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## Evaluation of Vocational Education Program for Secondary Stage at Yemen Republic from Student's point of views

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## Evaluation of Vocational Education Program for Secondary Stage at Yemen Republic from Student's Point of Views

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### **Abstract of the study:**

The current study aimed to evaluate the experimental vocational education; the study use the descriptive and analytical approach. A questionnaire was applied as a tool of study. The study sample consisted of 135 students; the study reached many results including, that students are satisfied with the professional education program. Also from the students' point of view, the program contributes to develop the skills and ideas of its enrolled students, and many successful experiences and stories of a number of those enrolled in the program emerged.

**Key words:** Evaluation, Vocational Education, Students of secondary school

## تقويم برنامج التربية المهنية للمرحلة الثانوية في الجمهورية اليمنية من وجهة نظر الطلبة

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### ملخص الدراسة:

هدفت الدراسة الحالية الى تقويم برنامج التربية المهنية للمرحلة الثانوية، حيث اتبعت الدراسة المنهج الوصفي وكانت الاستبانة هي الاداة المستخدمة لجمع البيانات. تكونت عينة الدراسة من 135 طالب وطالبة تم اختيارهم من المدارس التي طبق عليها البرنامج، وتوصلت الدراسة الى ان البرنامج يعد مهما لطلبة المرحلة الثانوية حيث ساهم في تطوير مهارات وأفكار جديدة، كما أن تطبيق البرنامج أظهر قصص نجاح لدى بعض الطلبة الملتحقين بالبرنامج.

**الكلمات المفتاحية:** التقويم، التقويم المهني، طلبة المرحلة الثانوية.

## Introduction:

Vocational education means learning to change one's behavior to enhance the quality of life through work and values, without or along with formal schooling. If the learning through the vocational approach enhances self-employment and economic productivity of the people then the war against poverty can be fought and conquered in a constructive way (Abdur Rashid: 2019).

Vocational education and training (VET) focuses on specific trades and imparts the practical skills, which allow individuals to engage in a specific occupational activity. VET is not only important in providing employment opportunities to individuals but also helps in enhancing the productivity of firms: "Vocational education and training are indispensable instruments for improving labor mobility, adaptability and productivity, thus contributing to enhancing firms' competitiveness and redressing labor market imbalances" (Caillods, 1994, p.241).

Primary objective is to ensure trainees develop the abilities necessary to fulfill the roles demanded of them and cope with situations arising in the course of their work.

During the post-World War II period, many international agencies, such as the International Labor Organization (ILO) and UNESCO, played major roles in the development of vocational education. It has been opined that after the Second Industrial Revolution at least three 'ideal models' of the vocational system emerged. One is a marketed system in which a labor market characterized by substantial mobility provides much of the vocational training. Another is a school model where most of the VET takes place in schools. And third is a dual model with the presence of an apprenticeship system (Nilsson, 2010). These models continue to distinguish today's national systems.

Whether to vocationalize or not, has remained a debate in the literature (Oketch, 2007), and the relative benefits differ from one country to another. General or academic education is more flexible because it allows a person to change their job easily whereas largely vocational education is suitable for a particular type of work. Vocationally trained workers are more efficient in handling old technologies. However, since technology is unpredictable and changes over time, such workers require frequent training, and general education enables workers to adapt to new technologies (Krueger & Kumar, 2002). VET is important in other aspects such as alleviating

mass unemployment, providing specific skills for self-employment, preventing mass movement of school leavers from rural to urban areas, and re-orientating student attitudes towards the rural society (Tilak, 2002).

### Objectives of the study

The study aims to identify:

- 1- Teachers performance level related to implementing professional education courses in schools implementing of experimental program from student's point of view
- 2- Knowing the students' performance in vocational education courses in schools implementing of experimental program.

### Study population:

All male and female (250 students) enrolled in the experimental program for vocational education courses for the secondary stage in the first, second, and third secondary levels.

### Study sample:

The research sample consisted of 135 students distributed on the four Schools (Orphanage School, Rabaa Al-Adwiya, Al-samad School and A-Saeed School).

**Table (1) show the study sample according to the Governorate and the School**

	The school				Total
	Orphanage	Rabaa Al-Adawiya	Al-Samad	Al-Saeed	
Governorate Sana'a	35	36	0	0	71
Ibb	0	0	24	40	64
Total	35	36	24	40	135

Tables (1) above show the study sample according to the variable of the governorate and school, which amounted to (135) male and female students.

**Table (2) show the study sample according to variable of School, grad and course**

	Course			Total
	Home economy 1st Secondary	Business Administration 2nd Secondary	Entrepreneurship 3rd Se condary	
Orphanage	7	10	18	35
Raba'a Al- Adawiya	10	10	16	36
The school Al-Samad School	24	0	0	24
Al-Saeed Complex	9	24	7	40
<b>Total</b>	<b>50</b>	<b>44</b>	<b>41</b>	<b>135</b>

Tables (2) above show the study sample according to the variable of school, course and grade, which amounted to (135) male and female students.

### **Limitations of the study:**

Spatial limits: the Republic of Yemen

Capital Municipality: Rabaa Al-Adawiya School and the orphanage.

- Ibb Governorate: Al-Saeed Educational Complex and Al-Samad School (in which only home economics was taught).

The current study was limited to evaluating the vocational education program funded by German Agency for International Cooperation GIZ, which was applied on four schools in Capital Municipality and Ibb governorate, where the program was applied experimentally for the three courses: Home economics for the first secondary grade, business administration for the second grade of secondary school, job skills and entrepreneurship for the third secondary school. These courses are in the orphanage and a Raba'a Al-Adawiya in the capital Sana'a and the Al-Saeed complex in Ibb city. While the applied pilot program at Al-Samad school was limited to a home economic course in the first grade of secondary school.

### **Study procedures:**

To achieve the objectives of the study, the procedures was carried out according to the following stages:

Preparing the study tool:

- Viewing the vocational education courses, the student book and the teacher's guide for the courses, Home Economics, Business Administration, Job Skills and Entrepreneurship.
- Building the study tool "Questionnaire", questionnaires are the most frequently used data collection method in educational and evaluation research. Questionnaires help gather information on knowledge, attitudes, opinions, behaviors, facts, and other information (Rama,2007).

To achieve the aims of the study, the researcher developed, two type of questionnaires, the first one related to the students satisfaction about the vocational Education Program which consisted of 12 items, and the other related to teachers performance which consisted of 14 items.

### **- A logic truthfulness of the questionnaire:**

The researcher realize the methodology or the logic truthfulness (validity) through analyzing the competency or the skill which he tackles or the scholastic course which is intended for measuring (Van Dalen. 1979, p448)

That could be accomplished by making the questionnaire represent the field and the topic requested for measuring and to ensure doing that the researcher referred to the sources of deriving such skills

### **- Apparent truthfulness of the instrument:**

by submitting such questionnaires to a group consist of 10 experts in addition to those who work in the education sector and vocational education to gather their opinion regarding the extent of the suitability of each item for the study topic. The assessors expressed in general the questionnaires validity, and they considered it trustworthy, therefore they maintained the majority of the items where all the assessors unanimously agreed on questionnaires soundness. Then some items were amended and others were deleted according to their point of view.

### **Reliability of questionnaire:**

To know the reliability of the student satisfaction questionnaire, the study used the Alpha Cronbach method, which amounted to 0.87, while the teachers performance questionnaire scored 0.85.

### Results of the Study:

Analysis questionnaire data related to the opinions of students.

The study used the following statistical scale to interpret the results of the respondents:

**Table (3) shows the scale for interpreting the results of the student response**

None	Few	Medium	Big	Very big
1-1.8	1.81-2.61	2.62-3.42	3.43-4,23	4.24-5

**Table (4) shows the means, standard deviations and percentages of the items related to students' opinions arranged according to the relative importance of their benefit from the vocational education program in general. (Sample 135).**

Items	Mean	Std. Deviation	Percent
I recommend continuing to teach this course.	4.70	0.64731	0.94
I benefited from studying this course in developing my ability to solve new problems	4.40	0.69325	0.88
I got to know the main occupations in our country.	4.21	0.78593	0.84
What I learned in this course is important to my future.	4.20	0.77073	0.84
Studying this subjects helps me choose my major after high school	4.16	0.81832	0.83
This course developed my ability for teamwork.	4.15	0.93456	0.83
Total	4.06	0.46804	0.81
I feel satisfied studying this subject.	4.03	0.93793	0.81
This course helped me discover my latent abilities and skills.	3.93	0.87417	0.79
Studying these subjects strengthened my relationships with my colleagues.	3.86	0.91556	0.77
I think that after studying this course, I can form my own project.	3.79	1.01028	0.76
I learned skills in these subjects that I have not learned before.	3.67	1.02818	0.73
Studying this article will help me succeed in my life.	3.59	1.18060	0.72



The total evaluation of the students' opinions and estimates on the extent of benefiting from the program was 4.0574 of the total score 5, with a rate of 81%.

It is evident that, the item that won the first arrangement is item which stipulates the continuity of teaching the course, whether it is home economics, business administration, job skills and entrepreneurship. Item which states "Studying this subject helps me succeed in my life" came last by 72%.

The above table results are also show that 5 items scored very large degree, and got rest of items on arithmetic averages confined to period between 3.43 and 4.23 with a large verbal estimate, meaning that all students agree that program has enriched their life skills and positive attitudes as well as enhanced Student's social relationships and increased their motivation towards team work as the scale represents all students. In the secondary stage, first, second and third secondary school, where its items were formulated in a general formula that shows the importance of program among students and the extent to which they benefit from this program.

**Table (5) shows the arithmetic mean and the standard deviation of students' opinions survey scale as a whole**

	N	Mean	Std. Deviation
Total	135	4.0574	0.46804

**Table (6) shows a result of One-Sample T test and the level of statistical significance at the default value 4 (80%).**

	Test Value = 4					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
total	1.425	134	0.156	0.05741	-.0223-	0.1371

In general and overall, the average student's estimate of their level of benefit from the program got a score of 4.0574, which is 81%, By comparing this value with the 80% mastery level, we find that the value indicated by the scale according to the students 'estimates indicates that the program has gained the enrolled students a rate of 81%, which is shown by the T-test schedule, which has a value of 1,425, and a confidence level of 95%, meaning that the students enrolled in the program see a confidence level of 95% that The

program achieved 80% of the positive changes in the skills and knowledge aspects.

This result confirms the findings of the focus groups' results, whether related to students or parents, especially in the axes, positives and program represented in home economics, business management, job skills and entrepreneurship for the three grades of secondary school respectively.

**Table (7) shows the standard mean, standard deviations and percentages of the sections of the student evaluation scale for teachers of vocational courses arranged according to their relative importance (sample 49).**

Items	Mean	Std. Deviation	Percent
The teacher helps me correct my mistakes without reprimanding.	4.80	0.57661	0.96
The teacher encouraged me to express my opinion and conviction in some matters.	4.69	0.65205	0.94
I gained new information from the teacher who teach this subject.	4.67	0.62543	0.93
The teacher encouraged me to do my best.	4.65	0.52245	0.93
The teacher continued teaching us the content of the book	4.61	0.67133	0.92
I learned new skills during my studies.	4.49	0.68076	0.89
The teacher helped me to develop my life skills	4.39	0.93131	0.88
The teacher used methods that made the subject interesting.	4.33	1.04857	0.87
The teacher used various teaching methods in teaching this subject.	4.18	0.78192	0.84
The classroom equipment was adequate.	4.16	0.89784	0.83
The physical equipment and teaching aids were sufficient to aid in understanding the subject.	4.14	1.19024	0.83
<b>Total</b>	<b>4.03</b>	<b>0.39073</b>	<b>0.81</b>
The teacher uses techniques that attract my thinking in some of the lesson situations.	4.02	1.24983	0.80
The teacher often attracts our attention in the class in different ways.	3.83	1.02768	0.77
The teacher used modern technology in teaching this subject when the lesson required it.	2.49	1.08012	0.50
The subject teacher used activities outside of the classroom to teach this subject.	2.31	1.57062	0.46
Suitable equipment was provided for extra-curricular activities (field visits - external participation).	1.37	0.80865	0.27

The above table shows the student's evaluations of teachers of the professional education program. The study use the following statistical scale to interpret the arithmetic averages of the students' grades in evaluating teachers of the professional education program.

**Table (8) shows the scale for interpreting the results of the student evaluation questionnaire for teachers.**

Never	Scarcely	Sometimes	Often	Always
1- 1.8	1.81-2.61	2.62-3.42	3.43- 4.23	4.24-5

It is evident from the table (8) that 8 items got means between 4.33 and 4.80 and with a verbal estimate always, and the phrase "The teacher helps me correct my mistakes without reprimanding" comes in the first order with an arithmetic means of 4.80, and the item "The teacher used methods that made the subject interesting" at the lowest level in the verbal appreciation always, and 6 items got in the range of the verbal appreciation often, as item 4 got arithmetic mean of 4.18, and this item comes at the highest level in the verbal appreciation often, while item which states "teacher often attracts our attention in the class in different ways" at the lowest level of verbal appreciation, often with arithmetic mean of 3.83, with a percentage of 77%, and in order of 14, and comes item which states "The teacher used modern technology in teaching this subject when the lesson requires it" in the verbal assessment Scarcely with arithmetic mean of 2.49 and by 50%, respectively 15 of the 17 items, as comes item which states: "The teacher used activities outside the classroom in teaching this course" at the lowest level of verbal appreciation Scarcely with an arithmetic mean of 2.31 and by 46%.

This is in line with the results of the members of the focus groups, whether for parents or students of both sexes, who expressed their views that one of the disadvantages of the program is the lack of extra-curricular activities. Item which states that "appropriate equipment for extra-curricular activities (field visits - external participation") came in the appreciation never, with an arithmetic mean of 1.37 and by 27%, which indicates that the three textbooks (Home Economics - Business Administration -Functional Skills and Entrepreneurship) do not include activities that support practical aspects outside the school or real life situations such as field visits to institutions, companies and bodies related to topics.

The professional education program, these results confirm the results of the observations of external raters of the program through their field visits to the experimental application schools, as it was found that all educational activities were confined to the school environment, as was shown by direct observation by external raters, not to use modern technologies such as the Internet and computers that you are supposed to encounter the implementation of some educational activities directly related to it, such as how to deal with E-mail in the business administration course for the second secondary or indirect class, such as making jam in the home economics course, this result, and when teachers of the program's courses inquired about the reason for not employing these technologies in implementing the activities of the educational process, they refer the reason for unavailability of these means.

### **Success experiences:**

Experiences and success stories through the professional education program:

A number of professional ideas have emerged among many students from different schools targeted by the professional education program as a result of influencing factors and topics of course, where some students have come to formulate ideas for a successful project (experience) on as shown below:

- The idea of preparing a nail project and promoting it through technical and social media.
- The idea of setting up a sweets project associated with the relevant markets.
- As a result of acquiring the skill and clarifying idea through dialogue with family members, someone indicate "her father is thinking of preparing a project"
- As a result of tangible changes, skill acquisition, and the advantages of idea, the students clarified the steps for implementing the project according to skills she acquired through studying the course, and her father implemented the steps in practice and started his own project.
- Some student's inventive ideas of preparing a marketing services project.
- Some students came up with the idea of developing the English language skill, in writing and speaking, with aim of reaching a job with foreign institutions.

- Some students have appeared ideas to prepare a home sewing project associated with the related to the same projects.
- Some students have crystallized the idea of preparing a project for private lessons on home economic.
- Students have created ideas of preparing a project for the manufacture of bakery and sweets in a traditional, family-funded fashion.
- Some ideas appear for the students to prepare a home grocery project and expanding its activity through the application of marketing services and application of making account statements, which contribute to support the family.
- The idea of preparing a super brand project was crystallized by some students with the participation.
- It crystallized for some ideas of preparing a project for beauty tools.
- Some people crystallized the idea of preparing a project for drawing and embroidery on fabrics.

**Table (9) shows experiences and success stories by school and course:**

Success story / experience / idea	course	Total
Marketing for the nail project	Entrepreneurship	1
Starting the implementation of the idea of the sweets and bakery project.	Home economy	2
Implementing the implementation steps for the Bharat mill project (presenting my ideas with my guardian).	Entrepreneurship	1
Industry silver belt at home.	Home economy	1
Preparing some cloth crafts (stitching).	Home economy	1
Imitating some busy activities by watching TV programs,	Home economy	1
Opening a grocery store at home and making an account statement.	Business Administration	1

Figure (1) shows the number of successful experiments according to field application schools.

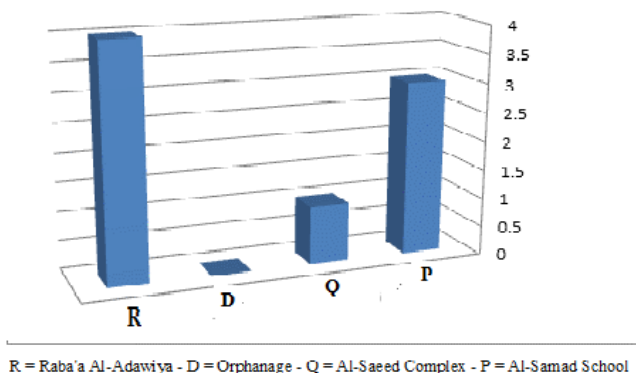


Figure (1) shows that the number of successful experiences in a Rabaa Al-Adawiya school is more than in other schools, Al-Saeed Complex comes in second, Al-Samad Complex comes in third.

Table (21) shows ideas for future projects according to the school and course:

### Recommendations:

Based on the results of study, we recommend the following:

- Spread awareness of vocational education importance among the community in general and students in particular.
- Continuity and generalization of program due to its importance and acceptance among the community (students – parents).
- Taking into account the time of implementing some activities according to the relative weight of the activity content, since 45 minutes is not sufficient to implement some activities.
- Continuity in implementing the program while expanding the scope of activities, especially those related to the skills development aspect.
- The competent authorities shall establish joint cooperation protocols and exchange experiences with the relevant institutions at the local and international levels.
- Output the student book in a better way according to the quality standards of the textbook.
- Include in the student book extracurricular activities that enrich the content and contribute to the development of students' ideas and skills.

- Equipping the training halls with technical devices and means such as computers, the Internet, to employ them in developing self-learning skills.
- Equipping the training halls with the devices and means required for the application.
- Encouraging learners to make small projects with supporters upon completion of the vocational education program
- Add professional and manual skills such as culinary arts, wood engraving, glass painting, decoration and embroidery.
- The necessity of selecting professional and experienced teachers for courses of the professional education program.
- Adequate pre-training for teachers of vocational education courses.

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