

## The Effectiveness of a Training Program for Developing the Attitudes toward Vocational Education of Secondary Vocational Education Teachers in Jordan

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### Abstract

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This study aims to investigate the effectiveness of training program to develop positive attitudes towards vocational education of secondary vocational education teachers in Jordan. The study population consisted of 100 teachers, who were distributed across all vocational schools of the educational directorates in Irbid governorate. In order to achieve the objective of the study; the researcher has prepared an attitude scale that consisted of 33 items, that were distributed over seven vocational education areas. The validity and consistency of the study tool were verified; whereas the reliability coefficient of the scale was 0.91. In order to answer the questions of the study, arithmetic means, standard deviations, and T-test were extracted. The study came with the following findings: majority of teachers scored at the middle level as to the degree of interest towards vocational education, and here were significant statistical differences in the average degrees of vocational education attitudes of secondary vocational education teachers between pre and post experiment test due to the effect of the suggested training program.

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**Keywords:** The effectiveness of a training program, the attitudes towards vocational education, secondary vocational education

### 1. Introduction:

The status of vocational education in pedagogical philosophy in any given educational system can be known through understating the adopted concept of education in that system. There is an underlying assumption in pedagogical philosophy underlying that education prepares individuals for life on the basis that productive work is what gives people a sense of self-realization and that success in practical life requires, in addition to work, positive attitudes and proper values to motivate an individual to have work that is beneficial to himself and his community. Thus, it can be argued that the status of practical and professional areas of general education correlates with the status of work within the system of common values in the community. The attitudes towards work, whether positive or negative, are reflected positively or negatively on the status given to vocational education in an educational system. It is common in contemporary educational systems that vocational education and professional development form an essential part of the contents of education and its objectives. (Abo-Sel, 1990)

Education, in general, aims at causing changes in attitudes, and teaching vocational education as part of general education aims at causing desirable changes in the attitudes of vocational learners. Thus forming scientific attitudes is the absolute guarantee of achieving this goal. And forming proper scientific attitudes of individuals should be based on the accuracy of information, concepts, and the scientific principles they acquire. Moreover, scientific attitudes are the outcome of an essential element represented in forming a sound treasure of scientific knowledge and principles that impact emotions in a way that changes the desired attitude and they change from memorized theories to procedural implication.

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So forming the attitude of occupational hygiene or safety, for example, can be observed through the manners of learners in different life situations. (El-Hyla, 1998) The findings of the increasing scientific research and the fast growth of scientific knowledge in this era made enlightenment or scientific culture a necessity to everyone. Scientific culture became a modern trend that imposes itself on the curricula of sciences and vocational education. It also became an essential objective in developing individuals to effectively participate with their knowledge, skills, and attitudes in developing their environment and society and solve their problems. (Abd El-Salam, 2001)

Scientific educations specialists' and science teachers believe that forming and developing scientific attitudes is one of the essential objectives of teaching science. That can be partially because of the role played by attitudes as behavior modifiers that can be reliable predictors of the type of scientific behavior of a person. They can also be considered as motives that drive learners to use scientific methods and processes, and use their skills scientifically in research and thinking. Consequently, forming scientific attitudes is vital to forming a scientific mentality; for scientific thinking cannot be right without them. (Zaytoun, 1988)

Trained teachers help their students to acquire the desired attitudes; an attitude is expressed in the position they hold towards the components of their environment. Some knowledge of the environment proves that the main feature of that attitude is characterized by an emotional state that inclines towards work, so attitudes are considered an essential element of determining behavior. Attitudes are both learned and socially acquired; they provide stimulation and preparation for a response. There are two types of attitudes: one is related to scientific study such as inquisitiveness and appreciating education, and the other is related to the philosophy of the community and its values such as the attitude of using science to benefit humans. Also, attitudes can be altered by changing their emotional components but that requires a lot of effort and time because attitudes are characterized by relative stability and measurability. Attitudes can be measured based on difficulty and can be quantified through the attitudes scale. For the attitudes of scholars to change; all the included information has to be changed. Some of the elements that constitute attitudes are the social environment, school curricula, and previous experiences (El-Khatib, 1977).

## **2. Problem of the study**

Vocational teachers face different variables during their career; they would not be able to keep abreast with them without acquiring knowledge and experiences that qualify them to do so. Sciences are rapidly changing and research papers are being added to them every day. Technology is advanced and is being accelerated towards everything that is modern and innovative. And what changes many of the difficulties and the patterns of life and communities is the change of their regimes, policies, work methods, developmental plans, and the relationships between individuals and institutes. Vocational teachers are influenced by these changes when their needs, ambitions, and their look to the future are changed (Madboloy, 2002). Therefore, this study attempted to answer the following questions:

1. What is the type and degree of the attitude towards vocational education of the secondary vocational education teachers?
2. What are the components of the suggested training program to improve the attitude towards vocational education of secondary vocational education teachers?
3. What is the effectiveness of the suggested training program to improve the attitude towards vocational education of secondary vocational education teachers?

## **3. Objective and importance of the study**

This study aims at investigating the effectiveness of a training program to develop the attitude towards vocational education of secondary vocational education teachers in Jordan. The importance of this study is accentuated through the following:

- 1- This study is a theoretical addition to educational literature because it discusses some topics that are related to the attitude towards vocational education and is relevant to life activities, education, and work.
- 2- This study offers a model of the method to create training programs for vocational education teachers in the topics of the attitude towards vocational education.
- 3- It opens up a door for other researches and studies to study the method of creating training programs to improve the attitude towards vocational education of teachers in other specializations.

#### 4. Limitations of the Study

The study is limited to the teachers of secondary vocational education in Irbid governorate of the school year 2008/2009. It focuses on the attitude towards vocational education on the seven areas included in the study.

#### 5. Procedural definitions

Vocational education: it is the sum of experiences and knowledge that the vocational education teacher stores in various vocational topics such as educational systems and legalizations, professional values and ethics, the domain of occupational health and safety, work market and development, and the professional training of teachers. The degree of possessing it is evaluated through the mark that the research subject obtains on the evaluation tool that was developed by the researcher. The training program: it is a group of planned activities and events in the areas of vocational education that are designed for secondary vocational education teachers. It aims at improving their level of vocational education in a way that suits the modern attitudes of the new educational system. Vocational education teachers: they are teachers who are specialized in a subject of vocational education sciences and have qualifications that make them eligible to teach the fields of agriculture, industry, trade, health and others in governmental vocational schools. The attitude towards vocational education: it is the degree of the response of individuals towards the areas of vocational education that are included in this study; it includes informative and emotional components that can be measured using the attitudes scale that is designed especially for this purpose.

#### 6. Literate Review

Due to the interest vocational education has received, researches and studies were conducted to identify the type and degree of the attitude towards vocational education. The theoretical framework of the study includes two main themes: The first theme: discusses educational literature that is related to the topic of the attitude towards vocational education. The second theme: discusses studies that are related to the topic of the attitude towards vocational education. The attitude towards vocational education: vocational education is considered one of the elements that contribute to the overall education of humans and is one the requirements of their growth. Greek philosophers divided the society into social classes on the basis of separating people who rely on handwork and those who don't have to do handwork. Here arises a fault in the platonic culture that neglected the importance of experience and work in the growth of people and their development and that led to decreasing the level of applied practices and their status. But modern education focuses on and accentuates the applied areas and practical skills as an essential element of what constitutes the process of teaching and learning. The UNESCO definition of education asserted that "education includes all the doings and effects that are directed towards individuals in order to improve and sharpen their intellectual skills, knowledge, skills, and behavior in a way that improves their personalities to the maximum so that they can participate positively in their communities".

The concept of an attitude: people encounter many things in life; they reject some of them and don't accept them in both theory and practice but they have a positive stance from other things. If things are deepened in people's psyche; they believe in them mentally more than emotionally and that kind of belief is characterized by some stability and steadiness and that is called an attitude. (Zabydat, 1988)

Various authors and researchers have defined attitude. The following are some of the definitions:

- Psychological readiness or a relatively chart state of mind that is contrived from the environment, which can be inferred from the response of an individual whether by accepting or rejecting a certain situation. (Wahid, 2001)
- Campbell defines attitude as a group of responses that are consistent and expected to happen in some social situations. (Okasha and Zaky, 1999)
- Fatim, 1995, defines it as readiness or tendency to respond to social situations. It contributes into directing the obvious behavior of individuals in these situations with all the variables involved.
- Thus the researcher defines attitude as a group of knowledge-based, emotional, and behavioral components that are related to the response of individuals towards the areas of vocational education and are acquired as a result of living through various vocational experiences.

### 6.1 The components of attitudes

The knowledge-based component: This is the first component of scientific attitudes which include the total sum of experiences, information, knowledge, and beliefs that a person acquires or knows about a certain field of science.

A person who has scientific attitudes and shows an acceptable response towards science could have an understanding of the meaning of that science, knowledge of the developmental phases of a certain branch of that science, the objectives and aims of that science, its characteristics, and its importance in our lives. The emotional components: This is the second component of scientific attitudes. It is a general emotional style that affects whether a person accepts and responds to the topic of the attitude (the science) or does not accept it (the preferential/emotional position). A person might be interested in studying a science because it gives him a feeling of comfort, joy, and happiness towards this science or his feeling can be unjustified or completely illogical. The behavioral component: This is the third component of scientific attitudes. It includes a group of behavioral patterns that are consistent with the knowledge and emotions that are associated with the topic of the attitude (the science). It is also represented in the method and way that a person should behave towards the topic of the science, thus scientific attitudes are considered guidelines to scientific (behavior). (Zaytoun, 1988)

The characteristics of attitudes: Attitudes are characterized by the following

1. Attitudes are learned: They are not innate, or inherited, but they are learned; an acquired sum of experiences, opinions, and beliefs that a person (student) acquires through his reaction with his physical and social environment. They are behavioral patterns that can be acquired and modified by teaching and learning; they are formed, expanded, and developed by the student through his interaction with his environment.
2. Their relative stability, modifiability, and changeability: Generally, attitudes seek to preserve themselves because once they are formed, especially those that were learned at early stages of education, they are relatively hard to change. The reason is that they are associated with the general frame of the personality, needs of a person and how he perceives himself yet they are modifiable because they acquired and learned.
3. Attitudes predict behavior: Attitudes direct behavior and can be inferred from the external behavior of a person (the learner). So the attitudes of a student who has scientific attitudes can largely be (predictors) of his scientific behavior.
4. Attitudes are social: Attitudes are described of having personal and social significance which affect the relationship between a student and his colleagues and vice versa. They suggest that the group has a prominent role in individual behavior and that a person (the student) may impact the response (behavior) of the other students.
5. Attitudes are triggered by emotional responses: What distinguishes attitudes from other psychological concepts (such as beliefs, motives, opinions, and values) is the evaluative component that is represented in the preferential situation (the inclination or tendency); for a person to be with or against something, an event, someone, or a certain situation. Thus the emotional component is considered the most important component of an attitude or the main component of an attitude.
6. Attitudes are measurable: Attitudes can be measured based on difficulty and can be quantified through the attitude scales as long as the preferential (evaluative) situation is involved in the items of the measure, whether through measuring the responses of students or through measuring the responses that were observed for them. (Zaytoun, 1988)

Learning attitudes and the methods of changing them: "Attitudes are behavioral patterns that can be acquired and modified through learning. They are subject to the same concepts and rules that govern other behavioral patterns. Several behavioral patterns can be acquired merely through observing the behavior of a model and imitating it. Other attitudes can be formed through conditional learning in both types: the responsive and the procedural, through conditioning some emotional responses (happy and unhappy) with some educational situations which leads to either accepting or rejecting them". (Ababnat, 2006, p. 39) Attitudes measurement: Studying attitudes through observation takes a long time and is rarely accurate and objective. Additionally, it is difficult to find trained people who can measure attitudes through observation. Consequently, a need of establishing standardized attitude scales was realized, (Obaydat, 1988). Some of them are:

1. Likert scale
2. Thurston scale.

### 3. Goffman scale.

The second theme: Studies that discussed the attitude towards vocational education and the training programs of secondary vocational education teachers.

In a study conducted by Hananya, 1995, about the professionalization of teaching in Arab countries she used the descriptive analytical method by obtaining information and facts from documents that are relevant to her study. The study showed that the profession of teaching is distinct and has its characteristics and that it involves technical and professional areas. It confirmed that the objective and technical areas integrate. The study indicated that it is necessary for teachers to evaluate and improve themselves and work on improving the processes of teaching and learning and develop them. For someone to be a teacher he has to have a sense of belonging to the profession of teaching, to be inclined to self-development and continuous training, to understand that teaching as a profession needs continuous training, and to acquire positive attitudes towards the profession and positive behavioral attitudes towards his own abilities so that he can be self-confident and deal with his pedagogical tasks and face various situations.

In a study conducted by Mieke in 2006 and titled “School type and academic culture: evidence for the differentiation–polarization theory”, the population of the study consisted of students and teachers from general schools and vocational schools in Belgium. The researcher used the descriptive method in this study. The findings suggested that the culture of pupils is less study-oriented in technical/vocational schools than in general (grammar) schools. It also showed that the staff culture is less academically-oriented in technical/vocational schools than in general schools. The study recommended the necessity of spreading awareness through lectures and seminars in school.

The study of Khwalidah, 2006, aimed at building a training program to develop the environmental literacy of vocational education teachers in the elementary stage in Jordan and show its effect in developing this culture in the following fields: environmental information, environmental policies and legislations, environmental management, and environmental ethics and values. The study came with some findings; the most prominent of them was that the field of ethics and values took the first rank in the high level of knowledge and with a percentage of 100%, which means that teachers had a positive attitude towards the environment, environmental legislations, and the field of environmental sciences. Recommendations were proposed in the light of the findings of the study which are: to include the topics of environmental literacy in the training program and courses that are held to vocational education teachers during their career, and to benefit from the suggested training program of preparing and training the teachers of vocational education, and improve it to keep abreast with the modern training needs.

## 6.2 Commentary on previous studies

It became evident, after investigating previous theoretical literature and previous researches, that studies which discussed the topics of the attitude towards vocational education are very rare, especially in the Arab world. They also were not of the expected level in the field of improving the attitudes of secondary vocational education teachers. So programs in the field of improving these attitudes towards vocational education do not meet the needs of learners and the community. It can be noticed that all the studies done by Hananya 1995, Mieke 2006, and Khwalidah 2006, focused on the behavioral aspect of learners. So the common factor of all these studies indicates a weakness in the type and degree of the attitude towards vocational education of learners. Recommendations came congruous with the findings which confirmed the necessity of conducting more researches and studies in the field of the attitudes towards vocational education.

## 7. Methodology

### 7.1 Method and procedures

This section includes a description of the method of the study, identification of the study population and sample, the steps of creating the study tool and confirming its validity and consistency and the procedures involved in applying the study, the developed training program, and the statistical analyses which were used in data processing and the extraction of results.

### 7.2 Methods of the study

The researcher has relied on the following research methods in his study: The descriptive method: depends on diagnosing the current situation in order to identify the type and degree of the attitude towards vocational

education of the teachers of secondary vocational education, and identifying its shortcomings - the researcher used an attitude scale for that purpose. The experimental method: depends on an experimental design of the one group using a pre and post experimental tests in order to confirm the effectiveness of the suggested training program to improve the attitude towards vocational education.

### 7.3 The population and the sample of the study

The population of the study consisted of specialized teachers of secondary vocational education at schools in the following directorates: Irbid the first, Irbid the second, Irbid the third, Ar Ramtha, Bani Knana, and Al-Aghwar Shamaliyyah for the school year 2008/2009, there were (252) teachers as shown in the following chart which shows their distribution according to the variables of sex and professional specialization.

**Table (1): the distribution of the study population according to the variables of sex and professional specialization**

Professional specialization	Sex		Total
	Male	Female	
Industrial education	74	-	74
Hotel education	19	-	19
Agricultural education	23	13	36
Health education	47	26	73
Home economics	-	50	50
Total	163	89	252

Note: This symbol (-) means that there are not any males or females in this specialization. This study sample was taken through the stratified random sample method and with a percentage of 39.5 of the study population and is distributed through the directorates of the ministry of education as it is demonstrated in the chart.

**Table (2): the distribution of the study sample according to the variables of sex and professional specialization**

Professional specialization	Sex		Total
	Male	Female	
Industrial education	29	-	29
Hotel education	8	-	8
Agricultural education	9	5	14
Health education	19	10	29
Home economics	-	20	20
Total	65	35	100

The study tool: In order to achieve the objective of the study, the researcher has used an attitude scale to identify the type and degree of attitudes towards vocational education of secondary vocational education teachers.

The following is a comprehensive explanation to this tool:-

### 7.4 The attitudes measurement tool

After viewing educational literature and relevant local, national, and international studies, such as the studies of Van Houtte 2006, Belcher 1996, Al-Razehy 1998, Al-Bataresah 1992, and GaAnini 1994, the researcher has developed a tool to measure the attitudes of secondary vocational education teachers towards vocational education. Various models of attitudes' measurement were inspected, such as (Zaid, 2004) and the model of (Amin, 1996). The scale was built based on Likert scaling method; every item in this scale includes five levels: (strongly agree, agree, uncertain, disagree, and strongly disagree) which represent the levels of the respondent's attitude towards vocational education topics in the seven areas. The scale initially consisted of 37 items: 23 items of which were positive and 14 were negative and all were distributed across the seven areas of the study.

### 7.5 The validity of the scale

The initial form of the scale was inspected by a board of specialized referees to assess convenience the scales for the intended purpose and to assess the clarity of items and their grammatical correctness.

Some items were rephrased and 4 items were omitted and others were modified based on the recommendations and observations of the board of referees. The items of the scale became 33 items. Thus the opinions of referees have reinforced the validity of the content and the external validity of the tool.

### 7.6 The consistency of the scale

The scale was applied on an exploratory sample (that consisted of 20 teachers in the field of secondary vocational education) to ensure its consistency. After that reliability coefficient was calculated using Kuder–Richardson Formula 20 which is 0.91 and it is shown for every area in the following chart:

**Table (3): Reliability coefficients for the attitudes scale**

Number	The area	Reliability coefficient
1	Professional training and preparation of the teacher	0.82
2	Educational systems and legalizations	0.85
3	Professional characterization and classification	0.83
4	Occupational health and safety	0.85
5	The relation between vocational education institutes and work market	0.84
6	The role of vocational education in development	0.89
7	Professional values and ethics	0.84
8	Overall reliability of the scale	0.91

The following is a chart that shows the final form of the tool that measures the attitudes of secondary vocational education teachers towards vocational education as to the number of items included in each of its seven areas.

**Table 4 the number of items in the scale distributed across 7 areas**

Number	The areas	Number of items
1	Professional training and preparation of the teacher	5
2	Educational systems and legalizations	4
3	Professional characterization and classification	5
4	Occupational health and safety	4
5	The relation between vocational education institutes and work market	5
6	The role of vocational education in development	5
7	Professional values and ethics	5
8	<b>Total</b>	33

### 7.7 The variables of the study and its design

The variables of the study include:-

**First:** the independent variable: the suggested training program to develop the attitude of secondary vocational education teachers towards vocational education.

**Second:** the dependent variable: the attitude towards vocational education of the teachers of secondary vocational education in Jordan. The experimental design of the study: the design of an individual group was used after a pre and post experimental test of the attitude towards vocational education and it can be expressed by the following symbols G O XO.

Whereas the symbols mean

G: the experimental group

O1: the scale of the attitude towards vocational education which was applied on the group before and after the experiment.

### 7.8 The procedures of the study

The researcher carried out the study using the following procedures:

1. The study population was identified and it consisted of vocational education teachers in the northern directorates of the Ministry of Education. After that, demographical data such as the name, educational qualification, sex, and places of work were noted in order to conduct the research procedures on the study population.
2. The researcher prepared the study tool which included an attitude scale consisting of 33 items.
3. The validity of the scale was confirmed based on the observations of the board of referees.
4. The consistency of the attitude scale was confirmed through reapplying it after two weeks.
5. It was coordinated with the directorates of the Ministry of Education with the help of educational advisors with the purpose of using the tools of the study with the study population.
6. The results of the attitudes were corrected in order to analyze the data using Statistical Package for the Social Sciences (SPSS) software to find the means and standard deviations for each item of the attitude scale items. After that items were classified into three levels (low, medium, and low) according to the type and degree of the research respondents.
7. The suggested training program was created based on items of the scale where teachers showed a weak attitude.
8. The validity of the training program was confirmed through showing it to an experienced and specialized board of referees and considering their observations before creating the final version of the program.
9. Thirty teachers from the study population were chosen to be the study group, in the directorates of education under the governorate of Irbid, and they showed a positive attitude. The purpose was to distribute the prepared training program in the form of training groups through the method of self-study then measuring its effect.
10. The after experimental scale was applied on the study group two months after the self-study of the training program; the scale was applied over two consecutive days on the 27th and 28th of February, 2008.

### 7.9 Statistical treatment

In order to answer the questions of the study, arithmetic means, standard deviations, and percentages were extracted. T-test was used to determine the significance of the differences between the grades of the before and after experimental performance of the study population on the attitude scale.

### 8. The study findings

The first question: what are the attitudes of secondary vocational education teachers in Jordan towards vocational education? In order to answer this question, the attitude scale towards vocational education was prepared and applied on secondary vocational education teachers to identify the type and degree of the attitude in the seven areas of vocational education. The scale included 33 items, 17 of which were positive, 14 were negative, and two were neutral. Items were classified gradually on five fields in accordance with the specifications of Likert scale whereas positive items were given grades on the following way: strongly disagree = 5, agree = 4, uncertain = 3, disagree = 2, strongly disagree = 1. But negative items were given grades on the following way: strongly agree = 1, agree = 2, uncertain = 3, disagree = 4, strongly disagree = 5. Since the items of the scale are 33; the highest grade of the scale is 165 and the lowest is 33. The grades of respondents ranged between 153 and 47. The arithmetic mean of the grades of the respondents' attitude was 115.25 on the overall scale. In order to train respondents according to their grades in their vocational education attitude (positive, neutral, and negative) formula (referred to in Al-Gadry 2002, P. 88, 89) was used. Arithmetic means and standard deviations of the seven areas and their items in the attitude scale were extracted as shown in the following chart:

**Table 5 Mean scores and standard deviations of the grades of secondary vocational education teachers at the areas of vocational education according to the results of the prior experimental attitude scale**

Area number	The areas of vocational education	The number of items	The arithmetic mean	The standard deviation	The expected average	Rank
1	Professional training and preparation of the teacher	5	19.05	3.02	3.81	3
2	Educational systems and legalizations	4	12.75	1.98	3.18	5
3	Professional characterization and classification	5	17.14	2.26	3.42	4
4	Occupational health and safety	4	16.15	2.18	4.03	2
5	The relation between vocational education institutes and work market	5	15.09	2.94	3.01	6
6	The role of vocational education in development	5	14.72	2.70	2.94	7
7	Professional values and ethics	5	20.35	2.32	4.07	1
	<b>Total</b>	33	115.25	10.25	3.49	

Chart 5 shows that the total arithmetic mean for the grades of the study population is 115.25 and that the arithmetic means for the areas of the study range between 20.35 as the maximum (the area of professional values and ethics) and 12.75 as a minimum (the area of educational systems and legalizations). The number of respondents was identified and they were distributed across the three levels (positive, neutral, and negative) as shown in the following chart:-

**Table (6): the distribution of respondents according to the type and degree of their attitude towards vocational education**

The type of the attitude	The categorical range	The number	%
<b>Positive</b>	Less than 33	28	28
<b>Neutral</b>	33-76	52	52
<b>Negative</b>	More than 77	20	20
<b>Total</b>		100	100

Chart 6 shows that 28% of the study population falls under the positive degree of the vocational education attitude, 52% came under the neutral degree and 20% under the negative degree. For the purpose of identifying the type and degree of the vocational education attitude of the scale items, items were categorized into three levels (positive, neutral, and negative) as shown in the following chart:-

**Table (7): the distribution of the scale items according to the type and degree of the vocational education attitude**

The type of the attitude	The categorical range	The number	%
<b>Positive</b>	3.76 and more	17	52
<b>Neutral</b>	3.34-3.67	14	42
<b>Negative</b>	2.33 and less	2	6
<b>Total</b>		100	100

The distribution of the items of the vocational education scale shows that items that represent the positive attitude are 52% of the total number of items, and neutral items represent 42%, and negative items represent 6%. Chart 8 summarizes the type and degree of the attitude of secondary vocational education teachers at the items of all the areas vocational education. The suggested training program to improve the attitude towards vocational education will be built in the light of these items. The program will include items that had an attitude type and degree of neutral and negative of the study population. The number of these items is 16 out of 33 items of the vocational education attitude scale. The following chart shows that.

**Table (8): the distribution of scale items according to the type and degree of the vocational education attitude of secondary vocational education teachers**

Vocational Education areas Educational level		Professional training and preparation of the teacher		Education al systems and legalizations		Professional characterizati on and classification		Occupation al health and safety		The relation between vocational education institutes and work market		The role of vocational education in developme nt		Profession al values and ethics		Tot al
		Items	%	Items	%	Items	%	Items	%	Items	%	Items	%	Items	%	
<b>Posit ive</b>	3.67 and more	4	80	2	50	1	20	4	100	1	20	1	20	4	80	17
		1	20	2	50	4	80	0	0	3	60	3	60	1	20	
<b>Neu tral</b>	2.34-3.67	1	20	2	50	4	80	0	0	3	60	3	60	1	20	14
<b>Neg ative</b>	3.33 and less	0	0	0	0	0	0	0	0	1	20	1	20	0	0	2
<b>Tota l</b>		5	100	4	100	5	100	4	100	5	100	5	100	5	100	33

**The second question: what are the components of the suggested training program to improve the attitude of secondary vocational education teachers towards vocational education?**

In order to answer this question, the results of the vocational education attitude scale were analysed to identify the type and degree of the attitude of secondary vocational education teachers. The Items of the scale were classified into three levels (positive, neutral, and negative). The training program was based on areas that vocational education teachers showed weakness at; that was based on the philosophy of self-study and the adult learning theory of Knowles and according to KEMP model, to design training programs such as the following:

1. The conceptual framework of the training program.
2. The theoretical basis of the training program.
3. Identifying the training needs of the targeted group.
4. Identifying the general objectives.
5. Formulating the specific objectives.
6. Identifying the content of the training program.
7. Choosing the appropriate training methods and means.
8. Choosing the appropriate evaluative methods for the training.

**The third question: what is the effectiveness of the suggested training program to improve the attitude of secondary vocational education teachers towards vocational education?**

In order to answer this question, appropriate statistical analyses were employed by using T-test on related groups to identify whether there are any significant differences in the degree of the attitude towards vocational education of the study respondents from secondary vocational education teachers after executing the training program. And chart 9 refers to the results of T-test of both pre and post experimental tests.

**Table (9): the results of T-test of the areas of vocational education scale (before and after the experiment) for secondary vocational education teachers**

Parameter	The mean of the pre experimental test	The standard deviation of the pre experimental test	The mean of the after experimental test	The standard deviation of the after experimental test	The calculated T. value	The statistical significance	The average amount of improvement
Professional training and preparation of the teacher	19.00	3.02	21.70	2.86	5.45	0.00	2.3
Educational systems and legalizations	12.74	1.97	13.90	2.39	11.02	0.00	1.14
Professional characterization and classification	18.22	2.25	19.23	3.29	7.45	0.00	0.68
Occupational health and safety	16.15	2.17	17.30	1.91	9.72	0.00	1.15
The relation between vocational education institutes and work market	15,09	2.94	18.55	3.29	7.38	0.00	3.46
The role of vocational education in development	14.72	2.69	16.90	3.51	4.56	0.00	2.18
Professional values and ethics	20.38	2.32	21.86	3.02	10.33	0.00	1.48
The tool as a whole	118.30	10.25	128.88	13.32	8.67	0.00	10.58

Chart (9) shows the results of attitude scale test of vocational education which includes both pre and post experimental tests of the study respondents from the teachers of secondary vocational education. The results of the statistical analysis indicate that the amount of improvement at the attitude towards vocational education as a result of executing the training program is 6.40% of the tool as a whole. As for individual areas, the highest amount of improvement belonged to the area of 'The relation between vocational education institutes and work market' which is 3.46. The lowest amount of improvement was the area of 'Educational systems and legalizations' which is 1.14. The chart also indicates that the overall arithmetic mean of all areas in the after experimental test is 128.88 and the arithmetic mean of the areas in the after experimental test is 10.58; so the difference between both means is 10.58.

T-test was used to identify the significance of the differences between the results of both tests and the calculated T. value was 8.67. Since the value of the statistical significance is less than 0.05; the null hypothesis was rejected. The null hypothesis states that there are not statistically significant differences in the average grades of the attitude towards vocational education of the study respondents between the pre and post experimental test. Therefore, the differences can be attributed to the effect of the training program and the alternative hypothesis can be accepted. In other words, there are statistically significant differences in the level of the vocational education attitude of secondary vocational education teachers.

## 9. Recommendations

In the light of the study findings, the researcher recommends the following:

1. To benefit from the training program that was developed in preparing the vocational teachers' training which is developed by the relevant agencies from the ministry of education.
2. The necessity of benefiting from the tool that was developed by the researcher to measure the degree of the attitude towards vocational education by the relevant agencies to train teachers and the included areas.
3. Conducting similar studies that discuss the reality of vocational education and the attitude towards it and the method of developing this culture to form positive attitudes towards it by teachers of different specializations.

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