspective of 57 students with disabilities in Jordan. One of the results of the study is that the overall degree and dimensions of administrative services are higher than those of academic services which came with a medium degree. There were no significant differences due to the type of disability.

(Basack, &etal, 2018) sought to examine the techniques used in the education of hearing impaired students using a qualitative research method of document analysis. The results reveal that traditional teaching methods alone are insufficient to teach hearing impaired students, that appropriate education is critical, and that the use of modern technology makes training of hearing impaired people more useful.

As for the study of **Abu'Ida (2017)**, it tried to determine the satisfaction of university students with disabilities with the adaptations and services provided to them in Palestinian universities, from the perspective of 129 students with hearing, visual, and physical disabilities at Birzeit University, Al-Quds, Bethlehem, Hebron, Al-Quds Open university Ramallah and BirZeit branches, using a questionnaire consisting of 51 paragraphs distributed over seven dimensions which are: satisfaction with university facilities, academic services, social connections, administrative facilitation, library services, registration services, and information resources.

(Social services, academic services, university facilities, information resources, and library services) were rated as high

and medium in : (counseling, registration and administrative facilities).

There were no significant changes in overall severity due to disability type, however there were substantial disparities in specific aspects in favor of hearing and physical disabilities. At the overall level, substantial differences ascribed to the University variable favored Bethlehem University in all categories except university facilities, which favored the Jerusalem Open Ramallah branch.

Ahmed's Study (2017), on the other hand, attempted to reveal the reality of support services and their relationship to the level of satisfaction of students with visual disabilities in university life at the Faculty of Education, Qassim University. A questionnaire with 34 paragraphs was distributed to 12 students with visual disabilities across four dimensions (admission and registration services, academic services, construction, and library services). The results reveal that admission and registration standards do not take their circumstances into account, admission procedures are difficult to implement, registration forms do not contain important information for people with visual disabilities, and that the registration staff, as well as their colleagues and management, are cooperative. In terms of academic services, they expressed dissatisfaction with teaching methods and a lack of appropriate educational resources, as well as a desire on the part of teachers to communicate with them, involve them in the educational process, provide sufficient time for exams, and provide a suitable location for exams. From the perspective of 81 students with disabilities enrolled at the University of

Jordan in 2014-2015, **Adra, Ibrahim (2016)** investigated the challenges faced by students with disabilities at the University of Jordan. The results showed that students with disabilities face numerous administrative challenges during registration, including a lack of academic guidance and procedures that are inappropriate for them, academic challenges such as competition with other students, taking exams, and failing to absorb educational material, and environmental challenges such as a lack of a library with suitable classrooms and difficulty participating in university accrediting activities. Teachers' social challenges include failing to consider their students' conditions, poor perceptions from other students, and trouble forming relationships with them.

(Taylor, et al, 2008) study used design, methodology, and teaching methods to evaluate the nature and types of suitable adaptations to educational practices at the university level for students with emotional and behavioral problems in the United Kingdom. The study indicated that a range of necessary adaptations to care methods, teaching methods, and evaluation procedures had been undertaken for university students in the United Kingdom with emotional and behavioral disorders.

The objective of the **(Gilson et al., 2007)** study was to conduct a national survey to assess library services from the perspective of university students with visual disability in terms of simple access to books and the barriers to that access. A total of 119 students with visual impairments were included in the study. According to the results, 27% were successful in getting access to books, 20% were moderately successful, 44% were occasionally

successful, 8% were unsuccessful, and 1% failed completely. The results reveal that time constraints and a lack of staff preparation in dealing with them or creating information sources to meet their needs are the main barriers to university students' access to information.

Finally, **(Eggett, 2002)** study aimed to explore the adapted technology available to people with disabilities in libraries from the perspective of the 4,939 patrons of the Utah State Library for the Blind and People with Other Disabilities, as well as assess their awareness of the available services. The researcher created a special questionnaire for the study's purposes, and the results revealed that less than a quarter of the sample indicated that adapted technology is available.

3. Method and procedure

1.3 Curriculum

The descriptive-analytical approach was used because it was suited for the nature of this study. Students with disabilities at Al-Quds and Bethlehem Universities were also surveyed about the adaptations they require in Palestinian universities.

2.3 Population

At the end of the second semester of the academic year (2020-2021), all students with disabilities at Al-Quds University and Bethlehem University, totaling (59) students, were included in the study.

3.3 Sample

The intentional sampling method was used to pick (50) students with disabilities from the Universities of Al-Quds and Bethlehem, and table (1.3) displays the distribution of the sample members by university and disability type.

Table 1: shows the distribution of sample members by University and type of disability.

Variable		#	%	Total
University	Al-Quds	26	52.0	50
	Bethlehem	24	48.0	
Disability	Visual disability	28	56.0	50
	Hearing disability	13	26.0	
	Physical disability	9	18.0	

4.3 Instrument

The educational literature related to the subject of the study and its objectives, as well as previous studies and instruments used in them, such as Al-Adra(2016) and Abu Ida(2017), were reviewed to develop a special questionnaire in order to identify the necessary adaptations for students with disabilities in Palestinian universities. In its final form, the instrument consisted of two sections:

First section: It includes primary personal data about the examiners.

Second section: It included the paragraphs that measure the necessary adaptations for students with disabilities in Palestinian universities, and the paragraphs in this section measured the necessary adaptations for students with disabilities in Palestinian universities, and there were 36 paragraphs in all.

The paragraphs were constructed in a positive direction, using a pentagonal scale, and the following weights were assigned to them: (strongly agree: five degrees, agree: four degrees, neutral: three

degrees, opposed: two degrees, strongly opposed: one degree).

All vertebrae paragraphs have been treated with this five-step ladder.

Table (2): the key to arithmetic means.

#	Level	Degree
1	If the mean value of the phrase or dimension ranges between 1-1.79	Very low
2	If the mean value of the phrase or dimension ranges between 1.80-2.59	Low
3	If the mean value of the phrase or dimension ranges between 2.60-3.39	Medium
4	If the mean value of the phrase or dimension ranges between 3.40-4.19	High
5	If the mean value of the phrase or dimension ranges between 4.20-5	Very high

2.3.4 Instrument validity

The instrument was presented to a group of experienced arbitrators, who made some observations, and the resolution was then produced in its current form, the instrument's validity was also confirmed by calculating the Pearson correlation coefficient of the research paragraphs and the total degree of the instrument, as shown in Table (3).

Table No. (3): the results of the Pearson correlation coefficient for the matrix of correlation of the paragraphs of the study instrument with the overall degree of the instrument.

#	Paragraphs	R value	Statistical significance
1.	The applicability of the University's teaching techniques for my condition.	0.756	0.000
2.	Suitability of exam performance procedures for my condition.	0.855	0.000
3.	Preparing the study plan so that it is easier for me to deal with it.	0.809	0.000
4.	Provide the educational material so that it is easy for me to understand.	0.761	0.000
5.	Facilitate faculty members' ability to take notes during the lecture.	0.740	0.000
6.	Taking into account the study plans for my circumstances and needs.	0.849	0.000
7.	Ensuring that assistance is consistently obtained	0.623	0.000
8.	Exam time suited to my requirements and ability.	0.620	0.000
9.	The possibility of participating in university activities and parties	0.703	0.000
10.	Facilitate the use of the library	0.702	0.000
11.	Accessibility to and from the University	0.747	0.000
12.	Ability to move between lectures	0.716	0.000
13.	Adapting university buildings to suit my disability	0.836	0.000
14.	The possibility of mobility and movement between floors in the college	0.704	0.000
15.	Providing dedicated corridors suitable for my disability	0.756	0.000
16.	Facilitate the use of my support tools (wheelchair, cane and headset..)	0.639	0.000
17.	Facilitating the use of restrooms	0.696	0.000
18.	Change the ordinary kids' negative perceptions about me.	0.383	0.019
19.	Making sure that other students don't use inappropriate language with me	0.792	0.000
20.	Facilitate the establishment of social relationships with others within the University	0.600	0.000
21.	Decrease the avoidance of me from other students	0.700	0.001
22.	Assisting me in adjusting to other University students	0.876	0.000
23.	facilitating participation in University social events	0.610	0.000
24.	working on other students' understanding of my situation	0.672	0.000
25.	Encouraging students to join me and accompany me.	0.715	0.000
26.	Teachers take into account my circumstances	0.702	0.000
27.	Work on the appropriateness of the treatment of	0.747	0.000

	administrators to me		
28.	Facilitating university admission procedures	0.716	0.000
29.	Working on the adequacy of the university services provided to me	0.819	0.000
30.	Administrative cooperation with me within the University	0.717	0.000
31.	Suitability of the teaching services used in teaching at the University for me	0.728	0.000
32.	Officials' interest in discussing the problems facing me	0.679	0.000
33.	Providing specialists at the university to deal with me	0.662	0.000
34.	The suitability of the registration procedure for me	0.391	0.019
35.	Facilitating access to the necessary services	0.753	0.000
36.	Provide guidance to me on an ongoing basis	0.621	0.000

In light of the theoretical framework on which the study instrument is based, all of the values of the matrix of the correlation of the paragraphs of the study instrument with the overall degree of the instrument are statistically significant, indicating the strength of the internal consistency of the paragraphs of the instrument and that they participate together in measuring the necessary adaptations for students with disabilities in Palestinian universities.

3.4.3 Instrument stability:

The stability was calculated using the method of internal consistency and the cronbach-Alpha equation, as shown in Table (4)

Table No. (4): results of Cronbach Alpha coefficient of the study's instrument's stability

Statement	Number of cases	Number of paragraphs	Alpha value
Total	50	36	0.895

It is noted from the previous table that the value of the study's instrument's stability at the overall level reached (89.5%), so the

questionnaire has a high degree of stability and can be adopted to achieve the objectives of the study.

4 Results

1.1.4 Results of the main question:

What are the adaptations needed for students with disabilities in Palestinian universities, from their point of view?

The numbers, as well as the arithmetic means and standard deviations of the adaptations on the total score of the instrument, were retrieved to answer this question, as shown in Table (5).

Table (5) numbers, arithmetic means and standard deviations for the necessary adaptations for students with disabilities in Palestinian universities.

Variable	#	Mean	Standard deviation	degree
Necessary adaptations for students with	50	3.85	0.43	High

disabilities in Palestinian universities				
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The overall score of necessary adaptations for students with disabilities was high, as shown in Table(5), with an arithmetic mean of (3.85) and a standard deviation of (0.43). Due to the new presence of students with disabilities at Palestinian institutions, this conclusion is consistent with the findings of most previous studies, and workshops are needed to familiarize decision-makers with the needs and techniques for adapting and coping with students with disabilities.

As for the dimensions:

The answer related to the first dimension: what are the academic adaptations needed for students with disabilities in Palestinian universities?

Arithmetic means and standard deviations of academic adaptations were extracted, as shown in Table No. (6).

Table (6): arithmetic means and standard deviations of the necessary academic adaptations for students with disabilities in Palestinian universities, sorted by importance

Rank	Paragraph	Paragraph	Mean	Standard deviation	Range
1.	7	Ensuring that assistance is	4.32	0.818	High

		consistently obtained			
2.	8	Exam time suited to my requirements and ability.	4.27	0.804	High
3.	1	The applicability of the University's teaching techniques for my condition.	4.22	0.712	High
4.	2	Suitability of exam performance procedures for my condition.	4.19	0.811	High
5.	4	Provide the educational material so that it is	4.19	0.739	High

		easy for me to understand.			
6.	6	Taking into account the study plans for my circumstances and needs.	4.11	0.906	High
7.	3	Preparing the study plan so that it is easier for me to deal with it.	4.09	0.824	High
8.	5	Facilitate faculty members' ability to take notes during the lecture.	4.06	0.917	High
Total			4.22	0.68	High

The data in the previous table indicate that the necessary academic adaptations for students with disabilities came high with an arithmetic mean of (4.22) and a standard deviation of (0.68), and the

paragraph: (Ensuring that assistance is consistently obtained) got the highest arithmetic mean of (4.32) and a standard deviation of (0.81), followed by (Exam time suited to my requirements and ability) With arithmetic mean of (4.27) and standard deviation of (0.80). This result is consistent with Al-Adra 2016, Abuaida 2017, and Ahmed 2017, and it can be explained by a lack of sufficient information among faculty members about disabilities and how to deal with them, which necessitates holding workshops for them on coping strategies and dealing with disabled students.

The answer related to the second dimension: what are the necessary environmental adaptations for students with disabilities in Palestinian universities?

Arithmetic means and standard deviations of environmental adaptations were extracted as shown in Table No. (7).

Table (7): arithmetic means and standard deviations of the necessary environmental adaptations for students with disabilities in Palestinian universities, sorted by importance

Rank	Paragraph	Paragraph	Mean	Standard deviation	Range
1.	11	Accessibility to and from the University	4.41	0.725	High
2.	15	Providi	4.3	0.716	High

		ng dedicat ed corrido rs suitable for my disabili ty	5		h
3.	17	Facilita ting the use of restroo ms	4.3 0	0.812	Hig h
4.	14	The possibil ity of mobilit y and movem ent betwee n floors in the college	4.2 2	0.821	Hig h
5.	13	Adapti ng univers ity buildin gs to suit my disabili ty	4.1 1	0.809	Hig h
6.	12	Ability to move betwee n lectures	4.0 9	0.808	Hig h
7.	9	The possibil	4.0 6	0.826	Hig h

		ity of particip ating in univers ity activiti es and parties			
8.	10	Facilita te the use of the library	4.0 5	0.817	Hig h
9.	16	Facilita te the use of my support tools (wheel chair, cane and headset ..)	4.3	0.714	Hig h
Total			4.2 7	0.64	Hig h

It can be noted from the previous table that the necessary environmental adaptations for students with disabilities came high with an arithmetic mean of (4.27) and a standard deviation of (0.64). The most important paragraphs were: (Accessibility to and from the University) with an arithmetic mean of (4.41) and a standard deviation of (0.72), followed by (Providing dedicated corridors suitable for my disability) with an arithmetic mean of (4.35) and a standard deviation of (0.71). This conclusion is similar with Ahmed 2020, Abu Aida 2017 and Al-Adra 2016, but differs from Abu

shkheidem2020 in that it can be explained by the modernity of the era of Palestinian universities, which included the presence of students with disabilities at the time and the old university buildings.

The answer related to the third Dimension: what are the necessary social adaptations in the relationship between students with disabilities and other students in Palestinian universities?

Arithmetic means and standard deviations of socialadaptationswere extracted as shown in Table No. (8).

Table (8): arithmetic means and standard deviations of the necessary socialadaptationsfor students with disabilities in Palestinian universities, sorted by importance

Rank	Paragraph	Paragraph	Mean	Standard deviation	Range
1.	18	Change the ordinary kids' negative perceptions about me.	4.49	0.731	High
2.	19	Making sure that other students don't use	4.38	0.681	High

		inappropriate language with me			
3.	20	Facilitate the establishment of social relationships with others within the University	4.32	0.852	High
4.	21	Decrease the avoidance of me from other students	4.22	0.630	High
5.	22	Assisting me in adjusting to other University students	4.22	0.712	High
6.	23	facilitating participation in University social	4.21	0.701	High

		events			
7.	24	working on other students' understanding of my situation	4.22	0.627	High
8.	25	Encouraging students to join me and accompany me.	4.22	0.610	High
Total			4.32	0.58	High

It can be noted from the previous table that the social adaptations in the relationship between students with disabilities and other students came high with an arithmetic mean of (4.32) and a standard deviation of (0.58). The most important paragraphs were: (Change the ordinary kids' negative perceptions about me) with an arithmetic mean of (4.49) and a standard deviation of (0.73), followed by (Making sure that other students don't use inappropriate language with me) with an arithmetic mean of (4.38) and a standard deviation of (0.68). This result is consistent with Al-Hadra 2016 and differs with Ahmed's 2017 study, and this result can be explained by the lack of awareness programs for students about their colleagues with disabilities.

The answer related to the fourth dimension: in Palestinian universities,

what social adaptations in the (relationship between students with disabilities and teaching and administrative bodies) are required for students with disabilities?

Arithmetic means and standard deviations of Social adaptations in relations between students with disabilities and the teaching and administrative bodies were extracted as shown in Table No. (9).

Table (9): arithmetic means and standard deviations of the necessary Social adaptations in relations between students with disabilities and the teaching and administrative bodies, sorted by importance

Ra nk	Parag raph	Paragra ph	Me an	Stan dard devia tion	Ra nge
1.	33	Providin g specialis ts at the universit y to deal with me	4.47	0.731	High
2.	29	Working on the adequac y of the universit y services provided to me	4.45	0.681	High
3.	28	Facilitati ng universit y	4.37	0.852	High

		admission procedures			
4.	31	Suitability of the teaching services used in teaching at the University for me	4.36	0.630	High
5.	36	Provide guidance to me on an ongoing basis	4.33	0.712	High
6.	34	The suitability of the registration procedure for me	4.30	0.701	High
7.	35	Facilitating access to the necessary services	4.30	0.627	High
8.	32	Officials' interest in discussing the problems facing me	4.27	0.610	High

9.	30	Administrative cooperation with me within the University	4.25	0.656	High
10.	27	Work on the appropriateness of the treatment of administrators to me	4.22	0.725	High
11.	26	Teachers take into account my circumstances	4.22	0.633	High
Total			4.32	0.58	High

It can be noted from the previous table that the social adaptations in the relationship between students with disabilities and the teaching and administrative staff came high with an arithmetic mean of (4.32) and a standard deviation of (0.58). The most important paragraphs were: (providing specialists at the university to deal with me) with an arithmetic mean of (4.47) and a standard deviation of (0.73), followed by (Working on the adequacy of the university services provided to me) with an arithmetic mean of (4.45) and a standard deviation of (0.68). This result

differs from the result of Ahmed's 2017 study, and this can be explained by the lack of information from the teaching and administrative staff about disabilities and strategies to deal with them.

2.1.4 Results of the second question:

Are there any significant differences at the level of ($\alpha < 0.05$) in the averages of the necessary adaptations for students with disabilities in Palestinian universities due to the following variables (University, type of disability)?

Two null hypotheses emerged from this question, the results of their examination are as follows:

1. Results of the first hypothesis:

There are no significant variations in the averages of the necessary

adaptations for students with disabilities in Palestinian universities attributed to the University variable at the level of significance ($\alpha < 0.05$).

The arithmetic means and standard deviations of the necessary adaptations were extracted based on the University variable to verify the validity of this hypothesis, as shown in Table (10).

Table 10: results of the T-test for the differences in the total arithmetic means of the necessary adaptations for students with disabilities in Palestinian universities according to the University variable.

Dimension	University	#	Arithmetic mean	Standard deviation	Calculated T value	Degree of freedom	Statistical significance
necessary adaptations for students with disabilities in Palestinian universities	Al-Quds	26	3.77	0.47	-0.681	48	0.502
	Bethlehem	24	3.86	0.33			

Table (10) shows that there are no statistically significant differences in the averages of the necessary adaptations attributed to the University variable, where the arithmetic mean on the overall grade of

al-Quds University was (3.77), while the arithmetic mean of Bethlehem University was (3.86), and it turned out that the calculated (T) value was (-0.681) at the significance level of (0.502), and

accordingly, the null hypothesis was accepted.

The result of this question showed that there are no differences in the necessary adaptations for students with disabilities in Palestinian universities due to the University variable, and this result is not consistent with the study of Abu Ida(2017), as universities are almost at the same level when it comes to the adaptations needed for their students with disabilities, all buildings are relatively old and the atmosphere in each of the universities is considered almost the same, and this means that students with disabilities need the same adaptations in the two universities.

2. Results of the second hypothesis:

There are no significant differences in the averages of the necessary adaptations for students with disabilities in Palestinian universities at the level of significance ($\alpha < 0.05$) due to the variable type of disability.

The arithmetic means and standard deviations of the necessary adaptations for students with disabilities in Palestinian universities were extracted according to the variable type of disability, as shown in Table, to check the correctness of the fifth hypothesis (11).

Table 11 shows the arithmetic means and standard deviations of the necessary adaptations for disabled students in Palestinian universities, broken down by disability type.

Variable	Type of disability	#	Mean	Standard deviation
Necessary adaptations for students with disabilities in Palestinian universities	Visual disability	28	4.01	0.37
	Hearing disability	13	3.60	0.35
	Physical disability	9	3.72	0.52

Table (11) illustrates that, depending on the type of disability, there is a difference in the methods of making essential adaptations for students with disabilities in Palestinian universities. The results of the one-way analysis of variance were retrieved to test the hypothesis, as given in Table (12).

Table (12): The results of the one-way analysis of variance of the differences in the necessary adaptations for students with disabilities in Palestinian universities based on the type of disability.

Dimensions	Source of variance	Sum of squares	Degrees of freedom	Mean square	Value of calculated F	Statistical significance
Necessary adaptations for students with	Between groups	1.718	2	0.859	5.560	0.007**
	Within	7.264	47	0.155		

disabilities in Palestinian universities	groups					
	Total	8.982	49			

The previous table shows that there are significant differences in the averages of the necessary adaptations for students with disabilities in Palestinian universities, depending on the variable type of disability, at the level of significance of ($0.05 \geq \alpha$). The value of (F) calculated on the overall grade was (5.560) at the level of significance of (0.007). The Tukey test was performed to determine the source of differences and assess the direction of significance, and the results are shown in Table (13).

Table 13 shows the results of the Tukey test used to determine the direction of the indication based on the type of disability.

Variable	Type of disability	physical	Hearing	Other
Necessary adaptations for students with disabilities in Palestinian universities	Visual disability		0.4165*	0.2876
	Hearing disability			-0.1288
	Physical disability			

The null hypothesis was rejected since the differences were significant in favor of students with (visual) difficulties, as shown in the previous table.

The answer to this question revealed that there are differences in the adaptations required by students with disabilities in Palestinian universities, depending on the type of disability, with visual disabilities being more prevalent. This differs from the research results of Abu shkheidem and Al-Qat'una (2018) and Abu'ida (2017). This result can be explained by the fact that the number of students with visual disabilities in universities is higher than the number of students with other disabilities, resulting in them receiving the necessary adaptations.

In view of the previous results, the following recommendation is made:

- Work to adapt university education to the needs of students with disabilities in all professions, particularly those involving hearing and physical difficulties.

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