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EFFECTIVENESS OF APPLIED-SCIENCE TEACHING COURCES ON OCCUPATION OF GRADUATED STUDENTS

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ABSTRACT

The present research has done to evaluate occupation status of graduated students of centers higher education of applied science in ACECR on 2008-2009 course year. Survey Research and Descriptive method with data collection questionnaire used. The scope of study was consisted; all graduated students of technician in semester method on years of 1998 to 2005 in computer and technology courses of applied science centers under supervision of university of Applied Science. The sample of study was included 695 graduated students which their answer sheets were return to. SPSS software was used to analysis of data. The results indicated that the teaching computer and technology courses have its effect on graduated students' occupation successfulness in applied science and technology centers. In addition, contents of applied science courses make improve their knowledge and skills to take a necessary job that make them satisfy.

KEYWORDS: Applied - Science Teaching Courses, Applied - Science University, Occupation, Graduated Students

INTRODUCTION

Given the purpose and philosophy of science and universities that promote changes in public attitudes and the needs of the specialist, the development of higher education in quantitative and qualitative aspects is essential. Universities and higher education institutions to undertake missions such as the production of knowledge needed to train specialists, community development, and technology innovation and achieve sustainable development in the light of today's experts, believe the use of advanced IT knowledge is acquired.

So to get the road condition, should be provided for the development of universities that enable students to apply new technologies, acceptance of responsibility at the individual, organizational and society.

Structure of the higher education system in Iran is somehow more willing to transfer knowledge in the form of theories and principles in a university classroom and less applied to practical training to labor market which needs skilled manpower and technology deals.

As Minister of Science, Research and Technology in a message dated (15Aug.2011) and managers responsible for meeting the vocational training center managers Applied Science University, which admitted this:

"Our country's system of higher education in the skills, need to train skilled and professional manpower and various sectors of society engagement and partnership with organizations and agencies will be reorganized and implementing programs to increase their speed. Axial jobs, look to the labor market and social welfare system features including skills training under serious effort, should be responsible and based on this new series are designed and implemented "(Message Minister of Science Research and Technology, (19Aug2010).

So Technology training and skill training as to provide a theoretical application for employment with training missions and can bemissions' education system at different levels of society.

Accordingly, the Supreme Council of the Cultural Revolution in the meeting dated (11.9.69) (16.Sep.1991) Regulations Council of Higher Education, in session 237 approved the application of applied science education at (October) and University applications passed a Statute in (1993), then subsequently founded the university in (1995) and in (1997)it attempted to accept the student in applied science courses. "Today, with more than 640 universities and over 400 thousand student center, one of the largest universities in the country is the Ministry of Science, Research and Technology '(comprehensive publication, 2010). And now more than 40 thousand students in different courses and the skills of scientific technology - used in 42 centers across the country (report ACECR, 2010).

A) Definition of applied science education

Applied science education, which refers to training intended to improve knowledge and develop skills and talents to work in the Alumni to establish them trained, and Occupation Business in jobs, various preparations and their ability to perform the work assigned to them and it will rise to the desired level (approved by the Supreme Council, 1991).

B) The purpose of applied science education

The purpose of this training is to train people at all levels for different sectors of industry - agriculture and services they need (approved by the Supreme Council, 1991).

1 - Create the right package for activities aimed at expanding and improving comprehensive knowledge and scientific research - applied.

2 - Improving the quality and quantity of applied science education in the community.

3 - Provision of appropriate infrastructure in order to solve a practical application of the theoretical potential graduates.

4 –Build an infrastructure for the creation of new technology transfer.

C) The characteristics of applied science education

"Applied science education program planning and guidance will be based on the following points:

1 - The application of scientific theory and technology acquired in the development of academic abilities.

2 - Coordination and proper relation between education and employment needs.

3 - Flexible training programs to fit industrial developments.

4 - The gradual and continuous preparation of individuals for employment in a specific occupational area.

5 - Development of the educational system so that each of the graduates are employed and to have different levels of performance for the possibility of return to education and continuing education is provided for them.

6 - Obtain job training and job skills to coordinate planning.

7 - Science education to improve student according to theirlevels.

8 - Change the system so as to promote employment and wage employment in professional jobs requires higher levels of training in Applied Science "(Supreme Council resolutions, 1991).

D) Structure of Applied Science education

"Structure of Applied Science education, scientific – practicaleducation,is a period that begins after high primary school (entry level) continues until the highest education levels."

E) Applied Science Education Program

Applied – science education programs are on a consistent basis and to enhance their knowledge and skills in each of the courses and fields, each level is designed. So that, the total training period is complete cohesion and harmony and proportion.

One of the duties of the Supreme Council for Science Education - Applied scientific study and practical training programs to fit these programs as well as technical knowledge and cultural conditions of the real needs of society. (Approved by the Supreme Council, 1991).

Another teaching academic subjects , mainly in order to make design thinking , creativity and research under -trained , but in applied science education scholarly training - Practical training also are target operation.

In general, scientific training - practical meaning in common and what is specific to those skills and technical training in higher education and technical education by colleges , universities or academic centers and application runs Objectives the training of skilled manpower including engineers, technicians and IT sectors of technology or industry, agriculture and services.

d) Different learning science - the application of theoretical training

Applied science education courses and theoretical courses in university are different from many directions.

1 – MODELS OF EDUCATIONAL PLANING AND STUDYING

Applied science education courses are usually made by the executive and the Supreme Council for planning approval which is given, used in defining terms, job analysis and they are well-known pattern. In terms of curriculum, as opposed to theoretical training base of knowledge' determines the structure and content of the training courses whereas scientific – practical, Skill and technology model is used and the specific skills and knowledge for the learning and skills in a profession dominated by specific needs are identified.

2 – IMPLEMENTATION OF TRAINING PROGRAMS

Applied science education courses typically use the resources of the applicant agencies in the public sector - public and private which is run. So scientific training - different applications of theoretical campuses and even at the workplace or training environment adjacent to the working environment and the nature of specialized content, applications and programs, has led experts to promote the lessons in host organizations to teach courses.

3 – EMPHASIZE TEACHING SKILLS AND TECHNOLOGY

In developed countries, the main structure of Manpower jobs builds by skilled manpower and technologies. In Economic development of country,perhaps no more important part of the educational system, skills and technology sector. Also according to internationally recognized patterns "for each person on average supervisor or expert guidance and supervision is responsible for three to four expert persons and technicians" (Henry Fayol, 1949).One of the main objectives of the establishment of applied science education courses to make a balance Pyramid Manpower jobs in different parts of the country.

4 – JOB CREATION

Important features are to characterize of applied science education courses is functional properties of the job creation.Defined courses based on labor market needs and organizations, content, applications, training, workplace or similarity learning environment to the work environment, teachers are used most often at work and Scientific conditions necessary to teach students studying and sometimes employment and training projects in the work and do It is expected that graduates of this system, not only in career but also other groups of employees receiving job than graduates of theoretical training, would win over, and self-Keeping One Step Ahead order to additionally force to create jobs.

2 – OBJECTIVES AND METHODOLOGY

In a study in 2009) to assess the employment situation of graduates Education Center, Applied Science ACECR (Academic Center of Education, Culture and Research) at the national level to accurately determine objectively assess the status of graduates and the impact of this training to employ graduates of this system over the years (1999 to 2006). IT disciplines including software and hardware, IT - ICT graduates were enrolled and took the following objectives:

RESEARCH PURPOSES:

1 - Investigation of the role of applied science education courses employment of learners and graduates of the education system - applications.

2 - Training of Science - Applied boost employment empowering learners and graduates employed.

RESEARCH HYPOTHESES:

1 - Applied Science graduates the skills required for the application of science and technology and employment are better absorbed by the labor market.

2 - Applied science education has enhanced the knowledge and skills necessary for graduates and it has provided a business.

STATISTICAL AREA:

The population consisted of all graduates input during (1999 to 2006) fields of computer software, software system, Hardware and IT in all scientific applications depends ACECR monitored by Applied Science University in the country, which includes a 5100 graduate graduates are more than 20 centers.

METHODS:

The research is applied research and survey method, first make a list of (1999 to 2006) graduates of the address and data extracted.Meanwhile a Questionnaire including 23 questions have been preparing to send them by speed post to much of graduated and requests to answer them. Then response letter back in the mail, explaining that the costs were paid back to Postage for response letters with envelopes. Following 45 days of receiving a total of 695 responses were performed on data and statistics. After the statistical data and the information extracted from the data were analyzed by SPSS software.

RESULT

Reviewing the findings of the 56.4 percent responses wife and 43.6 percent were male. Specified that:

Table 1: Distribution of the sample population based on current employment status

Current employment status	Frequency	percent
Working	327	47.1
Schools next	127	18.3
During military service	39	5.6
No job	194	27.9
No Reply	8	1.1
Total	695	100

Table 1: Current Status of Employment 695 members in four groups of samples recorded shows. Most of the respondents worked 47.1 percent are. Also a number of other respondents have said or during subsequent schools have 18.3 percent or during military service 5.6 percent and the 27.9percent said they are not working.

Table 2: Distribution of the sample population in terms of employment

Employment status	Frequency	percent
Employed before Techniciandegree	41	12.5
Working while in Technician degree	22	6.7
Employment after Technician degree	249	76.1
No Reply	15	4.7
Total	327	100

Table 2 shows that the Respondents have employed are 76.1percent the Employment after Technician degree, 12.5 percent before the Technician degree and6.7 percent while in Technician degree have been.

Table 3: Distribution of sample population by occupation

The job type	Frequency	percent
Government	136	41.6
Non-governmental (private)	186	56.9
Cooperative	5	1.5
Total	327	100

Table 3 indicates that most respondents in the private sector (private) 56.9 percent are employed. Also 41.6 percent are employed in the government sector.

Table 4: Distribution of the sample population in terms of employment in the private sector

Type of jobs in the private sector	Frequency	percent
I am self-employed and independent	31	18.6
I have a group job and salary	129	69.2
I have a group job and I am chief	26	12.2
Total	186	100

Table 4 shows that respondents are employed in the private sector 69.2 percent of them have a job and have salary. 18.6 percent self-employed and independent and 12.2 percent said they have a group job and they are chief.

Table 5: Distribution of the sample population in terms of job related field of study

Communication	Frequency	percent
Unrelated	37	11.3
Very low	14	4.3
Low	51	15.6
High	102	31.2
Very high	123	37.6
Total	327	100

In Table 5 found that 68.8 percent of the respondents were employed, the amount of jobs related to their field of study high and very high have expressed.the19.9 percent have evaluated this relationship very low and low and11.3 percent who have not been any connection between jobs and their profession.

Table 6: Distribution of the sample population based on the evaluation of training effectiveness

Applied Science in promoting job

The job	Frequency	percent
Very low	41	12.5
Low	35	10.7
Medium	99	30.3
High	96	30
Very high	56	16.5
Total	327	100

Table 6 indicates that the 46.5 percent of respondents employed in effect tutorials Applied Science in enhancing their professional high and very high have evaluated and 23.2 percent of this impact is very low and low have assessed approximately 30.3 the average percentage of evaluations have stated.

Table 7: Distribution of the sample population in terms of public facilities

If self-employment

The cases	Frequency	percent
Yes	13	23
No	9	16
Irrelevant	15	26
No reply	20	35
Total	57	100

Table 7 shows that 6percent of the total employees of 13 persons have government facilities (loans) are used for self-employment.

Table 8: Distribution of the sample population in terms of satisfaction of applied science education

Type of job	Frequency	percent
Very low	64	9.2
Low	100	14.4
Average	304	43.7
High	151	21.7
Very high	64	9.2
No reply	12	1.7
Total	659	100

Table 8 shows the total respondents, 30.9 percent expressed satisfaction with the applied science education.23.6 percent expressed satisfaction with low and 43.7 percent on average have been expressed.

Overall, the respondents' suggestions for improving the effective application of scientific education for job readiness of graduates have expressed:

1 - Raising the level of practical skills.

2 - Use of qualified and experienced teachers and young.

3 - Optional courses tailored to the job market.

4 - Increase in equipment and education facilities and educational technology.

5 – up to date of education levels.

6 - Enhancing the quality of education.

CONCLUSION

According to the results, it is concluded that the scientific education - has been applied to some extent to meet alumni satisfaction and has been effective in their jobs. , But the following reasons applied science education courses to achieve the ultimate goal is a huge gap because:

1 - According to the findings, most of the audiences were young people who were admitted after completion of secondary education in the state, not employed organizations.

2 - Between the syllables of lessons and occupations of desire job approximately there is no coordinate and may less coordinative.

3- Most of applied science teachers are theoretical structure graduated and they do not have skill to prepare graduates for their job knowledge.It does not fit to aim of these courses and better hire more teachers in all parts of job environment.

4-Lack of promotion and development of entrepreneurship culture in the most comprehensive university centers and encourage entrepreneurs who need more attention.

5- Lack of availability of government facilities for the development of self-employed jobs.

6- Lack of focus in support of graduate applied science education.

SUGGESTION:

1 –Attention to the above six cases by the relevant authorities, especially the Ministry of University and Science and Technology.

2 - Evaluate the impact of training - all graduates of applied courses in the country, provincial and national levels.

3 - Review and revision process of executive applied science education courses with a focus on technology -based learning and skills training, applied science Supreme Cultural Revolution Council Regulations.

4 - Focus on the reference to education policy and decision-making skills and technology, including technical training and professional - Applied Science course specialized skills.

5 - Independence of reference for policy makers and decision skills training and IT systems due to the differences in training with theoretical education system.

6 - Management of Applied Science University and its affiliated institutions to prepare and develop a comprehensive system of education, skills and technology, and the adoption of a new document in the law, ranging from the Islamic Consultative Assembly Cultural Revolution High Council will have to act.

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