

## Attitudes of tenth grade students in Jordan towards vocational education

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### ABSTRACT

This study aims to identify tenth grade students' attitudes towards vocational education in Jordan, as well as this attitude's relationship with the gender variable. The analytical descriptive approach was used to achieve the goals of this study. A questionnaire consisting of 25 items was created covering six fields: the professional field, the administrative field, the health field, the economic field, the media field, and the educational field. This questionnaire was distributed to a sample of 1,184 male and female students in the schools of the Jordanian Ministry of Education in the first semester of the academic year 2022/2023. After conducting the appropriate statistical treatments to tenth grade students' attitudes towards vocational education in Jordan, the results were a medium degree of correlation on the tool as a whole and on all of the areas of study mentioned. There was a lack of statistically significant trends within a 95% confidence interval  $\alpha \leq 0.05$  for the gender variables (male and female students).

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## 1. INTRODUCTION

Vocational education and training is a priority of this era, being a social and civilizational necessity that is based on the premise that the real guarantee of development is building the human being. The real wealth of the nation is its human wealth, as the human being is the goal and means of development, and for this reason vocational education has become an important part of the educational policies of developed and developing countries alike. It has many advantages in both the educational system and in the work force.

Vocational education is a type of formal education which includes tracks of secondary education in both its practical and theoretical parts. Vocational certificates are concerned with preparing a skilled workforce, in addition to qualifying them for jobs that depend mainly on practical and professional activities. These certificates also qualify the holder, within some conditions, to enroll in university studies. These vocational programs include technical skills, practical and theoretical knowledge, and personal and academic skills [1]–[8]. Therefore, vocational education institutions make great efforts to provide skilled graduates able to meet the demands of the labor market. They aim to achieve this through efficient operations and the skill of their students, but the competitiveness of institutions in the labor market and the developing technological demands of practical professions are accelerating in a manner that exceeds the process of developing the programs required to staff them at vocational institutions [9]–[14].

The importance of vocational education emerges from an indispensable necessity for societies to ensure the presence of qualified individuals who are able to carry out all the needs of technical fields.

It constitutes one of the educational programs that specializes in preparing and qualifying the human cadres necessary to implement development plans in any society [15]–[20]. In this context, Nadi and Sarairah [21] stated that as far as vocational education is in line with the actual needs of society and towards its future aspirations, there is the ability for rapid societal development. This is possible through vocational education institutions providing qualified and trained manpower to various fields of work. The researcher believes that vocational education targeting local workforces will provide the most important tools for economic and human development. This is done through qualifying individuals for highly skilled positions and developing their knowledge and technical skills to create a workforce with a high level of awareness and knowledge. This will ensure the achievement of high levels of productivity in various fields, which in turn effect economic and social development. The benefits of this will be overcoming a large percentage of unemployment suffered by individuals in society because of the youth's orientation to academic studies, which has led to reluctance to work in trade fields. Craft professions provide a source of income that protects individuals from poverty.

Although there is a theoretical attribution for this study, the subject of vocational education is considered an ongoing and evolving subject. This is due to the interest of many countries in the world in this subject, which enhances the originality and modernity of the study used for this research [22]. The mental image of vocational education gained in this study was based on student's memory, knowledge, and practical or emotional biases about vocational education. The analytical descriptive method was applied to an available sample of tenth grade students in the Tulkarem Governorate, consisting of (445) male and female students, representing 21% of the study population. To answer the study questions, a questionnaire consisting of two parts was distributed among the students. It consisted of 18 items distributed among the three sections of the study: the cognitive component, the emotional component, and the practical component. Appropriate statistical analysis was used for descriptive studies within the social statistical packages (SPSS). The study showed the following results: the total score, the emotional component, and the practical component of the mental image of vocational education among tenth grade students came in at an average level, while the cognitive component of the mental image came in at a high level. The following variables had no correlation with the mental image of vocational education among the tenth-grade students: gender, housing, the source of information, the work of the mother and the work of the father. The following variables had a significant correlation with the mental image of vocational education among the tenth-grade students: school average.

A different study by Mokoro [23] aimed the present study investigated the attitudes of youth trainees towards technical and vocational education and training (TVET) in Vocational Educational and Training Authority (VETA) Institutions in Arusha City in Tanzania. The study was guided by two research questions: i) what is the rate of youth enrolment in TVET in VETA Institutions in Arusha City? and ii) what are the attitudes of the trainees towards the offered courses? The study employed a cross-sectional research design. The sample comprised 130 trainees, 15 trainers and three programme coordinators, yielding a total of 148 participants. The data collection process encompassed the utilisation of questionnaires, interviews, and document analysis guides. The data were analysed statistically and thematically. The findings of the study demonstrate that the enrolment rate is notably high, given the institutions' capacity for admission. Furthermore, the majority of trainees exhibit a favourable attitude towards the offered TVET courses, perceiving them to be advantageous. The study concluded that the rate of enrolment of young trainees met the admission capacity by 100%, and that the trainees' attitude towards TVET was positive in the studied VETA Institutions. This study posits that greater awareness and publicity of TVET among the general public could facilitate the acquisition of vocational skills among a significant number of young people.

Another study by Panda [24] the present study has been designed to facilitate an understanding of the attitudes of female students towards vocational education in secondary schools in the Jajpur District of Odisha. A sample of 100 female students was selected from secondary schools in the Jajpur District. The employment of a three-point Likert scale was utilised to assess the attitudes of female students towards vocational education, as determined by the interview. The researcher employed a standardised questionnaire tool that had been developed by Sundharavadivel. Utilising this instrument, the researcher was able to assess the attitudes of female secondary school students towards vocational education. Thirty-one attitude statements pertaining to vocational education were administered to the subjects. The results indicated that there was no significant difference in attitudes towards vocational education between urban and rural secondary female students. However, a significant difference was observed between government and private secondary female students in their attitudes towards vocational education. A survey was conducted to ascertain the level of awareness among students regarding vocational education, its scope, benefits, and scholarship opportunities for their enhancement. The findings revealed a significant lack of awareness regarding these resources.

Another study by Shaari *et al.* [25] aimed the present study examines secondary students' attitudes towards TVET. The prevailing public mindset regarding three-dimensional illusions has the potential to influence Malaysia's future aspirations for TVET. The objective of this study is to comprehend the reasons

why high school students do not regard skills education as a means of enhancing their career prospects. A behavioural insights approach was developed, drawing upon behavioural theories and social learning theory, with the objective of identifying the environmental, social and personal influences on student attitudes. The present study comprised two phases: a survey and an experimental phase. The overall findings indicated that there was a low level of negative attitudes toward TVET. Following a series of experimental tests, considerable shifts in attitudes towards the curriculum and objectives of TVET, as well as its roles, were identified. The study results indicate that TVET literacy can reduce the negative mindset of TVET and encourage more after-school students to pursue TVET and join the pool of skilled workers.

The study of Zayid *et al.* [13] aimed at identifying the attitudes of tenth grade students in North Al-Batinah Governorate towards vocational education and its relationship to vocational awareness and revealing male and female students' responses according to a measure of their attitudes towards vocational education. The study adopted the descriptive approach. A random sample of 393 male and female students was selected from the study population, and three scales were used: the attitude towards vocational education scale (30) statements, the professional awareness scale (30) statements, and the professional interests scale (24) statements. The results indicated that the students' attitudes towards vocational education were positive to a low degree, in addition to the absence of differences between male and female students in the attitude towards vocational education.

Another study by Zhi and Yaakub [26], the objective of this research is twofold: firstly, to identify the major factors that influence students' attitudes towards TVET, and secondly, to determine the relationship between these factors and students' attitudes. The present study elected to utilise TVET students at Universiti Tun Hussein Onn Malaysia (UTHM) as respondents. A cross-sectional study was conducted using a survey questionnaire. A total of 278 questionnaires were distributed to targeted respondents via Google Form. In the context of the study, 278 sets of the questionnaire were distributed; of these, 200 were returned, yielding a rate of return of approximately 71.94%. The research involved the administration of three distinct tests: the Normality test, the Reliability test, and the Spearman Rho's correlation coefficient statistic. The findings indicated a substantial correlation between the variables under investigation, namely parent influence, teacher influence, peer influence, academic performance, future career and job potential, socio-economic status, and attitudes towards TVET among TVET students at UTHM. The findings of this study have the potential to inform future initiatives aimed at enhancing public perceptions of TVET programmes, with a particular focus on the perspectives of students and parents.

Another study by Nadi and Sarairah [21] aimed to identify the level of attitudes of the tenth-grade students in Jordan towards joining the fields of vocational education after the end of the basic education stage. To achieve the objectives of the study, a questionnaire was distributed to a sample of (707) students from the tenth grade in primary schools in Jordan, and then analyzed using the descriptive method. The results showed that the attitudes of tenth-grade students in Jordan towards joining the fields of vocational education after the end of the basic education stage came within the average level. The variable with the highest correlation was the number of family members, with the highest mental image with students whose family members were (5-7 members) and (more than 7 members).

Another study by Ali *et al.* [27] The study aims to identify the factors influencing students' attitudes towards TVET in Western Fiji. The study will focus on parental influence, teacher influence, peer influence, career prospects, job potential, and social status. The present study investigates whether these factors significantly affect students' perceptions of TVET. A total of 200 participants were surveyed using a structured questionnaire. The sample comprised 111 males and 89 females, with ages ranging from 20 to 60 years. The study employed a cross-sectional design with a convenience sampling method, distributing 250 online questionnaires to the target population in vocational institutions. The response rate was found to be 80%, with 200 completed questionnaires returned. The data were analysed using descriptive statistics via SPSS. The findings indicate that parental, teacher, and peer influences significantly shape students' attitudes towards vocational education. The findings indicate that these influences, in conjunction with career and social expectations, may contribute to unfavourable attitudes towards TVET.

This problem emerged through specialty research in the field of education, specifically in the field of vocational and technical education. In addition, the researcher has professional relationships with many specialists in the field of vocational and technical education, whether teachers or educational supervisors. There he noticed the weakness and lack of interest on the part of students in vocational education, as most of these students' turnout-which is compulsory-was either due to their inability to join the academic branches due to their weak grades, or to their inability to cover the financial costs required for academic studies. This study also came as an investigation of the recommendations of some previous studies, such as the study by [21], [24]. These studies recommended the need to pay attention to vocational education to improve the community's view towards vocational education and to provide school students with positive attitudes towards it. In light of this, this study tries to answer the following questions: i) what are the attitudes of tenth grade students in Jordan towards vocational education? and ii) are there statistically significant differences at

the significance level ( $\alpha=0.05$ ) in the attitudes of tenth grade students in Jordan towards vocational education attributed to the gender variable (male or female students)?

The importance of this study lies in the importance of its topic, which is the attitudes of the tenth grade students towards vocational education in order to find out the reasons for the low percentage of students enrolled in vocational education and work to solve the obstacles that hinder their enrollment. Increasing students' mental image of vocational education and raising the efficiency of vocational education graduates, added to providing vocational programs that keep pace with the labor market, will require highlighting the reality of vocational education and trying to change the societal view of vocational education.

This study aims to: i) identify the tenth-grade students' attitudes towards vocational education in Jordan and ii) identify if there is a correlation with the gender variable on students' attitudes towards joining vocational education programs.

- Direction: as defined by Al-Momani [12] that the individual's mental and psychological readiness, which is formed through their experience and has a direct effect on their response to the situations that provoke this response. This is measured in this study by the degree that the student obtains on the items of the attitudes scale that was prepared and used for the purposes of this study.
- Vocational education: a type of formal education which includes tracks of secondary education, both practical and theoretical, and is concerned with preparing educated individuals and a skilled workforce, in addition to qualifying them for jobs that depend mainly on practical and professional activities (Jordanian Ministry of Education).
- Basic tenth grade: the last academic stage of the basic stages, during which the student makes their professional decision in the light of their abilities and readiness for the professional field.

This study was carried out according to the following parameters:

- Objectivity border: to identify tenth grade students' attitudes towards vocational education in Jordan.
- Spatial boundaries: this study was conducted in primary and secondary schools, in which the tenth grade is located, whether they are male or female schools, in the directorates of education in the governorates of Ajloun, Jerash, and Irbid in Jordan.
- Human limits: the application of this study was limited to tenth grade students.
- Temporal limits: this study was carried out during the first semester of school during the school year (2022/2023).

## 2. METHOD AND PROCEDURE FIELDT

For this study, the researcher adopted the analytical descriptive approach. This approach relies on describing and analyzing the phenomena related to the variables of the study. The phenomenon targeted by the study was described in the study individuals without change or modification.

### 2.1. Study community

The study population consisted of all tenth-grade students in Jordan. This population is 144,000 male and female students according to the statistics of the Jordanian Ministry of Education for the year (2022). As it is the end of the basic stage in the educational stage in the Kingdom of Jordan, the academic or vocational track that the student wishes to study is determined according to the principles and laws in force in the Jordanian Ministry of Education.

### 2.2. The study sample

The study sample was formed from (1,184) male and female students from the tenth grade in the schools affiliated with my principal at education, for the governorates of Ajloun, Jerash and Irbid. These schools were selected to choose (521) male and (663) female students in the first semester of the academic year (2022/2023) to participate in the study.

### 2.3. Study tool

The special study tool measuring tenth grade students' attitudes towards vocational education in Jordan was created based on a review of the tools used in previous studies, such as study by [9], [12], [23]–[25]. The resolution formed in its primary form from (32) paragraphs divided into six areas: the administrative field, the professional field, the health field, the educational field, the economic field, and the media field.

### 2.4. Believing the study tool

#### 2.4.1. The validity of the study tool was verified through

The veracity of the arbitrators (the veracity of the content): the questionnaire was shown to (10) Arbitrators specialized in the fields of vocational and technical education, faculty members specializing in

AL-Balqa Applied Universities and Yarmouk University, teachers of the subject of vocational education, and educational supervisors of the subject of vocational education. These arbitrators were asked to express their opinion on the tool and the appropriateness of the paragraphs for each field, in addition to merging, deleting, amending, or adding paragraphs. This validation resulted in deleting (7) paragraphs from the tool due to the repetition of meaning in other paragraphs. In its final form, the tool consisted of (25) paragraphs divided into the fields of study.

Structural validity (internal consistency): the validity of the internal consistency of the study tool was verified by applying it to a survey sample consisting of (30) male and female students outside the study sample set but from the same community. The correlation coefficient was calculated between degrees for each item in the scale and its total score, and the results showed that there was a statistically significant correlation between the score of each item and the total score on the scale, as shown in Table 1.

Table 1. Link transactions to scale paragraphs students' attitudes towards vocational education

Paragraph number	Correlation coefficient	Paragraph number	Correlation coefficient
1	0.534**	14	0.616**
2	0.558**	15	0.534**
3	0.578**	16	0.451**
4	0.365**	17	0.418**
5	0.307**	18	0.499**
6	0.372**	19	0.527**
7	0.548**	20	0.408**
8	0.591**	21	0.645**
9	0.637**	22	0.307**
10	0.94**	13	0.372**
11	0.88**	24	0.548**
12	0.457**	25	0.506**
13	0.394**		

\*\*Function at a significance level less than 0.05.

#### 2.4.2. Stability of the study tool

The stability of the study tool was proven using the the method of application and re-application (test-re-test) by applying it to a sample from outside sample the study. It used the same community of (30) male and female students as the structural validity test, with a time difference of two weeks between the two applications. The stability coefficient was calculated using the Pearson correlation coefficient and the Bethe significance level of correlation was (0.93). Where this ratio good for study purposes.

#### 2.4.3. Description of the study tool

A five-point Likert scale was used to express the responses of the study sample on all items of the scale as follows: (strongly agree, agree, neutral, disagree, strongly disagree). The weighted value (5) was given to strongly agree, (4) to agree, (3) to neutral, (2) to disagree, and the weighted value (1) to strongly disagree. Level ratings divided students' aptitude for vocational education into three levels: high, medium, and low. This is done by dividing the range of numbers from 1-5 into three categories to obtain the range of each level, i.e.  $1.33=1-5$ . Therefore, the levels are as follows: low degree from (1-2.33), medium degree from (2.34-3.67), and high degree from (3.68-5) [28].

#### 2.5. Statistical processors

A set of indicators was used to evaluate this data set through the program SPSS 21 to conduct the descriptive analysis of the study. Among these indicators are the following: i) frequencies and percentages to get acquainted on the characteristics of the study sample; ii) arithmetic means and standard deviations to analyze the paragraphs of the questionnaire, and arrange them according to their relative importance, depending on their arithmetic averages; and iii) t-test for the gender variable.

### 3. RESULTS AND DISCUSSION

Results related to the first question which states: what are the attitudes of tenth grade students in Jordan towards vocational education? The mean and standard deviations were extracted for the study instrument domains, shown below in Table 2. Table 2 illustrates that the arithmetic mean for directions tenth grade students towards vocational education in Jordan came with an average score on the scale as a whole, as the arithmetic mean (3.27), with a standard deviation of (0.74) and may be the arithmetic mean for the domains ranged between (3.12-3.43), with a standard deviation of (0.51-0.76).

Where it came from in the first place there vocational my average score was (3.43), with a standard deviation of (0.75), and with a medium degree, followed by the second place the area the economist with an average of (3.38), with a standard deviation of (0.76), and with a medium degree, followed by the third place the area media with an average of (3.29), with a standard deviation of (0.63) to a moderate degree, and he came ranked fourth the area educational With an arithmetic mean (3.24) and standard deviation (0.52) and moderately, it came ranked penultimate there admin with an average of (3.19), with a standard deviation of (0.51) to an average degree. In the last place came the health domain, with an arithmetic mean of (3.12) and a standard deviation of (0.64).

Table 2. Arithmetic means and standard deviations of tenth grade students' attitudes towards vocational education in Jordan descending order according to their arithmetic averages

Rank	The field	Arithmetic averages	Standard deviation	Class
1	The vocational field	3.43	3.43	Medium
2	The economist field	3.38	3.38	Medium
3	The media field	3.29	3.29	Medium
4	The educational field	3.24	3.24	Medium
5	The administrative field	3.19	3.19	Medium
6	The health field	3.12	3.12	Medium
	Total marks	3.27	0.74	Medium

This result can be attributed to the fact that students view vocational education as a suitable field to enroll in after the end of the tenth grade, and that it is a field that may secure their future. Material through obtaining work in the market, which may be for people who have a specific profession, depends on the holders of other educational qualifications. Students also consider that the role of the media in attracting attention towards vocational education may not be at the appropriate level, especially since most countries of the world are moving towards empowerment. Also, the fact that the administrative field ranked second to last leads us to the fact that the school administration in general and the Jordanian Ministry of Education in particular do not play the role of school administrations in educating students about vocational education in a good way, and this may be the opposite of what some ministries of education in other countries are doing towards vocational education. Students also consider that vocational education may not fully provide them with health protection, because they deal with dangerous machines and equipment that require high skills, which may be a reason for students not going to join vocational specializations in the future.

Results related to second question which states: are there statistically significant differences at the significance level ( $\alpha=0.05$ ) in attitudes of tenth grade students in Jordan towards vocational education attributed to the gender variable (male or female students)? To answer this question, a t-test was used to examine the differences between the mean responses of the study subjects using the variable gender (male, female). These results were shown in Table 3.

Table 3 shows a lack of statistically significant differences in attitudes of the tenth grade students in Jordan towards vocational education attributed to the gender variable (male, female). The value of (v) is (5.98), and this value is not statistically significant, so it can be concluded that there is no statistical difference in attitudes between male and female students. The results of this study agree with the results of study [24], which showed no statistically significant differences in the estimates tenth grade students towards their attitudes towards vocational education attributed to the gender variable.

Table 3. Results of t-test analysis to test whether there are differences in ratings tenth grade students towards their attitudes towards vocational education attributed to the variable gender (male, female)

Gender	The number	Arithmetic averages	Standard deviation	(v) calculated	Significance level
Male students	521	3.86	0.59	5.98	0.59
Female students	663	3.82	0.62		

Several recommendations are proposed to enhance the likelihood of young men and women to enroll in vocational education, the most important of which are: i) Enhancing the general infrastructure for vocational education through providing vocational schools with modern facilities, equipment and workshops equipped with the latest appropriate equipment; ii) Using modern scientific methods to guide students and their parents towards discovering their inclinations and aspirations in vocational education, and increasing youth awareness about vocational education and its empowerment opportunities; iii) Developing a national database on job opportunities. Research and studies should be developed on employment trends and

promising sectors, and an integrated and accessible national database on available and stagnant job opportunities should be established and updated continuously; iv) Enhancing the participation of both genders in vocational training and the labor market. Women currently represent a minority in the labor market, so gender considerations must be considered in all workplaces; v) Supporting vocational education schools during and after the Corona crisis, providing the necessary support for vocational schools, including providing them with electronic platforms specially designed for vocational education to be used in the event of a future pandemic; and vi) Combating the culture of shame about vocational education and spreading the culture of craftsmanship as a source of income. Creating new majors in public and private universities and institutes that allow students to obtain a bachelor's degree in professional disciplines such as a bachelor's degree in beauty, fashion design, and carpentry.

#### 4. CONCLUSION

The study's findings indicated that the attitudes of tenth-grade students in Jordan towards vocational education were moderate, with an overall mean score of 3.27 and a standard deviation of 0.74. The mean values for the various fields of study ranged from 3.12 to 3.43, indicating minor variations in students' preferences across different vocational domains. The vocational field was ranked first with a mean score of 3.43, followed by the economic field with a mean score of 3.38, and then the media field with a mean score of 3.29. These results indicate that all three fields were considered to be moderate in intensity. The least preferred fields were education, followed by administration, and finally the health field, which ranked last with a mean score of 3.12. The findings of this study are attributable to students' perception of vocational education as a conduit to clearly delineated future employment opportunities, particularly for those endowed with specific professional competencies. Nevertheless, the limited promotion of vocational education in the media may hinder students' interest in the subject, despite the global trend towards the empowerment of this type of education. The suboptimal ranking of the administrative field may also be indicative of a deficiency in the role of school administrations and the Ministry of Education in raising students' awareness of the importance of vocational education. Finally, the comparatively low ranking of the health field may be attributed to students' concerns regarding the potential risks associated with the utilisation of equipment and machinery, which in turn limits their aspiration to pursue this particular major.

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#### AUTHOR CONTRIBUTIONS STATEMENT

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C : Conceptualization

M : Methodology

So : Software

Va : Validation

Fo : Formal analysis

I : Investigation

R : Resources

D : Data Curation

O : Writing - Original Draft

E : Writing - Review & Editing

Vi : Visualization

Su : Supervision

P : Project administration

Fu : Funding acquisition

### CONFLICT OF INTEREST STATEMENT

The present authors and the authors of the aforementioned manuscript hereby declare that there are no conflicts of interest.

### INFORMED CONSENT

The protection of privacy is a legal right that must not be breached without individual informed consent. In cases where the identification of personal information is necessary for scientific reasons, authors should obtain full documentation of informed consent, including written permission from the patient prior to inclusion in the study. Incorporate the following (or a similar) statement: we have obtained informed consent from all individuals included in this study.

### DATA AVAILABILITY

The authors confirm that the data supporting the findings of this study are available within the article [and/or its supplementary materials]. The data supporting the findings of this study are also available from the corresponding author, [MOAM], for readers, researchers, graduate students, and any entity or institution within the scientific research framework seeking to advance science and knowledge.

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