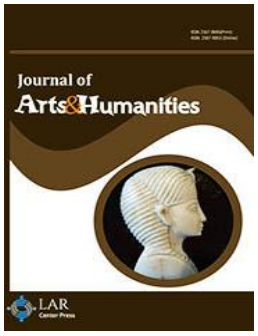

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Jordanian vocational education teachers' acquisition of workshops management skills

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ABSTRACT

Vocational education has been acknowledged in the last few years as the future of successful economy and this needs to reconsider vocational education teachers different skills including workshops management skills. The study aimed to define vocational education teachers' acquisition of workshop management skills in Jordan. The study sample consisted of (58) vocational education teachers selected randomly. To achieve the objectives of the study, a questionnaire was employed. The results showed that the level of vocational education teachers' acquisition of workshop management skills was moderate. The study revealed statistically significant differences in vocational education teachers' acquisition of workshop management skills in light of educational level, in favor of higher education, and in light of experience, in favor of teachers with more than 10 years of experience, while no statistically significant difference was found in light of gender. In light of the results, the study recommends to include activities addressing the required workshop management skills into vocational education pre-service and in-service training programs.

Keywords: Vocational Education Teachers, Workshop Management Skills, Acquisition, Vocational Workshops, Jordan.

1. Introduction

In an effort to achieve a better teaching-learning process, and in order to achieve the objectives of the educational process, teachers are in need to obtain high levels of different skills among which are management skills, that are considered essential skills that manage teachers to perform their teaching duties effectively. Vocational education workshops require such skills in order to be able to manage them adequately in light of the technological developments, and the need to make the different branches of the educational process adapt to these developments.

In this regard, it can be noted that now in the knowledge-based economy, educational systems have become required to keep pace with scientific, cognitive, and technological developments, which will only be through preparing the teachers who possess the skills of the current century. Therefore,

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the quality of education has become among the most prominent issues of concern to educational policymakers, especially in light of the global shift towards intellectual investment in which the teachers are a key element. So, developing teachers and their teaching skills, as well as paying attention to their managerial skills is an important educational goal due to the activities included in the curricula that require a well-prepared teacher who is able to meet the needs of students to achieve educational goals (Nsour, 2018).

Management is a process of making the environment friendly in order to be able to achieve desired goals. It is also a way of thinking and describing how things should be accomplished for achieving goals through working with individuals and using the resources efficiently (Batamuriza, 2018).

In this respect, classroom management is a skill that teachers are in need of for an effective teaching-learning process. It is an ongoing process that calls for teachers to make decisions about different aspects including where students should sit, with whom they should work within the class, the followed teaching methods, how to ensure student's participation and motivation, the required materials to use, arranging the equipment, and the appropriate way to deal with students' misbehaviors (Sadik & Akbulut, 2015).

Classroom management skills are defined by Collier-Meek, Johnson, Sanetti and Minami (2019) as a set of practices teachers follow in order to proactively support class engagement and the learning process for increasing students' academic competence. According to Mkhasibe and Mncube (2020: 151), management skills are "deliberate actions taken to create and maintain a learning environment conducive to successful instruction".

As for workshop management, Mohamed and Kimaro (2019) believe that workshop management includes the different things that teacher does with aim of organizing students' space, time, and materials within the workshop; for the learning activities to take place in a consistent environment effectively.

Workshop management implementation aims to enhance pro-social behavior and increase students' academic engagement. Additionally, workshop management achieves meaningful academic learning, facilitates social and emotional growth, and decreases negative behaviors among students (Iheoma & Uchenna, 2020).

Furthermore, it takes a creative workshop that enhances students practical skill to produce efficient workshop management. Effective workshop management and workshop work are able to enhance students' practical skills and introduce graduates who are competent and able to meet the standards of the working world (Setiawaty, 2015).

Managerial skills can be classified into three areas: technical skills which are related to knowledge and understanding of the mechanics of work, human relations skills which indicate the understanding of individuals and the ability to work effectively with them, and the conceptual skills which are related to the ability to visualize the organization as a whole (Alphonse, 2016).

It also involves providing students with a healthful and safe environment in terms of temperature, lighting, ventilation, and sound control; arranging the tools and workstations so that the teacher can oversee and manage workshop activity; avoiding congestion in order to avoid hazards (Osuntuyi, 2020).

A teacher with strong management skills is able to use time efficiently as he creates routines and procedures that save time in the long run, he also achieves consistency, students know everything related to the routine activities as a result of knowing how the class runs. Moreover, he creates an inquiry-based environment in order to enable students to lead the learning process and encourages creativity through creative activities that provide students with the opportunity to express what they have learned in a new way. Finally, he employs collaborative teaching for students to become able to achieve the learning goals together effectively (Iheoma & Uchenna, 2020).

In addition to that, Osuntuyi (2020) states that there is a need to pay attention to safety issues in vocational education workshops and must be the number one priority for vocational education teachers, since creating a safe environment helps achieve the goals and object of vocational Education, students who learn to in a safe learning environment will be safe workers in business and industry.

Vocational education is a response to the recommendations of UNESCO and in response to the recent calls of educators to improve the quality of the educational product (student) to comply with the requirements of the labor market and life (Alkaltham, 2016). Since vocational education aims to

provide society with the right labor forces that are able to work in the different fields; support the economic and social growth of the country; and form a positive view of various occupations, this indicates the importance of vocational education as a learning subject in Jordan; as it works through its practical activities on introducing students to the world of work and prepare them for it, and thereby, it focuses on investing in human capital as it delivers a return that may be greater than the capital, and provides society with qualified human forces capable of actively participating in the working life and contributing to production (Al-Momaini, 2019).

Moreover, and given that vocational education is a main subject that forms a fundamental basis to define students' career interests and their abilities, and working on developing them to qualify them to be able to choose their future career in light of the objectives of vocational education emanating from Jordan's general education objectives; there is a need to pay attention to the preparation of vocational education teachers and their ability to manage the educational process in the class and vocational education workshops using their experiences, knowledge, and cognitive skills (Smadi & Al-Hashmi, 2020).

In this vein, and in the context of teaching practical skills to students in vocational education, there is a set of different teaching methods than can be employed. However, the appropriate one is the one that can motivate students and maintains an interest in continuing in the vocational field (Yinusa, 2014). Thereby, teachers are in need to obtain high levels of management skills that can enable them to manage the vocational education workshops effectively for the purpose of guiding and preparing students properly through organized and planned educational activities, transferring basic knowledge and practical skills to them in a way that makes them creative and productive as a result of acquiring theoretical and practical skills (Suleiman & Nuhu, 2009; Ababneh, 2020).

Jawarneh and Al Azam (2017) define vocational education as a school subject that has been introduced into the basic education in Jordan in 1990, that amalgamates many learning areas, including health and general safety, engineering skills and light maintenance, home affairs and general life skills, agriculture and environment and others. It develops certain valuable practical skills such as tool use, repair and maintenance, and safety procedures. While Khames and Abo Hammud (2018) described it as an applied learning material that provides students with knowledge, skills, and values to enable them to discover their trends and self-abilities, the reality of their desires, and helps them understand and deal with their surroundings, develops innovation and scientific thinking, and become familiar with the developments in the field of technology.

Vocational education has been designed with aim of preparing students for a vocation or a specialized occupation, as it is directly associated with a nation’s productivity and competitiveness. Vocational education proved its important role in reducing unemployment and improving economic conditions in disadvantaged regions by reducing the skill mismatch between workers and enterprises (European Centre for the Development of Vocational Training, 2011).

Teaching vocational education differs from other subjects in relation to organizing the educational content, teaching, and assessment as well as the methods used to teach subjects. Creating an appropriate environment give students the flexibility and ability to face challenges; using scientific thinking and searching for the best solutions, and keeping students active in the process of learning vocational education (Alkaltham, 2016).

With the aim of delivering the practical aspects of vocational education, there is a need to use a set of tools and equipment in an appropriate environment which can be found in the workshop, which is a unique learning situation where students study, experiment, create, assemble, test, disassemble, repair, construct, imagine and design (Jawarneh & Al Azam, 2017). Therefore, Al-sa'aideh and Mahasneh (2015) stressed the need to take into consideration the teacher's management skills, given that his educational tasks include supervising the workshops, providing guidance for students while working in them, carrying out productive work in the workshop, as well as teaching the vocational education curricula, and preparing for the practical activities included in it.

In this vein, Tachie and Molepo (2019) stressed the fact that the high failure rates amongst students in acquiring the needed skills in such workshops could be attributed to the fact that some teachers are unable to implement effective and efficient managerial skills in an integrated manner. The teacher’s role is not limited to standing in front of the classroom and teaching, as an active teacher is

aware that the teaching profession today has become multifaceted, and there is a necessity to redefine their skills; in order to be able to deal with the new changes; as they are responsible for transferring these changes into the educational system. Thus, vocational education teachers need to acquire a high level of workshop management skills that enable them to effectively achieve workshop goals and adapt to changes in the educational process.

Several studies addressed cognitive skills among teachers such as Sadik and Akbulut (2015) study, which aimed to detect the management skills of teachers working at high schools. the sample of the study consisted of (1000) teachers who participated voluntarily and responded to a questionnaire. The results revealed significant relations between management skills and gender, age, experience, classroom management courses, reading classroom management books, pedagogical background, and types of schools. The results indicated that teachers need to improve some skills related to collaboration with administration, parents, and counseling service foundations, employing educational equipment in correlation with the course content and guiding students for more productive activities.

Using a sample from four educational directorates in Irbid governorate in the northern region of Jordan consisted of (356) vocational education teachers selected using random cluster method, Jawarneh and Al Azam (2017) examined the perceived training needs of vocational education teachers relating to workshop management and teaching utilizing Borich needs assessment model, by administrating a questionnaire on the selected sample. The results of the study found that the teachers were in need of professional development education in all areas of workshop management which include: Workshop and equipment maintenance, workshop safety, planning for the workshop teaching, and workshop teaching.

Yasin and Mustafa (2020) distributed a questionnaire on a sample consisting of (30) English teachers and (531) students and a language test to test the quality of students' achievements; in order to find any correlation between instructional management skills and instructional quality, in addition to any correlation between instructional management skills and the achievements of the students in English subject. The results obtained showed that only two components of instructional quality were significantly correlated to some instructional management skills. No statistical evidence was found for any correlation between the instructional management skills of the teachers with the achievements of the students.

While Silva (2021) aimed to find if there is a significant relationship between managerial skills and teaching effectiveness through a sample consisting of elementary teachers (n = 62) using a questionnaire as the main tool for data collection. The study found that the perceived managerial skills of teachers were manifested through their technical, conceptual, and human skills. The level of the teaching effectiveness is always effective in terms of management of students' behavior and assessment of students' learning and effective in the organization of instruction and adjustment of learning. Results also found a significant relationship between managerial skills and teaching effectiveness in terms of management of students' behavior, organization of instruction, assessment of students' learning and adjustment of learning, and that managerial technical skill significantly related to teaching effectiveness.

It can be noted from the previous studies the limited number of studies addressed workshops management skills, as Jawarneh and Al Azam (2017) examined the perceived training needs of vocational education teachers relating to workshop management, while Sadik and Akbulut (2015) detected the management skills of teachers working at high schools. Thus, there is a need to place greater emphasis on investigating the level of vocational education teachers' acquisition of workshop management skills in order to become able to provide a set of recommendations to improve these skills so as to reflect positively on the learning process.

2. The problem of the study

Vocational teachers assume many responsibilities that needs careful planning and adoption of affective behaviors. As such, there is a need to examine to how extent vocational education teachers are capable of guiding their students and direct them to acquire the needed targeted skills provided by vocational education curricula in developing countries such as Jordan.

In the last few years, educational policies in Jordan are calling for making vocational education one of its priorities with the increasing number of academic tracks students who are faced by

unemployment in the future while skilled workers are not enough. This means that vocational education teachers should focus on making their students more prepared to enter work force market. There is also a need to equip these students to be able to work in those occupations and professions that require them to use both their motor and cognitive skills.

As known, vocational workshops need specific skills by vocational teachers; the most important are their ability to manage the various activities in it. In another words, vocational teachers must be able to handle the equipment and material available in workshops, especially when knowing that some of them are dangerous. Additionally, vocational teachers should be more than prepared to address the problems arising from the interaction between students and these materials and equipment effectively so as students can master the skill presented in the vocational education class

Reviewing previous studies, the researcher found that there is a significant theoretical gap since the acquisition of vocational education teachers of workshop management skills is still under examined, despite its importance of these skills for making students work in a safe environment. The researcher found no previous studies in Jordan that addressed such skill and this urged him to conduct this study as it is plausible to examine such skills for their significance in vocational education classes. The problem of the study lies in answering the following questions:

-What is the level of vocational education teachers' acquisition of workshops management skills?

-Are there statistically significant differences in the level of vocational education teachers' acquisition of workshops management skills in light of gender, educational level, and experience?

3. Study objectives

The current study aims to define the level of vocational education teachers' acquisition of workshops management skills, as well as the differences between their responses in light of gender, educational level, and experience.

4. Study significance

The significance of the current study stems from the information it provides in relation to vocational education teachers' management skills needed to be able to manage workshops effectively, which is considered one of the most important skills for vocational education teachers. It also stems from the proposals it provides for developing workshop management skills among teachers. Additionally, the study attempts to drive the attention of the educators and those in charge of the educational process towards the importance of developing vocational education teachers' management skills, so that they can effectively manage the practical aspects of the learning material and become able to provide a safe teaching-learning environment for students in which they can acquire the practical skills. As well as developing a set of procedures that can be adopted by teachers to appropriately develop their management skills.

5. Definitions

Management Skills: Deliberate actions taken to create and maintain a learning environment conducive to successful instruction (Mkhasibe & Mncube, 2020: 151). It is defined in this study as all the skills needed to manage the activities of the workshops effectively by the teacher

Vocational Education Teachers: The teacher who undertakes education or any specialized educational service in any public or private educational institution from the fourth grade to the tenth grade and holds a university degree in the field of vocational education (Smadi & Al-Hashmi, 2020). It is defined in this study teacher responsible for vocational textbooks delivery at school.

Vocational Education Workshops: A place where practical activities involve measurement, cutting, sizing, smoothing, assembly, repairs, and finishing in addition to other activities, that are considered core components in vocational education (Onele, 2014). It is defined in this study as the place where the vocational education textbook activities are applied and practiced by students.

6. Limitations of the study

The current study is limited to a sample of vocational education teachers at the Jordanian public schools in Irbid governorate who worked during the second semester of 2021/2022. The results of the study are determined by the psychometric properties of the study instrument and the indicators of validity and reliability.

7. Methods and procedures

7.1 Methodology

The researcher employed the descriptive-analytical design in order to achieve the study's objectives.

7.2 The population of the study

The population of the study consisted of all vocational education teachers who work at the Jordanian public schools in Irbid governorate during the second semester of the school year 2021/2022.

7.3 Sample of the study

The sample of the study consisted of (58) vocational education teachers selected randomly from a set of public schools in Irbid governorate. The following table shows study sample distribution based on the study variables.

Table 1.

Study sample distribution based on the study variables.

Variable		N	%
Gender	Male	23	39.7
	Female	35	60.3
Educational Level	BA	39	67.2
	Higher Education	19	32.8
Experience	Less than 5	9	15.5
	6-10 Years	20	34.5
	More than 10	29	50
Total		58	100%

7.4 Instruments of the study

In order to achieve the study's objectives, the researcher developed a questionnaire by reviewing a set of previous studies such as Rawaqa and Taani (2001) study.

7.4.1 Construct validity

To obtain construct validity, correlation coefficients between the items and the total score through a pilot sample consisted of (20) teachers. Correlation coefficient of each item was calculated, as the correlation value indicates validity significance for each item since it indicates the correlation value between the item and the total score from one hand and between each domain and the total score on the other hand. The correlation coefficient of the items and the total score ranged between (0.46-0.84), and with the domain (0.51-0.87) as shown in the following table.

Table 2.

Correlation coefficients between the items, the total score and the domain to which they belong.

Item	correlation coefficients to the domain	correlation coefficients to the instrument	Item	correlation coefficients to the domain	correlation coefficients to the instrument	Item	correlation coefficients to the domain	correlation coefficients to the instrument
1	.76(**)	.62(**)	8	.60(**)	.72(**)	15	.61(**)	.59(**)
2	.51(*)	.46(*)	9	.66(**)	.71(**)	16	.61(**)	.71(**)
3	.87(**)	.84(**)	10	.54(*)	.51(*)	17	.70(**)	.63(**)
4	.65(**)	.61(**)	11	.52(*)	.63(**)	18	.65(**)	.72(**)
5	.76(**)	.59(**)	12	.78(**)	.67(**)	19	.57(**)	.47(*)
6	.60(**)	.61(**)	13	.60(**)	.59(**)	20	.75(**)	.77(**)

7	.51(*)	.77(**)	14	.52(*)	.62(**)

* Significant at (0.05)

** Significant at (0.01)

It can be noted that all the correlation coefficients were expected and significant, and for that none of the scale items have been deleted.

7.4.2 Reliability

To verify the instrument reliability, test-retest method was used by administrating the instrument and re- administrating it after two weeks on a sample consisting of (20) teachers selected form the same population and out of the original sample. Pearson's correlation factor was calculated between their responses in both times. Then, Pearson Correlation was calculated between their scores on the scale.

Furthermore, Cronbach Alpha Coefficient for internal consistency reliabilities was calculated. Table (3) shows internal consistency reliabilities for the individual domains and the total instrument. It can be noted that these values are appropriate to achieve the objectives of the study.

Table 3.

Cronbach alpha internal consistency reliabilities for individual domains and total instrument.

Domain	Test-Retest Reliability	Internal Consistency Coefficient
Teachers' Responsibilities	0.81	0.73
Equipment arrangement	0.80	0.75
Providing Equipment and Maintenance	0.83	0.77
Total score	0.86	0.81

Table (3) shows that internal consistency coefficient for ranged between (0.73-0.77), while test-retest ranged between (0.80-0.83).

7.4.3 Statistical standard

5-point Likert scale (Strongly agree = 5, agree = 4, neutral = 3, disagree = 2, strongly disagree = 1) was employed by giving each item a score from strongly disagree to strongly agree. The following scale was adopted to analyze the results"

- 1.00-2.33: low
- 2.34-3.67: Moderate
- 3.68-5.00: High

8. Results and discussion

8.1 The results of the first question: "what is the level of vocational education teachers' acquisition of workshops management skills?"

To answer the first question, means and standard deviations of the level of vocational education teachers' acquisition of workshops management skills were computed as presented in tables.

Table 4.

Means and standard deviations of level of vocational education teachers' acquisition of workshops management skills from their perceptions, ranked in a descending order.

Rank	N	domain	Mean	Std. Deviation
1	1	Teachers' Responsibilities	3.67	.615
2	2	Equipment Arrangement	3.50	.513
3	3	Providing Equipment and Maintenance	3.13	.602
		QALL	3.45	.482

Table (4) shows that "Teachers' Responsibilities" receives the highest mean (3.67), while "Providing Equipment and Maintenance" was ranked last with mean (3.13). This table also shows that the total mean is (3.45) and a moderate level. This result reflects a fact that vocational education teachers work hard to acquire those skills able to make the learning experiences presented to students as effective as possible. In this sense, these teachers keep abreast with new teaching methods focusing on making teachers acquire the needed skills. Faculties of education in the different Jordanian

Universities have acknowledged this fact and worked on designing courses covering the most important teaching skills able to prepare teachers to provide a positive learning environment for students. These skills include both a cognitive and behavioral aspects. The cognitive aspect is manifested by the believes and values adopted by vocational education teachers, while the behavioral aspect is elicited by the apparent action shown by the vocational education teachers. This require working on both these aspects; something that Jordanian Ministry of Education also worked on by designing pre-service and in-service training programs addressing these skills. All these factors have promoted vocational education teachers acquisition of workshop management skills.

Mean and standard deviation of each item in each domain were calculated as shown in the following tables.

1. Teachers' responsibilities

Table 5.

Means and standard deviations Teachers' Responsibilities items, ranked in a descending order.

Rank	N	Item	Mean	Std. Deviation
1	2	Teacher arranges the location of equipment to create a safe environment for students	3.72	.988
2	1	Teacher directs students, coordinates their tasks and works on making them acquire cognitive skills	3.71	.991
3	7	Teachers maintains that the equipment are ready for students	3.69	1.079
4	3	Teacher explains theoretical and practical aspects of the skill before engaging students at the workshop	3.67	.962
5	4	Teacher participates in the open day of schools	3.66	.828
6	5	Teacher cares about the school garden	3.64	.950
7	6	Teacher keeps records of equipment and materials	3.62	.970
		Teachers' Responsibilities	3.67	.615

Table (5) shows that Item 2 "Teacher arranges the location of equipment to create a safe environment for students" receives the highest mean (3.72), while item 6 "Teacher keeps records of equipment and materials" was ranked last with mean (3.62). This table also shows that the Teachers' Responsibilities mean as a whole is (3.67) and a moderate level. Vocational education teachers know that their responsibilities is the main core of making the workshop environment safe and maintain a positive learning environment. Also, code of conduct provided by Jordanian Ministry of Education clarify vocational education teachers responsibilities toward the workshop, students and the learning content.

2. Equipment arrangement

Table 6.

Means and standard deviations of Equipment Arrangement items, ranked in a descending order.

Rank	N	Item	Mean	Std. Deviation
1	8	The teacher arranges equipment based on the workshop design	3.60	.972
2	9	Teacher keeps small equipment safe at hanging lockers	3.59	1.060
3	12	Teacher asks students to prepare the equipment at his supervision before using them	3.57	.975
4	10	Teacher preserve equipment at students disposal to use them easily	3.55	1.029
5	11	Teacher models the appropriate skill before asking students to perform it	3.53	.883
6	13	Teacher asks students to return equipment at their places in the workshop before returning to class	3.47	.863
7	14	Teacher returns the equipment himself after the class has ended.	3.16	1.225
		Equipment Arrangement	3.50	.513

Table (6) shows that Item 8 "The teacher arranges equipment based on the workshop design" receives the highest mean (3.60), while item 14 "Teacher returns the equipment himself after the class has ended." was ranked last with mean (3.16). This table also shows that the Equipment Arrangement mean as a whole is (3.50) and a moderate level. This result reflects that vocational education teachers realize the importance of arranging equipment safely to prevent any chance of students injuries. They also realize that their students do not have the adequate awareness of the dangerous that may emerge from the misuse of these equipment and this encourages them to acquire equipment arrangement skills more.

3. Providing equipment and maintenance

Table 7.

Means and standard deviations of Providing Equipment and Maintenance items, ranked in a descending order.

Rank	N	Item	Mean	Std. Deviation
1	15	Teacher determines type and quantity of materials and equipment	3.40	1.123
2	17	Teacher asks school administration to contact maintenance department to fix any damaged equipment	3.33	1.033
3	16	Teacher prepares list of the damage material and sends it to school administration	3.28	1.005
4	20	Maintenance of equipment is a regular task by the teacher at any annual basic	3.19	1.131
5	19	Teacher cleans the equipment and provides basic maintenance	2.81	1.131
6	18	Teacher gets equipment and any needed maintenance from the school budget	2.76	1.081
		Providing Equipment and Maintenance	3.13	.602

Table (7) shows that Item 15 "Teacher determines type and quantity of materials and equipment" receives the highest mean (3.40), while item 18 "Teacher gets equipment and any needed maintenance from the school budget" was ranked last with mean (2.76). This table also shows that the Providing Equipment and Maintenance mean as a whole is (3.13) and a moderate level. In the work description and responsibilities, vocational education teachers are not expected to have vast knowledge about the maintenance of equipment since this is a job that should be assumed by a specialist that is outsourced by the school administration when needed. Also, this mirrors that vocational education teachers received theoretical knowledge during their teacher preparation program, while the applied aspect was ignored.

8.2 The Results of the Second Question: "Are there statistically significant differences in the level of vocational education teachers' acquisition of workshops management skills?"

To answer this question means and standard deviations of the level of vocational education teachers' acquisition of workshops management skills in light of their gender, educational level, and experience, were computed to find out whether there are statistical significant differences in these means, t-test analysis was conducted for gender, and educational level while One Way ANOVA was conducted for experience, the results are shown in tables below.

1. Gender

Table 8.

T-test results of the level of vocational education teachers' acquisition of workshops management skills in light of Gender.

	Gender	N	Mean	Std. Deviation	t	df	Sig. (2-tailed)
Teachers' Responsibilities	Male	23	3.74	.817	.667	56	.508
	Female	35	3.63	.444			
Equipment	Male	23	3.58	.555	1.070	56	.289

Arrangement	Female	35	3.44	.483			
Providing Equipment and Maintenance	Male	23	3.15	.555	.262	56	.795
	Female	35	3.11	.639			
Total score	Male	23	3.51	.581	.793	56	.431
	Female	35	3.41	.409			

Table (8) shows there are no statistically significant differences at (⍰=0.05) due to gender in all domain and in total score. Despite the fact that there is difference between the activities presented in male students schools compared to female students schools with respect to the learning content presented in vocational education classes, this study mainly focus on the general characteristics common among both genders. These skills are included in the learning content of vocational education teachers preparation program regardless of gender and this explains the absence of any differences between male and female vocational education teachers.

2. Educational level

Table 9.

T-test results of the level of vocational education teachers' acquisition of workshops management skills in light related educational level.

	educational level	N	Mean	Std. Deviation	t	df	Sig. (2-tailed)
Teachers' Responsibilities	BA	39	3.47	.582	-4.173	56	.000
	Higher Education	19	4.10	.444			
Equipment Arrangement	BA	39	3.33	.463	-4.056	56	.000
	Higher Education	19	3.84	.436			
Providing Equipment and Maintenance	BA	39	2.97	.571	-3.125	56	.003
	Higher Education	19	3.46	.538			
QALL	BA	39	3.27	.425	-4.790	56	.000
	Higher Education	19	3.82	.375			

Table (9) shows There are statistically significant differences at (⍰=0.05) due to educational level in all domain and in total score in favor of higher education. It is known that vocational education teachers holding higher education degrees are more exposed to the modern teaching and learning theories and this has increased their chances in mastering the skills examined in this study. Furthermore, vocational education teachers who hold a graduate degree can seek the needed information they feel important for them to make vocational education class more effective by resorting to Internet, Social Media and this may explain why these teachers showed higher levels of mastery of workshop management skills.

3. Experience

Table 10.

Means, Standard Deviations of the level of vocational education teachers' acquisition of workshops management skills related to Experience.

		N	Mean	Std. Deviation
Teachers' Responsibilities	Less than 5	9	3.70	.645
	6-10 Years	20	3.33	.661
	More than 10	29	3.90	.465
	Total	58	3.67	.615
Equipment Arrangement	Less than 5	9	3.27	.476
	6-10 Years	20	3.27	.459
	More than 10	29	3.72	.473
	Total	58	3.50	.513
Providing Equipment and	Less than 5	9	2.87	.611

Maintenance	6-10 Years	20	2.92	.526
	More than 10	29	3.35	.583
	Total	58	3.13	.602
QALL	Less than 5	9	3.30	.453
	6-10 Years	20	3.19	.467
	More than 10	29	3.67	.398
	Total	58	3.45	.482

Table (10) shows a slight variance in the means of the level of vocational education teachers' acquisition of workshops management skills related to experience, to find out whether there are statistical significant differences in these means, one way ANOVA was conducted, results are shown in tables (11, 12).

Table 11.

One way ANOVA related to the level vocational education teachers' acquisition of workshops management skills in light.

		Sum of Squares	df	Mean Square	F	Sig.
Teachers' Responsibilities	Between Groups	3.892	2	1.946	6.061	.004
	Within Groups	17.659	55	.321		
	Total	21.551	57			
Equipment Arrangement	Between Groups	2.914	2	1.457	6.636	.003
	Within Groups	12.075	55	.220		
	Total	14.988	57			
Providing Equipment and Maintenance	Between Groups	2.927	2	1.464	4.533	.015
	Within Groups	17.757	55	.323		
	Total	20.684	57			
Total score	Between Groups	3.041	2	1.520	8.188	.001
	Within Groups	10.213	55	.186		
	Total	13.254	57			

Table (11) shows that there are statistically significant differences at ($\alpha \leq 0.05$) according to experience in all domain and Total score. Pair wise Multiple Comparisons Post Hoc Test using Scheffe method was conducted as shown in table (12).

Table 12.

Pairwise multiple comparisons post hoc tests using scheffe method according to experience.

Dependent Variable	(I) Experience	(J) Experience	Mean Difference (I-J)	Std. Error	Sig.
Teachers' Responsibilities	Less than 5	6-10 Years	.370	.227	.275
		More than 10	-.203	.216	.646
	6-10 Years	Less than 5	-.370	.227	.275
		More than 10	-.573(*)	.165	.004
	More than 10	Less than 5	.203	.216	.646
		6-10 Years	.573(*)	.165	.004
Equipment Arrangement	Less than 5	6-10 Years	-.002	.188	1.000
		More than 10	-.449	.179	.050
	6-10 Years	Less than 5	.002	.188	1.000
		More than 10	-.448(*)	.136	.007
	More than 10	Less than 5	.449	.179	.050
		6-10 Years	.448(*)	.136	.007
Providing Equipment and Maintenance	Less than 5	6-10 Years	-.046	.228	.980
		More than 10	-.480	.217	.095
	6-10 Years	Less than 5	.046	.228	.980

		More than 10	-.434(*)	.165	.039
	More than 10	Less than 5	.480	.217	.095
		6-10 Years	.434(*)	.165	.039
QALL	Less than 5	6-10 Years	.115	.173	.802
		More than 10	-.372	.164	.086
	6-10 Years	Less than 5	-.115	.173	.802
		More than 10	-.487(*)	.125	.001
	More than 10	Less than 5	.372	.164	.086
		6-10 Years	.487(*)	.125	.001

***** The mean difference is significant at the 0.05 level.

Table (12) shows there are statistically significant differences at (α= 0.05) between 6-10 Years and between more than 10 favor of more than 10 in domains and total score as well. This result reflects that vocational education teachers having more experience are without doubt are exposed to more encounters with the problems emerging in vocational education workshop. This promoted their problem solving skills; something that made them more prone to acquire workshop management skills they are sure that can make the learning experience presented to students more interactive and encouraging.

9. Conclusion

The study examined vocational education teachers' acquisition of workshop management skills at Jordanian schools. it was found that the level of vocational education teachers' acquisition of workshop management skills was moderate, and this means that there is a need for vocational education pre-service and in-service training programs should include activities addressing the required workshop management skills.

The study revealed statistically significant differences in vocational education teachers' acquisition of workshop management skills in light of educational level, in favor of higher education. As such, BA university programs should focus more on providing courses enhancing workshop management skills among students. In light of experience, in favor of teachers with more than 10 years of experience hence, vocational education school supervisor should dedicate more time on working with novel vocational education teachers to better equip them to make use of their personal potentials to be able to manage workshops more effectively.

In some, universities, especially those providing vocational education teachers preparation programs should reconsider their syllable to include more courses addressing personal and professional skills among their undergraduate. Furthermore, ministry of education in Jordan must work on presenting more in-service training programs addressing some of the shortcomings found in vocational education teachers.

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