Arab Women Participation In Scientific, Technical And Vocational Education

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Abstract: Women’s education is the most productive investments a society can make in terms of socio-economic development of a country. Keeping this thought in mind the paper has been written to find out whether the technical education and vocational training can act as a tool of self esteem and can give confidence to the female part of the society. What would be proper way to bring out the talent and skill of the less fortunate women of a society? The paper has highlighted the prospects and importance of vocational training and technical education for girls and women in Arab world. The aims and objectives to achieve a successful program on technical education and vocational training have been discussed briefly over here. The paper has also included the systematic approaches and strategic developments of this program. As an inspiration, some outstanding examples were incorporated to illustrate the initiatives of government and their support to empower the female part of the society. Several target groups had been developed and different proposals were given to empower women according to the need and scope of each target groups. Local and International case studies were given to raise the awareness among the Arab women and to encourage them to take part in the social and economic development.

Keywords: Technical education, vocational training, self-esteem, gender discrimination, financial dependence, women empowerment, Arab women

1. Introduction

Technical education and vocational training is not just preparation for work, it is preparation for life. And this is why it is so important to make it accessible to all [1]. In other words this technical knowledge and vocational training can improve a person’s efficiency and helps him/her to survive in this competitive world. The knowledge that can be acquired through this program can improve their living condition and establish their status in the society. In general most of the countries especially Arab and under developed countries, the women are less experienced in science and related areas of study and employment. Skills are vital for poverty reduction, economic recovery and sustainable development. As a consequence, policy attention to technical education and vocational training (TEVT) is increasing worldwide [2].

Gender discrimination and its negative impact play a vital role in the society. All over the world there is a unanimous understanding for the importance of developing the technical education and vocational training for the female population. The woman should be prepared to face the world of work through their education whether it is formal or informal or through the technical and vocational training. Therefore, emphasis is given for equal access and contribution in this field.

2. Understanding Aims and Scope of Vocational Training and Education

Vocational training is training for a specific career or trade, excluding the professions. Vocational training focuses on practical applications of skills learned, and is generally unconcerned with theory or traditional academic skills. A large part of the education in vocational schools is hands-on training. Vocational training thus provides a link between education and the working world [3]. On the other hand, vocational education is education within vocational schools that prepares people for a specific trade. It directly develops expertise in techniques related to technology, skill and scientific technique to span all aspects of the trade [4].

Therefore, the literal terms of vocational education is the training designed to advance individuals’ general ability, expertise, competence, aptitude, talent, skill and proficiency, particularly in relation to their present or future occupations. It is the education (traditionally it was non-academic) that will train the people to choose a suitable career or profession according to his/her basic skill, natural ability or inclination. It was directly related to a specific trade, occupation or vocation. For example mat making, weaving, poultry, carpentry etc. Sometimes it also refers as technical education as the participant learns and specializes in a particular narrow technique by using technology, machinery equipment or tools. And, as it was mentioned before, this training does not normally include training for the professions.

The aim of vocational training is to develop the trainee’s general cultural background in addition to improve his or her technical training ability. This policy is followed in the academic requirements of regular vocational schools. To get enrolled to the vocational school the trainees do not require completion of school degree. Even a person can take this course while doing his/her regular job. This training can be given at different times of the day so that men or women at different age group can participate according to their free time.

The vocational education and training can be provided through independent vocational training establishments or can work as a link with some regular technical institutions. Some industries can have a program to train his employees
through extensive vocational education.

Vocational education can be considered as secondary education comparing with the regular educational program. Only few decades before vocational education focused on specific trades of automobile and machineries. Therefore, it was given only to the men of low income group. But now the outlook of this aspect has been changed. In many countries governments and businesses are increasingly investing in the future of vocational education. Still in the developing countries vocational education is more focused on traditional crafts and cottage industries. But now it is extended over information technology, tourism, cosmetics etc.

3. Eradication of Gender Based Discrimination

Universal Declaration of Human Right provides that “everyone has the right to education” [5]. In developing countries it has been seen that in families with small income, the man tries to dominate the woman and keep her in a situation of financial dependence. Moreover, socially it is expected that women should be confined themselves within the boundary of four walls and do house hold activities or farm work. At the same time women try to keep themselves away to get involve to any outdoor work with a fear that they will be rejected or denied access. There is a kind of unwritten understanding that female should not enter to certain occupation dominated by the male. But when these women get a chance to do something of her own and generate some income out of that, then it will give her the freedom from financial dependence and acquire self confidence.

UNESCO is currently intensifying advocacy for girls’ right to education and eradication of gender-based discrimination, notably through the implementation of 1960’s Convention against Discrimination in Education, which provides an international legal framework for the protection of the right to education and prohibits any form of discrimination based on sex, including any distinction, exclusion, limitation or preference [6]. Gender equality in education is a basic human right- It is also essential to achieve sustainable development. In this competitive world, it has been proven that a society can be considered as sustainable society who has eradicated discrimination on women’s education and gives women the equal access to technical knowledge, opportunities to develop their talents and interests.

It will take some time to accept the fact that women, can also be a person towards whom the family can show a sense of respect which she deserves by birth. This respect will come gradually when people will see that being a women, she is also participating in the family’s income. This represents a step in the right direction towards greater equality between men and women in a family. It has a great implication for gender relationship within the home. It has been observed that only few young women choose technical subjects, and even fewer take vocational based degrees and use their degree in a related career. One of the reasons is the negative attitudes of teachers towards teaching of girls in technical lines of study. Beside this, there are other socio-cultural and religious constraints that holds back the women to flourish.

Therefore, opportunities should be created to have suitable technical education and vocational training programs for female from different age and income groups, so that they can have access to those occupations which were kept only for men in this male dominating society. Universal Declaration of Human Right, provides that “everyone has the right to education” [7]. This approach will reduce the gender gap in our society and resolve the shortfall of human resources to improve our socio-economic development. We have many examples of different international organizations like UNESCO, UNDP about how they developed pilot and research projects of vocational training and technical education for girls and women in the developing countries.

While explaining a gap between men and women in reference to gender based discrimination it has been noted that [8];

- Boys receive more attention than girls by teachers.
- Boys have more opportunities for autonomous learning activities in order to do high level tasks, work independently and persist on solving problems.
- Discourages girls from pursuing nontraditional careers

4. Education in Arab World

Modern education for women in the Arab world is of relatively recent origin. The first modern schools were opened in Egypt (1829), Lebanon (1835) and Iraq (1898). In other countries like Kuwait, Yemen and Saudi Arabia, modern education for women is a product of the 20th century. The ratio of female enrollments to the total registration increased from 30 percent to 36 percent. While this represents a definite change for the better, it also suggests that opportunities for female education are still much more limited and restricted than male education. In other words, the status of women's education still has room for improvement [9].

It is firmly believed that without emancipating women from the bondage of illiteracy no real political, social or economic development can take place. Several studies in the Arab world show that the education of women is the most powerful weapon for improving their status as well as the most potent force of social change, and will touch every aspect of their life from the family to economics. For example, it was discovered that women's education is the best weapon against the population explosion [10]. According to a recent study, four countries, Bahrain, Jordan, Qatar, and United Arab Emirates, experienced the highest growth in female enrollment [11]. In a gender based statistics it has been found that “Educational opportunities have indeed increased for women in the Arab countries, also countries like Bahrain, Oman and United Arab Emirates having a gender gap in favor of women [12].
5. Aims and Objectives to Create

Successful TEVT Program

The aims and objectives of this paper is to improve the life of Arab women by enhancing their participation in scientific, technical and vocational education and related careers. The objectives are given below,

- Promoting the participation of Arab women especially who are underprivileged and coming from low income family background to get appropriate TEVT training at the same time ensuring their access to related occupation. This will develop their knowledge, skills, competencies, values and attitudes.
- Identifying the psychological and sociological barriers that narrow down the chances of girls and women to enter into this type of technical and vocational training program.
- Developing an individual’s skills to broaden her horizons to earn the living in creative way rather than reliance on agriculture alone. At the same time encouraging the growth of productivity of traditional crafts and industries.
- Adopting innovative measures to educate the TEVT trainers so that, they can create appropriate curriculum to incorporate Arab girls and women in technical fields and effectively link the formal and non-formal education for TEVT development.
- Creating scopes to get proper educational material for the trainers because in many developing countries, particularly in non-urban areas, it is extremely difficult to get appropriate educational materials and sources of information that can go a long way in giving greater confidence to the trainers and educators involved in TEVT program and consequently making it more attractive for their pupils.
- Presenting series of national and international case studies of successful TEVT programs to women so that they can get convinced to have TEVT knowledge. This approach will also help them to gain experiences on successful TEVT program from other parts of the world. In other words creating a system of exchanging TEVT information among the women in the developed and the developing nations.
- Removing the gender discrimination for an occupation from which women have been excluded so far as well as assuring their appropriate recognition.
- Creating scopes to develop experimentation, innovation and the transmission of sharing information and exchanging dialogue between researchers and policymakers.
- Raising the profile and the status of TEVT trainers and voluntary workers.
- Improving systematic access to database and documentation. It will help for monitoring, checking the present day’s work on regular basis and help the trainers and the policy maker to do the future development of TEVT program. This is a systematic way of strengthening and upgrading education for the world of work for women.

6. Systematic Approach of Strategic Development

Job opportunities for women in the science and technology fields should be balanced with educational and training opportunities [13]. “Technical Education and Vocational Training for Work”- this should be the campaigning of the Arab women for the present and future generation of Middle East. Success on this will create a competent and proficient labor force for the socio-economic development of these countries. Therefore, the strategies to create a systematic approach toward TEVT or career guidance program can be done through the following phases;

- **Functional and Purposeful Literacy**- There should be direct relationship with the probable future profession and the present education. A person should know where she has interest or competence and based on that she should get the appropriate knowledge. In other words one should focus on her competence or skill and choose a profession accordingly.
- **Workplace Literacy**- One must have complete knowledge about the work place she is going to be. This will give a person full confidence of her surrounding environment.
- **Technical / Vocational Education** -This education will train a girl according to her competence, aptitude and skill. It will advance her general ability. This phase involves vocational guidance and counseling, endorsement of equal access of girls and women to technical and vocational education.

To make the above systematic approach successful, we need to focus on the following strategies, keeping in mind that the traditional approaches are failing -

- Organizing local and international co-operation (at private or at government level) to develop national policy, legislation, funding, program settings, evaluation etc in the field of TVET.
- Co-operation and teamwork between TEVT institutions.
- Connections and relations between assessment and learning.
- Providing appropriate education and training to the instructors at professional level for TEVT.
- Involving the planners and managers (educational planners, school teachers, technical resource persons, trainers, and researchers) in the process of project implementation.

7. Technical Education and Vocational Training for Women in the Kingdom of Bahrain

The higher education system of Bahrain is an outstanding example of empowering women to attain leadership. The government gives direct support and encouragement. The major opportunities which are created by the Government are;
a. **Scholarship for higher education**: The government gives scholarship for higher education to women same as men according to ability and academic attainment. This scholarship is given based on competition rather than gender.

b. **Higher education**: In academic year 2010/11, the percentage of female students vis-a-vis males was approximately 54.4% in all institution of higher education [14].

According to a current statistics done by UNESCO; (Factsheet, 2014)
- Transition rate from primary to secondary: Female: 99% (2010)
- Youth (15-24yrs) literacy rate: Female: 97.6% (2010)

The Ministry of Education provided many facilities and programs to achieve success in eradicating illiteracy. These include: Opening the Nursery Schools for Mothers Studying in Continuing Education Centers. This humanitarian and cultural provision offers a solution to one of the problems leading to the absenteeism of female learners since they were not able to leave their children unsupervised during class hours. This scheme greatly contributed to an increase in number of admissions of women for Continuing Education Centers [15].

The Kingdom of Bahrain took several measures for women and for their empowerment. The major one is “The Bahrain Training Institute for Women” to create equal opportunities and eradicate discrimination. This institution has been designed for specialized training programs for women according to the needs of the current employment market. The programs are focused on dressmaking and design organized in collaboration with Tamkeen [a] labor fund and the Council for Women. These organizations are all aimed at training Bahraini female jobseekers in dressmaking, dress design and embroidery. Through the provision of necessary equipment this will help them to begin dressmaking projects and to work from home leading to the future creation of dressmaking and design workshops. In recognition of the important role in society played by women, who represent half of the population, the institute has worked to provide them with new ideas and to encourage and assist them to enter the employment market [16].

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**8. Developing Target Groups: Recommended Proposals for each Target Group**

In many countries TEVT program is available only for younger population. Our emphasis should be given for both younger (girls) and older (women) generation because there are many women in Arab world who did not get educational facilities in the past and have tremendous inhibition to take part to any training program due to social and religious pressure. Therefore, this will be a great hope to get some technical or vocational knowledge and become an income generating person in the family. The suggested target groups are,

- **Target group A**: Girls from low income family background and do not have access to formal educational facilities.
- **Target group B**: Girls and women from low income family background have access to formal educational facilities
- **Target group C**: Girls and women from middle and high income family background with or without formal education

**8.1. Target group A: Girls from low income family background and do not have access to formal educational facilities**

The girls of this target group are poor. Age between 12 to 16. They are out-of-school coming from rural and urban communities. These girls are the most underprivileged and deprived who never had any chance to go to school in their life (either because of social or religious reasons). They are vulnerable, weak and often forced by economic circumstances into early marriages, abuse and exploitation. They need the help most. This group has no option but to rely entirely upon the help and support coming from either the government or from private charity level. Therefore, the emphasis should be given initially to encourage this target group to have access to appropriate technical education and vocational training program where they will get the chance to learn different skills and later on scope will be created when they will have the access to the professional careers.

**8.2. Target group B: Girls and women from low income family background have access to formal educational facilities**

This target group receives supports from government or from private sector/organization to get formal education. Their education level can be up to grade-6 or even can have diploma backgrounds. This group needs to be encouraged to get TEVT training as a parallel knowledge to their existing education. For both the above cases opportunities will be expanded for female to receive skill training of the technical education and vocational training program. With this objective the following proposals are suggested for each target groups.

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[a] Established in August 2006, Tamkeen is one of the cornerstones of Bahrain’s national reform initiatives and Bahrain’s Economic Vision. Its primary vision is empowering Bahrainis to prosper and contribute to the national economy. Their mission is to create opportunities for Bahraini individuals and enterprises in Bahrain to develop

- Semi-skilled and skilled professionals
- Making enterprises in Bahrain more resourceful to capture market opportunities [17].
8.3. Project Proposal for Target Group A and B

This project is composed of two major phases, the first phase aims to increase the access to TEVT program and creating the opportunities to receive skill training at all levels of that program. Types of training can be dress-making, printing, pottery, tailoring, repairing of sewing machine, computer operation and maintenance. This training will empower them by developing their scientific and technical knowledge capacity at local level.

The second phase is to ensure their access at professional careers. This phase requires the involvement of the government policies to develop the job opportunities for them. Private organizations can play an important role in these circumstances by creating job opportunities in their companies. The following case studies will uphold examples of positive measures that have been taken at government and private sector for women’s participation in education and vocational training program. These examples will be useful for the women of this target group to expand their opportunities and experiences.

8.4. CASE STUDY: Grameen Bank, Bangladesh

Bangladesh is a developing country where 70% people are poor and they live in rural areas. In 1983 Muhammad Yunus, a professor of economics founded a project called „Grameen“. He developed a banking system called Grameen Bank (GB). This bank provides micro credit without any collateral to the poorest of the poor in rural Bangladesh who have been kept outside the banking system. The banking system is based on mutual trust, accountability, participation and creativity. This special type of banking system helped to fight poverty and worked for overall development of socio-economic conditions of the poor people in Bangladesh.

Interestingly, Grameen Bank is owned by the borrowers of the bank and most of whom are poor women. Of the total equity of the bank, the borrowers own 94%, and the remaining 6% is owned by the Bangladesh government. The bank grew significantly between 2003-2007. As of January 2011, the total borrowers of the bank is 8.4 million, and 97% of those are women [18]. The number of borrowers has more than doubled since 2003, when the bank had 3.12 million members [19]. The bank has distributed Tk. 684.13 billion (USD 11.35 billion) in loans, out of which Tk. 610.81 billion (USD 10.11 billion) has been repaid. The bank claims a loan recovery rate of 96.67%, up from the 95% recovery rate claimed in 1998 [20].

It has been studied that after getting the financial support from Grameen Bank, the women started to recognize their own capacity to get involved to some income-generating activities. It increases their confidence, mobility and access to markets. This financial service enhances women’s decision-making capacity. It gave them the confidence and improved their status at home and in the community. Another survey shows that women are better than men at repaying loans. The examples of money generating activities which the rural and semi-urban girls and women started with the financial support from the Grameen Bank are, poultry, goat fattening, embroidery, mat-making, weaving, wood work etc. All the initiatives of Grameen Bank projects became successful as it fulfilled project’s aims and objectives. The secrets of success were:
- Pre-defined process monitoring and evaluation systems,
- Qualified trainers,
- Appropriate target groups and
- Laborious trainees

There are some other organizations called BRAC [b], BRDB [c] provide technical training to the poor women of the rural areas. The women who receive this help and technical training pass it on to others in the region. BRAC also offers women training in non-traditional trades such as carpentry, brick-making and silkworm breeding.

8.5. Target group C: Girls and women from middle and high income family background with or without formal education

This target group of women is coming from middle and high income family background. They have both the options and opportunities to get formal education. Now the question may arise why we need to concern about this group of girls/women since neither they have any educational problem nor they have any economical crisis. But if we think deeply then we will understand that these target groups are the girls and women of Arab countries and they have problems at different levels than the first target group. Their life style, living pattern, scope of profession is very different then the women for the rest of the world. Reasons are:

1) Till now the Arab women in some countries are not allowed to work in the front office of their own establishment, neither can they do a business of their own even though it is based on handicrafts.
2) They cannot get involved in any kind of business oriented profession because of their social prejudices.
3) They can only work at school or university as teaching faculty but that requires high level of educational background. The percentage of this group of women is negligible in most of the Arab countries.
4) After they graduate most of them are not allowed to work anywhere related to her educational background.

[b] BRAC, Bangladesh Rural Advancement Committee, an international development organization based in Bangladesh, is the largest non-governmental development organization in the world. Established by Sir Fazle Hasan Abed in 1972, BRAC is present in all 64 districts of Bangladesh as well as in Afghanistan, Pakistan, Sri Lanka, Uganda, Tanzania, South Sudan, Sierra Leone, Liberia, Haiti and The Philippines as of 2012 [21].
[c] BRDB, Bangladesh Rural Development Board is the prime government agency engaged in rural development and poverty alleviation. BRDB basically operates by organizing the small and marginal farmers into cooperative societies for increasing agricultural production through improved means and by forming formal or informal groups of landless men and distressed women to promote income generating activities in the rural areas [22].
Practically they stay at home after four to five years of hard work for their graduation degree and the parents look for suitable groom for their weeding.

5) After marriage their mind is only focused to have children, raise them and look after the family and attend social gatherings.

There is no word called self actualization in their life time. This situation is equal for both the women with or without any educational background. Both of them suffer for not doing any work that will give them self respect or mental peace.

Now if these women can get some opportunities for technical education or vocational training based creative knowledge— they will have the taste of self actualization in their life. Moreover, if they get the freedom to establish their own career then they will be an asset for socio-economic development of the country. At the same time they will gather self confidence and respect from their own family.

8.6. Project Proposal for Target group C

The proposals for this group of women are given as following;

Training Institute can be developed with following criteria

- The institution will have facilities for research, planning, and training concerned with TEVT for the trainees and for the trainers.
- The institution will have innovative TEVT programs.
- The curriculum of this program will be created focusing on girls and women with or without educational background.
- There will be co-ordination and exchange of learning program between the formal educational institutions and the TEVT centre. This will create a scope of exchange knowledge and experiences for both the university students and the students of this institution.

The following case study on University of Bahrain will prove the possibilities to create a co-ordination and exchange of learning program between the formal educational institutions and the TEVT centers. The case study will be an inspiration to the Arab girls and women

8.7. CASE STUDY: Department of Interior Design, College of Civil Engineering and Architecture, University of Bahrain.

Approximately 30 to 40 students graduate every year from the Interior Design Program, College of Civil Engineering and Architecture, University of Bahrain (UoB). It is a four years graduation program. Like any other international interior design institution the students of this program works very hard to complete all the critical courses and design studies. After four years of extreme hard work only few graduate with higher GPA and can get job according to their professional background but rest only sit down at home and striving for a job as the market is already saturated and do not have opening on this specialised profession. So the door of opportunity is more or less closed. The graduate students usually apply in private schools as an art teacher. But there is a big proportional gap between the number of openings in schools and the number of graduate students. So, only 5 to 6 percent of graduate students can get the work as art teacher in the private schools of this kingdom. Rest just stays at home. It is a great waste of human resources for this country.

At present the university offers several vocational and technical based courses like textile, photography, printing, working drawing, graphic design, Auto CAD, 3D max etc. besides the courses directly related to interior design program. It has been observed that huge number of students enroll to this program with medium and lower GPA and once they start the program they struggle to get passing grade in all the courses. At the end only few get higher GPA but the GPA of the majority are very low. This could be due to preferences and competences of the students on specific types of courses and weakness in others. All the students enroll in this program may not have creativity in design related courses but they can be very talented in technical or vocational based courses. As a result all these courses become burden for majority of the students but they have to take them to complete the curriculum of the university’s program. Therefore, neither they can flourish as a good interior designer nor they can think to start a profession based on technical and vocational knowledge which they are obtaining from the university. After considering this situation, the following suggestions are given which will be beneficiary for the university as well as for the students.

At the beginning there will be orientation courses for two years for all the students. Form the second year, there will be two divisions of the students,

- One group of students with higher GPA (3 to 4) will continue for the next two years to complete their bachelor degree to be an interior designer.
- Other group of students with lower GPA (below 3) will be provided with extensive courses to learn all the technical and vocational based skills like handicraft, weaving, pottery, textile, graphic art and computer related courses. The university will also create opportunity for co-ordination and interaction between UoB and other technical and vocational institutions in local and national level. This would expand opportunities for girls to receive skill training at all levels of the technical education and vocational training program. All these will continue for one year. The next one year will be the intern year for these girls to have practical experiences. After this stage the students will get a diploma degree from the university.

With the above proposal we will have two expert work forces for this country. One will be a group of successful interior designers with high GPA, who will get involved in their profession or move towards higher education and other will be a group of successful women with higher skills and expertises in vocational and technical knowledge who can start their own business and flourish their life. In one hand she will have confidence to face this world, share financial requirement at home and get respect from her own family.
9. Conclusion

The girls and women of our society must get appropriate recognition which they have not received for a long time. The knowledge of technical and vocational education for girls/women will give them confidence to survive in this competitive world and to live in better way. In addition to that their power of work and capability of earning will rise. This will increase productivity and efficiency to become self-sufficient, independent. All these will directly create impact to her status within the family. They will achieve their self-esteem, confidence as well as self-respect to live in present and for the future. Therefore, it can be said that technical education and vocational training for women will act as a tool to survive in a creative way.

References


Author Profile

Fariel Khan, lecturer of University of Bahrain (UoB), hold a Bachelor and Master’s degree in Architecture from Bangladesh University of Engineering and Technology (BUET) with a specialization on architectural conservation. She has participated and presented research papers in different seminars and conferences and was selected as keynote speaker in the International Conference (STEX 2006-The Fourth Saudi Technical Conference and Exhibition) held in Riyadh, KSA. As an editorial assistant, she has assisted in research work to produced three books for publication on architectural conservation and historical preservation in Bangladesh with the grant of Getty Foundation.