

# **Perceptions of Vocational Teachers Regarding the Extent of Application of Curriculum Standards for Selected Vocational Programs in Jordan Utilizing the State of California Standards for Vocational Programs' Quality and Effectiveness**

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## **ABSTRACT**

The main purpose of this study is to determine the perceptions of vocational teachers concerning the extent of application of curriculum standards for selected vocational programs in Jordan. The survey instrument developed for this study was based on the state of California (1993) vocational curriculum standards, which included seven dimensions represented by 37 items. The study surveyed 141 vocational teachers employed by vocational schools in the second educational district of Amman. Descriptive analyses were used to analyze the data collected.

Results of the study indicated overall moderate agreement toward the application of curriculum standards in the chosen three vocational programs. More specific, the standard "program development and evaluation" received the lowest degree of application whereas the standard "attention to the program" received the highest degree of application. Data have been discussed in light of demographic variables of vocational teachers. The study ended by offering a number of practical and theoretical implications for the field of vocational education.

**Keywords:** Vocational Education; Educational Reforms; State of California Curriculum Standards; Curriculum Models, Jordan.

## **1. INTRODUCTION AND THEORITICAL FRAMEWORK**

The current global economy places a great deal of pressure on countries worldwide to produce skilled, competent, and well-educated workforce. Jordan, a small but strategic country, is plugged into the world economic system and is pursuing further steps in developing human capital in both private and public sectors (Central Bank of Jordan, 1994, 1). It is doing so by strengthening and improving its educational system for the sole purpose of providing students with the necessary skills in various industry-related fields and disciplines, including vocational, industrial, agricultural, technological, and other professional careers (Masri, 1998, 66).

Education is universally considered as the most powerful tool that countries are using to develop and utilize their productive workforce. It plays a vital role in supplying business and industry with highly-skilled

workforce to meet the demands of diverse work environments which provides a safety net for organizations and communities (Bartlett and Porter, 2002, 847).

Currently, vocational education institutions, both locally and internationally, are faced with the challenge of maintaining a competent workforce in an era of rapidly changing technologies and increasingly complex vocational and technical needs (Hudelson, 1993, 33). That challenge demands a need to reform vocational programs that prepare professionals in order to ensure the alignment between the taught and needed competencies (Spoerk, 2005, 21). This role, however, can not be accomplished without establishing guiding program standards that stress program quality and effectiveness (Bailey, 1999, 10).

The significance of developing such standards is well articulated in the literature. For example, Hoachlander and Rahm (1994) state that national vocational standards can promote: greater worker mobility, more efficient recruitment, clear goals and direction for students, more consistent, targeted instruction and curriculum; and greater accountability for schools, teachers, and students (20).

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To this end, some countries across the world have created rigorous standards to ensure the quality of their programs. The State of California, for example, developed a model for assessing the quality of its vocational programs (State of California, 1993, 1). The model provides a systematic, logical framework for assessing the quality of vocational programs. It provides the vocational sector with a vehicle, which in a climate of increasing accountability, can be used with the confidence that represents best practice (Spoerk, 2005, 27). Indeed, the model revolves around the following seven dimensions:

1. Program design, rationale, and coordination. Students need to experience programs that are coordinated and designed on the basis of a sound rationale.
2. Attention to the program. The quality and effectiveness of a program depend in part on the attentiveness of the local education agency to the program's governance, effectiveness, and needs.
3. Resources allocated to the program. If resources are insufficient, it is neither realistic nor reasonable to expect program staff or students to achieve high standards of quality or competence.
4. Qualification of providers of instruction. Curriculums should be taught by qualified instructional personnel or field supervisors which may have a great impact on students' learning opportunities.
5. Evaluation and development of the instructional personnel. For a program to achieve and maintain high levels of quality and effectiveness, the quality of instruction in courses and field experiences must be assessed periodically.
6. Program development and evaluation. To achieve high quality and full effectiveness, a program must be evaluated comprehensively and continually by its sponsor and clients. Developmental efforts and improvements must be based on these systematic evaluations.
7. Delineation of program requirements. To make adequate progress toward professional competence and certification, candidates must receive information about the applicable policies and requirements.

On the regional side, with countries such as Jordan, efforts have been made to improve the quality of education. For example, in 2006, a joint effort between the Ministry of Education and a number of national universities resulted in the development of a list of seven "National Teacher professional Standards for the 21<sup>st</sup> century". These standards revolved around education in

Jordan, academic and special program knowledge, planning of instruction, implementing instruction, assessing of students' learning and instruction, self development, and professional ethics (Ministry of Education, 2006, 2).

However, an extensive surveying of the relevant literature of vocational education shows an absence of having clear standards in place that can stress the quality of its vocational programs. Therefore, this study come to address this critical issue for the sake of developing such data that can function as a resource for guiding the development and modification of existing vocational programs in the country. It seeks to develop comprehensive standards that can help reformers of vocational programs in Jordan to refine the content of their programs as well as to establish the skills and standards necessary for job acquisition.

#### **Statement of the Problem**

Due to technological, economic, and industrial rapid changes many nations started to reform their vocational programs to strengthen the link between vocational education and the new needs of employment. Perhaps the most important response to economic changes is to develop vocational education and training standards. This is an important and largely unexamined issue in the field of vocational education. This study is taken place in Jordan where positive steps have been taken since 1987 to improve the quality of education and vocational education. Jordan Ministry of Education issued and implemented a number of policies to ensure the quality and maintenance of the educational system represented in that (a) teachers must possess a minimum of bachelor's degree to teach in kindergarten and primary education schools, (b) teachers must possess a diploma to teach in high schools, (c) teachers must possess a masters' degree to supervise teachers. Furthermore, vocational teachers were provided with various improvement opportunities including: support for completion of advanced degrees, comprehensive health education, and rewards for any effort leading to the production of goods and services that are beneficial to vocational schools and the society as a whole (Teacher's Journal, 2006, 63).

Several studies maintain that adopting a standards-base curriculum is essential for the development of high quality programs in vocational education (Tillema, Kessels, and Meijers, 2000, 267). The purpose of these new standards are "...to improve the quality of

instructional programs at schools, to encourage wiser use of the services of teachers, and to create a system more responsive to changing educational concepts and societal expectations” (Colorado State Board of Education, 1990, 1).

### **Purpose and Objectives**

The main purpose of this study is to assess the application of vocational curriculum standards to selected vocational programs as perceived by vocational teachers at selected vocational schools in Jordan utilizing the State of California (1993) standards for vocational programs' quality and effectiveness.

### **Research Questions**

The present study is driven by the following research questions:

1. What are the personal characteristics of vocational teachers in selected vocational programs (e.g., gender, age, teaching experience, and vocational program area)?
2. What is the extent of application of vocational standards to selected vocational programs as perceived by vocational teachers?
3. What are the differences in the extent of application of vocational curriculum standards based on gender, age, years of experience, and vocational program area?

### **Objectives of the Study**

The main objectives of the study were:

- To describe the personal characteristics of vocational teachers in selected vocational programs (e.g., gender, age, teaching experience, and vocational program area).
- To determine the extent of application of vocational standards to selected vocational programs as perceived by vocational teachers.
- To determine if differences exist in the extent of application of vocational curriculum standards based on gender, age, years of experience, and vocational program area.

### **Significance of Study**

The central problem that encounters vocational education programs in general is the lack of having specific curriculum standards that ensure its quality and effectiveness. Standards are imperative because the current national and international demands emphasize the establishment of standards-based vocational education

programs (Bishop, 1998, 171). Standards provide a guide that helps identify the areas of study of a discipline, delineate the content standards, and identify the specific competencies (Mansfield, 2001, 2). With this in mind, establishing specific curriculum standards that guide vocational education programs seems to be crucial. This study will provide critical information for Jordanian decision-makers, administrators, and teachers for developing an assessing model for curriculums of vocational programs. This, in turn, can result in quality vocational programs that meet the demands of current and future economic challenges of having competent national workforce.

### **Delimitations and Limitations**

The delimitations and limitations of this study included the following:

1. The target population of the study was limited to vocational teachers from the second educational district of Amman.
2. This study was delimited to the use of a survey instrument as the primary method of gathering data.
3. The design of this study was survey research.

### **Definition of Terms**

**Vocational curriculums:** refer to the specialization of vocational teachers in vocational majors such as industrial, agricultural, and home economics curriculums.

## **2. RESEARCH METHODS AND PROCEDURES**

### **Population and Sample**

The population that was to be relevant to this study consisted of all vocational high-school teachers currently employed by vocational schools in the second educational district of Amman. A list of all vocational high schools was obtained from the Ministry of Education which included eight schools. These schools were mainly specialized in various vocational fields including industrial, agricultural. Data were obtained from teachers specialized in industrial, agricultural, and home economics. The total teacher population of these schools was 214 male and female teachers. A random sample of 160 vocational teachers was selected from this pool of schools. Suitable procedures were followed to insure an equal representation of vocational teachers from each vocational program. In the sample of the surveys returned, 141 were useable, resulting in a return rate, or accessible population, of 88%.

### **Instrumentation**

The instrument used to collect data for this study consisted two parts. The first part of the instrument requested selected demographic information including gender, age, teaching experience, and vocational program area. The second part of the instrument was the "Curriculum Standards Survey", the researchers'-designed instrument, which included 37 items measured on a five point Likert-type scale with the following anchors: 1 = strongly disagree, 2= disagree, 3 = neutral, 4 = agree, and 5 = strongly agree. This instrument was developed to measure perceptions of vocational teachers regarding the extent of application of curriculum standards to selected vocational programs using a combination of questions emerging from the current literature and from the State of California standards of program quality and effectiveness research report (State of California, 1993, 1). Seven areas were identified in this report including program design, rational, and coordination (PDRC); attention to the program (ATP); resources allocated to the program (RATP); qualifications of providers of instruction (QPI); evaluation and development of instructional personnel (EDIP); program development and evaluation (PDE); and delineation of program requirements (DPR).

The content validity of the instrument was established through a review by a panel of nine experts consisting of individuals with specific expertise in the areas of vocational education, curriculum and instructional design, evaluation and measurement, and research design and methodology. The panel of experts was asked to confirm that the instrument had clearly defined items which represented the domain of interest in this study, make changes or offer suggestions for the addition or deletion of items, and evaluate the overall format and appearance of the instrument. The original instrument had 37 items. After minor revisions were made to the instrument (mainly in the wording of items and instructions to complete the instrument) reflecting panel member recommendations, a pilot test was conducted using a group of 20 vocational teachers whom were not included in the final sample of the study. To estimate the reliability of the 37-item instrument, the standards for instrument reliability for Cronbach's alpha by Robinson, Shaver, and Wrightsman (1991) were used to judge the quality of the seven scales of the instrument. These standards were: .80-1.00 - exemplary reliability, .70 - .79 - extensive reliability, .60 - .69 - moderate reliability, and < .60 -

minimal reliability. Using Cronbach's alpha, the overall instrument was found to be reliable ( $\alpha = .89$ ) as well as each subscale as follow: PDRC (.64), ATP (.76), RATP (.82), QPA (.87), EDIP (.79), PDE (.81), DPR (.70).

### **Data Collection Procedure**

Data for this study were collected during the second semester of the academic year 2005/2006 using the researchers' designed instrument. The following steps were followed in collecting the data: (a) administrators of the selected vocational schools in the second district of Amman were contacted, provided with a brief description of the purpose of the study and asked to cooperate with the collection of the data for the study, (b) after the administrators agreed to support the study, specific arrangements were made to distribute the instruments to the selected vocational teachers (some schools representing other vocational majors such as hotel management did not agree to participate in the study, (c) the researchers and/or the administrators met with the vocational teachers in each school agreed to participate in the study and provided them with a brief explanation of the study, explained the procedures for completing the instrument, assured anonymity and confidentiality, and distributed the instruments to the selected vocational teachers, and (d) the researchers instructed vocational teachers to return the complete instruments to their respective administrators whom in turn returned them to the researchers.

### **Data Analysis**

The Statistical Package for the Social Sciences (SPSS 11.5) computer program was used to analyze the collected data. The first and second research questions were descriptive in nature and were analyzed using descriptive statistics. Variables which were measured on a categorical scale were summarized using frequencies and percentages in categories. Variables which were measured on an interval or higher scale of measurement were summarized using means and standard deviations. Research question three was accomplished using independent t-test statistic to compare the extent of application of curriculum standards among male and female vocational teachers and analysis of variance (ANOVA) to examine differences in vocational teachers' perceptions related to age, teaching experience, and vocational program area. The alpha level was set a priori at .05.

### 3. RESULTS OF THE STUDY

The data collected from all participants were examined for the accuracy of data entry by inspecting "out of range" values. An examination of these values showed that no "out of range" values were entered. In addition, missing subjects were not detected either.

#### Personal Characteristics of the Targeted Vocational Teachers

Question 1 addressed the personal characteristics of the vocational teachers who participated in the current study. Data gained from the returned questionnaires indicated that the majority of the vocational teachers who responded were male (70.2%), age 40 years and above (71%), and with at least seven years of experience (71.6%). Table 1 presents the descriptive statistics for the vocational teachers who participated in the study.

**Table 1. Personal Characteristics of the Sample**

The variable	The levels	Number	Percentage
Gender	Male	99	70.2%
	Female	42	29.8%
	Total	141	100%
Vocational Programs	Industrial Programs	54	38.3%
	Agricultural Programs	45	31.9%
	Home Economics Programs	42	29.8%
	Total	141	100%
Age	22-30 yrs	23	16.3%
	31-39 yrs	18	12.8%
	40-48 yrs	40	28.4%
	49-57 yrs	43	30.5%
	Above 58 yrs	17	12.1%
	Total	141	100%
Teaching Experience	1-3 yrs	26	18.4%
	4-6 yrs	14	9.9%
	7-12 yrs	32	22.7%
	13-20 yrs	42	29.8%
	+ 21	27	19.1%
Total	141	100%	

#### The Extent of Application of Curriculum Standards

Question 2 concerned the extent to which vocational standards of selected vocational programs have been applied as perceived by vocational teachers. Seven

vocational standards were measured for their application. Each of the following tables represented, separately, the means and standard deviations of the extent to which each standard was applied.

As shown in Table (2), the mean for overall application of program design, rationale, and coordination standard as perceived by vocational teachers was 3.42. This result indicated that items of program design, rationale, and coordination standard were applied, in average, fairly moderate to high. To further elaborate on results of this question, it is observable from table 2 that item five "the program has personnel from diverse gender, ethnicity and handicapping conditions" and item six "the overall design of the program is able to meet its long-term planned objectives" had the lowest mean values of 2.63 and 2.62 respectively. These low mean values indicate disagreement toward the application of such sub-standards in the vocational programs. Whereas, the rest of the items had high mean values ranging from 3.44 to 4.19 on the rest of the items, indicating strong agreement toward the application of such sub-standards.

Table (3) clarified that the overall mean score for all items of the attention to the program standard was 3.60, indicating fairly high agreement of vocational teachers regarding the application of this standard in the vocational curriculum. Item 1 had the highest mean value (4.10), whereas item 6 "the program coordinators are included in the decision-making process" had the lowest mean value (2.74). The rest of the items mean values fairly high ranging from 3.48 to 3.92. It is noticeable that three of the six items had mean values above 3.50.

With regard to the means and standard deviations of the five items of the resource allocated to the program standard, the mean of the "adequate personnel" was higher than all other means (3.95), followed by "administrators meet the needs of the program" (3.83) and "adequate budget" (3.19) respectively. "Adequate resources" (2.67), and "adequate qualified personnel" (2.56) had the lowest means.

Table (5) indicated that means of the items of qualifications of providers of instruction standard ranged from (2.76 to 3.43). However, means of the items of evaluation and development of instructional personnel standard ranged from (2.37) to (3.67). No item in the two standards was above (4) to reflect high application. Further, means of the overall items of the two standards were (3.08) and (3.20) respectively.

**Table 2. Means and Standard Deviations for the Items of the Program Design, Rationale, and Coordination Standard**

	<b>Item</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>
1.	The overall design of the program is based on recent, relevant models and theories of education.	141	4.19	0.87
2.	There is an effective communication between the teachers and administrative personnel of the program.	141	4.07	0.92
3.	The administrative components of the program (e.g., admission, advisement) are coordinated as planned.	141	4.02	0.89
4.	The teaching approaches utilized by the program takes into account the diverse nature of students.	141	3.44	0.99
5.	The program has personnel from diverse gender, ethnicity and handicapping conditions.	141	2.63	1.06
6.	The overall design of the program is able to meet its long-term planned objectives.	141	2.62	0.99
Average		141	3.42	0.42
5=Strongly Agree, 4=Agree, 3=Neutral, 2=Disagree, 1=Strongly Disagree				

**Table 3. Means and Standard Deviations for the Items of the Attention to the Program Standard**

	<b>Item</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>
1.	Problems between program staff are resolved promptly.	141	4.10	0.56
2.	School administrators are attended to the importance of the program.	141	3.92	0.81
3.	School administrators support the goals of the program.	141	3.87	0.88
4.	There are effective procedures to resolve the needs of program staff, students, and instructors.	141	3.49	0.91
5.	The administrative needs of the program are resolved Promptly.	141	3.48	1.01
6.	The program coordinators are included in the decision-making process.	141	2.74	0.98
Average		141	3.60	0.44
5=Strongly Agree, 4=Agree, 3=Neutral, 2=Disagree, 1=Strongly Disagree				

**Table 4. Means and Standard Deviations for the Items of the Resources Allocated to the Program Standard**

	<b>Item</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>
1.	There are adequate personnel to staff the program (e.g., instructors).	141	3.95	0.73
2.	Program administrators meet the needs of the program as it appears.	141	3.83	0.81
3.	There is adequate budget to meet the needs of the program.	141	3.19	1.06
4.	There are adequate resources (e.g., buildings, offices, classes, equipment, and instructional material) to maintain an effective program.	141	2.67	1.16
5.	There are adequate qualified personnel to maintain an effective program.	141	2.56	1.22
Average		141	3.24	0.68
5=Strongly Agree, 4=Agree, 3=Neutral, 2=Disagree, 1=Strongly Disagree				

**Table 5. Means and Standard Deviations for the Items of the Qualifications of Providers of Instruction Standard**

	<b>Item</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>
1.	Recruitment policies of instructional personnel are fair.	141	3.43	1.17
2.	Program teachers have appropriate experience and background of study.	141	3.34	1.06
3.	Program teachers take into account diverse needs of society.	141	2.80	1.16
4.	Program teachers have experience suitable to the needs of the program.	141	2.76	1.12
Average		141	3.08	0.78
5=Strongly Agree, 4=Agree, 3=Neutral, 2=Disagree, 1=Strongly Disagree				

With regard to Table (7), it appeared that most items of program development and evaluation standard were applied fairly low (2.73, 2.71, 2.67, 2.65, and 2.45 respectively) except for one item (3.36). In table (8),

however, two items of delineation of program requirements standard were applied fairly high (3.62 and 3.40 respectively) and the other two items (2.21 and 2.16 respectively) were applied fairly low.

### Application of Vocational Curriculum Standards and Demographic Variables

Question 3 concerned the significant differences among standards of vocational curriculum and the following individual demographics of vocational teachers: age, teaching experience, and vocational program area. With regard to gender, t- test statistic for independent samples was used to examine the difference in means between males and females.

As can be observed in Table (9), there were significant differences between vocational teachers' males and females in the following standards: program design, rationale, and coordination for the favorite of males; resources allocated to the program for the favorite of males; and evaluation and development of the instructional personnel for the favorite of females. However, there were no significant differences at the 0.05 level between vocational teachers' males and females in the following standards: attention to the program, qualification of providers of instruction, program development and evaluation, and delineation of program requirements.

On the other hand, one-way analysis of variance

(ANOVA) was utilized to identify whether the variances of the five level groups of age, the five level groups of teaching experience, and the three level groups of vocational program area were equal or significantly different. Table 10 illustrated that there were no significant differences among the five level groups of age in perceiving each dimension of vocational curriculum standards. Similarly, Table (11) revealed that there were no significant differences in each dimension of vocational curriculum standards among the five experience level groups at the 0.05 level.

Table (12) indicated that there were no significant differences among the three vocational program area level groups in the following standards: attention to the program, qualification of providers of instruction, and delineation of program requirements. However, there were significant differences among the three vocational program area level groups in the following standards: program design, rationale, and coordination; resources allocated to the program; evaluation and development of the instructional personnel; and delineation of program requirements.

**Table 6. Means and Standard Deviations for the Items of the Evaluation and Development of Instructional Personnel Standard**

Item	N	Mean	SD
1. Teachers have permission to change the direction of instruction.	141	3.67	0.96
2. Teachers use evaluations to improve instruction.	141	3.49	1.10
3. Program administrators use fair evaluation process.	141	3.30	1.23
4. Teachers have access to support their professional development (e.g., research support, program development).	141	3.28	1.24
5. The work of teachers is evaluated equitably	141	3.11	1.34
6. Program courses are evaluated on a regular basis.	141	2.37	0.90
Average	141	3.20	0.68

5=Strongly Agree, 4=Agree, 3=Neutral, 2=Disagree, 1=Strongly Disagree

**Table 7. Means and Standard Deviations for the Items of the Program Development and Evaluation Standard**

Item	N	Mean	SD
1. Information about the program's strengths, weaknesses, and needed improvement is collected from all participants in the program.	141	3.36	1.05
2. Program goals are evaluated regularly.	141	2.73	1.44
3. The program design is evaluated on the basis of established standards.	141	2.71	1.00
4. Program administrators encourage students' participation in the evaluation process.	141	2.67	0.96
5. Improvements in all components of the program are based on the results of program evaluations.	141	2.65	0.96
6. Everybody in the program participate in program evaluation.	141	2.45	0.85
Average	141	2.76	0.58

5=Strongly Agree, 4=Agree, 3=Neutral, 2=Disagree, 1=Strongly Disagree

**Table 8. Means and Standard Deviations for the Items of the Delineation of program requirements Standard**

Item	N	Mean	SD
1. Students are informed in writing about program coursework, teacher certificate, and certain deadlines.	141	3.62	.99
2. Students are informed in writing about advisement services, assessment criteria, and appeal procedures.	141	3.40	1.00
3. Students are informed of the level of pedagogical knowledge and skills in the program.	141	2.21	0.79
4. Students are advised of their strengths and weaknesses and how to correct them.	141	2.16	0.86
Average	141	2.84	0.62

5=Strongly Agree, 4=Agree, 3=Neutral, 2=Disagree, 1=Strongly Disagree

**Table 9. The Differences between Vocational Teachers' Males and Females in Each Dimension of Vocational Curriculum Standards**

Dimensions	Gender	N	Means	S.D.	T	P
Program Design, Rationale, and Coordination	M	99	3.56	.43	2.80*	.006
	F	42	3.34	.36		
Attention to the Program	M	99	3.50	.45	-1.59	.874
	F	42	3.51	.42		
Resources Allocated to the Program	M	99	3.33	.71	2.45*	.015
	F	42	3.02	.55		
Qualification of Providers of Instruction	M	99	3.09	.79	.23	.815
	F	42	3.05	.75		
Evaluation and Development of the Instructional Personnel	M	99	3.03	.66	-4.99*	.000
	F	42	3.61	.52		
Program Development and Evaluation	M	99	2.66	.56	-3.12	.002
	F	42	2.99	.58		
Delineation of Program Requirements	M	99	2.88	.65	1.06	.289
	F	42	2.76	.54		

**Table 10. The Differences among the Five Age Level Groups (22-30 yrs, 31-39 yrs, 40-48 yrs, 49-58 yrs, or above 58 yrs ) in Each Dimension of Vocational Curriculum Standards**

	Sum of Squares	df	F	p	
Program Design, Rationale, and Coordination	Between Groups	.549	4	.74	.56
	Within Groups	24.977	136		
	Total	25.526	140		
Attention to the Program	Between Groups	1.311	4	1.68	.15
	Within Groups	26.479	136		
	Total	27.790	140		
Resources Allocated to the Program	Between Groups	2.236	4	1.20	.31
	Within Groups	62.925	136		
	Total	65.161	140		
Qualification of Providers of Instruction	Between Groups	1.519	4	.61	.65
	Within Groups	84.689	136		

			Sum of Squares	df	F	p
Evaluation and Development of the Instructional Personnel	Total		86.208	140		
	Between Groups		.903	4		
	Within Groups		64.007	136	.47	.57
Program Development and Evaluation	Total		64.909	140		
	Between Groups		.788	4		
	Within Groups		46.576	133	.56	.69
Delineation of Program Requirements	Total		47.363	137		
	Between Groups		1.723	4		
	Within Groups		52.498	136	1.11	.35
Total			54.222	140		

**Table 11. Differences among the Five Teaching Experience Level Groups (1-3 yrs, 4-6 yrs, 13-20 yrs, or above 21 yrs ) in Each Dimension of Vocational Curriculum Standards**

				Sum of Squares	df	F	p
Program Design, Rationale, and Coordination	Between Groups			364	4		
	Within Groups			25.165	136	.491	.74
	Total				25.526	140	
Attention to the Program	Between Groups			1.103	4		
	Within Groups			26.686	136	1.40	.23
	Total				27.790	140	
Resources Allocated to the Program	Between Groups			1.037	4		
	Within Groups			64.124	136	.55	.69
	Total				65.161	140	
Qualification of Providers of Instruction	Between Groups			1.226	4		
	Within Groups			84.983	136	.49	.74
	Total				86.208	140	
Evaluation and Development of the Instructional Personnel	Between Groups			1.716	4		
	Within Groups			63.194	136	.92	.45
	Total				64.909	140	
Program Development and Evaluation	Between Groups			.575	4		
	Within Groups			46.788	133	.40	.80
	Total				47.363	137	
Delineation of Program Requirements	Between Groups			.891	4		
	Within Groups			53.330	136	.56	.68
	Total				54.222	140	

**Table 12. The Differences among the Three Vocational Program Area Level Groups (Industrial, Agriculture, or Home Economics) in Each Dimension of Vocational Curriculum Standards**

				Sum of Squares	df	F	p
Program Design, Rationale, and Coordination	Between Groups			2.096	2		
	Within Groups			23.430	138	6.17*	.003
	Total				25.526	140	
Attention to the Program	Between Groups			.022	2		
	Within Groups			27.768	138	.05	.948
	Total				27.790	140	
Resources Allocated to the Program	Between Groups			5.251	2		
	Within Groups			59.910	138	6.04*	.003
	Total				65.161	140	
Qualification of Providers of Instruction	Between Groups			2.298	2		
	Within Groups			83.910	138	1.89	.155
	Total				86.208	140	

	<b>Sum of Squares</b>		<b>df</b>	<b>F</b>	<b>p</b>
Evaluation and Development of the Instructional Personnel	Between Groups	11.470	2	14.81*	.000
	Within Groups	53.439	138		
	Total	64.909	140		
Program Development and Evaluation	Between Groups	4.147	2	6.47*	.002
	Within Groups	43.217	138		
	Total	47.363	140		
Delineation of Program Requirements	Between Groups	.500	2	.64	.52
	Within Groups	53.722	138		
	Total	54.222	140		

**Table 13. Post Hoc Comparisons across Vocational Program Area**

	<b>Mean</b>	<b>Mean Difference</b>	<b>Sig.</b>
Program Design, Rational, and Coordination Industrial vs. Home Economics	3.63/3.34	.29*	< .01
Resources Allocated to the Program Industrial vs. Home Economics	3.47/3.02	.44*	< .01
Evaluation and Development of Instructional Personnel Industrial vs. Home Economics	2.91/3.61	-.69*	< .01
Program Development and Evaluation Industrial vs. Home Economics	2.57/2.99	-.42*	< .01

Using **Scheffe comparison test**, differences were detected between vocational teachers who teach industrial programs and vocational teachers who teach home economics programs. Table (13) revealed that differences were for the favor of industrial teachers in program design, rationale, and coordination standard and resources allocated to the program standard. However, differences were for the favor of home economics teachers in evaluation and development of the instructional personnel standard and program development and evaluation standard.

#### 4. DISCUSSION

With the growing importance of curriculum standards in the field of vocational education, it is important that a body of research be reviewed to establish nationally-accredited curriculum standards in Jordan. Toward this end, no prior studies were located that were related to the curriculum standards. This study was conducted in an effort to determine the perceptions of Jordanian vocational teachers regarding the extent of application of

a theoretically-developed set of vocational curriculum standards in selected vocational programs. The present study sampled 141 vocational teachers from three program areas (industrial, agricultural, and home economics) in the Second Educational District of Amman. For comparison purposes, this study also gathered information about gender, age, teaching experience, and program subject area. Descriptive research methodology was utilized to gather and report data for this study.

Based on the results of the data gathered by this study, general interpretations were drawn related to the survey questions on each of the seven established curriculum standards. With relation to the first standard (program design, rationale, and coordination), vocational teachers agree that their vocational curriculum is based on recent and relevant theories of education; that there is an effective system of communication in place; that their program has effective administrative component related to admission and advisement services; and that their teaching approaches is taking into account the diverse nature of students. This is evident in the efforts

undertaking by the educational system in Jordan to update their programs periodically to match changes in the globalized economy. However, vocational teachers, based on their perceptions, regard their program ineffective in relation to the inclusion of personnel from diverse gender (e.g., females in industrial programs), ethnicity (e.g., non-Jordanian), and handicapping conditions (e.g., people with disability) as shown by their low mean values. Moreover, vocational teachers perceive the program ineffective in meeting its long-term planned objectives. For example, there may a gap in connecting what is taught in class to the economic needs of the country represented by industry demands.

The second vocational curriculum standard (attention to the program), overall, received favorable agreement. Vocational teachers perceive that problems are resolved promptly, needs of the program staff and students are satisfied, and school administrators have positive attitudes toward the importance of their vocational programs. These results are encouraging taking into consideration the fact that our society has been suffering from the so-called "shame culture" (defined as the negative attitudes expressed by administrators, teachers, and the society toward vocations and people working in vocations) (Altwasy, 2004, 24). However, vocational teachers have concerns about the decision-making process, which is more centralized in nature (Altwasy, 2004, 98) meaning that decisions are made at the higher authority level without consulting people in the field. As far as the third and fourth standards (resources allocated to the program) and (qualifications of providers of instruction), vocational teachers agree that there are adequate instructors with appropriate experience to staff the vocational programs, however, the staff are not qualified enough, according to their perceptions. Furthermore, vocational teachers perceive that there are not enough supplies, equipments, and buildings to maintain an effective program. (Altwasy (2004, 96)) supports this conclusion where vocational programs in Jordan still facing personnel and economic difficulties due to lack of resources. Also, higher education institutions are not offering specialized vocational programs (with the exception of Albalqa Applied University).

The fifth standard (evaluation and development of instructional personnel) and the sixth standard (program development and evaluation) reveal that there are outdated program's goals. Also, students and teachers are

not involved in the evaluation process which can be used to provide useful information about the strengths and weaknesses of the vocational programs. It is imperative to consider the different groups of stakeholders in the evaluation process including teachers, students, parents, practitioners, and government agencies to instill commitment to program goals and improvements (Ceglowski, 2001, 21).

Finally, the seventh standard was related to delineation of program requirements which shows that vocational teachers have favorable agreement toward the fact that the vocational curriculum provides students in writing with information about the program coursework, teacher certificates, and assessment criteria. However, vocational teachers do not agree that students are provided with enough information about the level of knowledge and skills they are expected to master and about their strengths and weaknesses. These results are consistent with Green's (1995, 50) notion that standards of student attainment on vocational courses are still widely to be low. Vocational schools should consider establishing skill standards for students to attain during their vocational endeavor. Employers still frequently complain about the low standards of core skills among their young recruits (Brown and Scase, 1994, 51). Furthermore, more assessment tools should be established to guide students as to their strengths and weakness and how to capitalize on strengths and improve weaknesses. This is a national effort that should involve the Vocational Corporation, the school, the family, and the student.

Finally, differences were found among male and female vocational teachers regarding the extent of application of curriculum standards. For example, male vocational teachers, overall, have higher favorable agreement in the program design standard and allocation of resources standard. On the other hand, female teachers, overall, have higher favorable agreement on the evaluation and development standard than male vocational teachers. Such results may be attributed to the fact that female teachers are more concentrated in the home economics program whereas male teachers are more concentrated in the industrial and agricultural programs. It is well known that these vocational programs vary in curriculum nature and objectives. Furthermore, ANOVA analysis showed that the actual differences on the above standards were between the industrial and the home economics program.

## RECOMMENDATIONS

The findings of this research provide the information needed to make recommendations for future practice in the vocational curriculums under study. The following recommendations are suggested for practice: (a) findings of this study can be used as a base to develop standard-based curriculum guides for Jordanian vocational schools; (b) vocational curriculum standards established in this study should be distributed to all vocational schools and taught to vocational teachers through a comprehensive workshop; and (c) all vocational programs in Jordan should be evaluated based on the established standards and reform efforts should take place based on these evaluations.

The study provides also theoretical implications as well. These implications include: (a) this study should be replicated in all Jordanian vocational schools; (b) it is recommended that a qualitative segment be added to the

replication study to better explain the importance and utilization of the vocational curriculum standards as perceived by administrators and teachers; and (c) any future replication of this study should include more demographic variables such as teachers high school and university grade-point-averages.

To recapitulate, the researchers hope that the rich information gathered from the results of the present study may serve as a research-based resource that will aid in further refinement and development of local, regional, and international standards for the curricula of vocational programs. We must demonstrate that our programs are relevant, standard-based, and truly beneficial to all students. It is imperative that we prepare our students to compete in a global economy (Spoerk, 2005, 30). Final word, it is well-known that vocational-based programs are the tool for social and economic development (Altwasay, 2004, 96) therefore; they should always be evaluated based on established, nationally accredited curriculum standards.

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