

The status of Omani women in the ICT sector

Ayman Elnaggar
Sultan Qaboos University, Oman

ABSTRACT

Women in the Arab Gulf region in general and in Oman in particular are at a higher risk of being marginalized from today's knowledge-based economy, due to factual findings related to a traditionally male-dominated ICT sector, unequal access to training, the lack of "Arabized" Internet content and training, and the lack of awareness and policy advocacy, among others. The aim of this research is to present a gender sensitive assessment of the ICT space in Oman and the status of women within it, and to develop the seeds of an information base that provides gender analysis of opportunities and challenges in the ICT space.

Keywords: *Gender Empowerment; Gender Equality; Gender and ICT; ICT4D.*

INTRODUCTION

ICT has proven to be the single most powerful tool for development in the past ten years (Hafkin & Taggart 2001). It has become the bridge of communication among countries; a tool for creating a common language that opens opportunities, connects people, and creates channels for personal and country development (Geldof & Unwin 2005).

Today ICT is the most effective tool in the hands of women to enabling them to extend their participation in a variety of productive fields and providing them with an avenue to express the development of their personalities and capacities (Huyer & Sikoska 2003). It can enable them to participate effectively in numerous development fields, including planning and decision-making, at the level of the family, institutions and society (Gurumurthy 2004). Therefore, ensuring gender equal access to ICT has become an essential core objective and integral element in the many extensive research and development initiatives at the global level in order to effectively improve women's lives by increasing their capacities to share and access information and knowledge (Copper & Weaver 2003). As a result, more and more women have begun to utilize ICT through the initiatives that promote women's access to and understanding of ICT (Rainer, Laosethakul & Astone 2003).

Gender digital divide among Arab countries

Despite these advances in many regions however, women's access and utilization of ICT among Arab countries continue to lag behind men creating a widening gender digital gap. As shown in Table 1, women population is as low as 4% of Internet users in Arab countries, one of the lowest in the world in quantitative terms (Internet World Stats, 2006).

Table 1: Internet users in the Middle East and in the world

Internet Users in the Middle East and in the World							
Middle East region	Population (2005)	Pop. % of world	Internet users, latest data	% Population (penetration)		Usage % of world	Use growth (2000-2005)
				Female	Male		
Total for the Middle East	187,258,006	2.9 %	16,163,500	4%	8.3%	1.7 %	392.1 %
Rest of the world	6,232,844,716	97.1 %	956,664,501	15.3%	15.3%	98.3 %	167.4 %
World total	6,420,102,722	100.0%	972,828,001	15.2%	15.2%	100.0%	169.5 %

Table 2: Middle East Internet Usage and Population Statistics.

Middle East Internet Usage and Population Statistics						
Middle East	Population (2005)	Usage	Internet Usage, Latest Data	% Population (Penetration)	(%) of M.E.	Use Growth (2000-2005)
Bahrain	707,357	40,000	152,700	21.6 %	0.9 %	281.8 %
Iran	68,458,680	250,000	5,500,000	8.0 %	34.0 %	2,100.0 %
Israel	6,986,639	1,270,000	3,200,000	45.8 %	19.8 %	152.0 %
Jordan	5,788,340	127,300	600,000	10.4 %	3.7 %	371.3 %
Kuwait	2,530,012	150,000	600,000	23.7 %	3.7 %	300.0 %
Lebanon	4,461,995	300,000	600,000	13.4 %	3.7 %	100.0 %
Oman	2,396,545	90,000	245,000	10.2 %	1.5 %	172.2 %
Palestine	3,997,861	35,000	160,000	4.0 %	1.0 %	357.1 %
Qatar	768,464	30,000	165,000	21.5 %	1.0 %	450.0 %
Saudi Arabia	23,130,024	200,000	2,540,000	11.0 %	15.7 %	1,170.0 %
Syria	18,586,743	30,000	800,000	4.3 %	4.9 %	2,566.7 %
United Arab Emirates	3,750,054	735,000	1,384,800	36.9 %	8.6 %	88.4 %

With exception of Israel and Gulf countries, most of the Arab countries suffer from a very low Internet population. Oman, being one of the Gulf countries, has the lowest Internet access population among countries in the region as shown in Table 2. Access to ICT, especially the

Internet, is particularly difficult for women in poorer and less urbanised areas where telecommunications infrastructure is poor. The problem is not only the lack of access to computers, telephones and other resources. It also involves a severe absence of training and application opportunities for women and girls (UNDP-POGAR 2005). These issues remain critical for most women in the region.

RATIONALE

The recent human resource report published by the ministry of National Economy in Oman indicated that females currently constitute 49.5% of Oman's 1.8 million population (Ministry of National Economy 2006). Specifically, females constitute 0.85 million with 40% of them under 15 years of age, and 30% being school students. Gender differentials in education levels and literacy rates are rapidly disappearing and access to education at all levels has nearly achieved gender parity. Over the last few decades, Oman has witnessed tremendous progress in the area of female education with the percentage of female students in all education levels is 50%. It is worth also pointing out that Oman boasts one of the lowest female illiteracy rates in the Gulf region at 23.8% as of 2005 compared to 33% in 2000. Table 3 lists the percentage distribution of Omani population (10 years and over) by educational status & gender. Female illiterate are more than male, even though there is just a small difference between the total number of educated female and educated male.

Table 3: Percentage Distribution of Omani Population by Educational Status & Gender.

Male%	Female%	Average %	Educational Status
11.81	23.82	17.77	Illiterate
21.17	18.46	19.83	Can read and write
23.66	18.10	20.90	Primary stage of education
19.14	15.78	17.47	Preparatory stage of basic education
17.36	18.39	17.87	Secondary stage
2.77	2.29	2.53	Post secondary non-tertiary
3.50	2.73	3.12	First university degree
0.38	0.10	0.24	Master degree
0.07	0.02	0.04	PhD degree
0.14	0.31	0.22	Not stated

Although these figures indicate that women's advancement in Oman's society have been great in the area of education, Omani women have a rather low practicing rate in the workforce. The report also pointed out that the percentage of females working in the public sector is 31%, while the percentage of those working in the private sector is as low as 17.9%. The report further indicated that females are only 2% of self-employed Omani and make up less than 1% of Omani employers.

Compared to other countries in the Gulf region, where women are still lagging behind in public life and the work force (Ministry of Information 2006), Oman is doing well in terms of the percentage of women in employment and in education. However, from the above mentioned statistics and knowing that women accounted for 49.5% of the population of Oman, one can deduce that many of the educated women are job seekers.

Barriers for women in Oman to the full use of ICT

Omani socio-cultural norms trap and chain women's thinking and ability, and limit their mobility, whether they are living in a thriving urban center or a remote rural village. In addition, Omani women are at a higher risk of being marginalized from today's Information Society, due to factual findings related to a traditionally male-dominated ICT sector, unequal access to training, the lack of "Arabized" Internet content and training, high Internet connectivity costs, and the lack of awareness and policy advocacy, among others.

Although many gender empowerment initiatives have been published in the literature "(United Nations, 2005)", most of these initiatives targeted certain low income and heavily populated regions such as India, Central Africa, and Central and South America. Here the problem is different. The region has lots of socio-culture gender barriers. Unfortunately, few if any regional statistics were available on the status of women in the ICT sector. As far as we know, our research is the first work to address this issue. However, preliminary studies and observations indicated that women are greatly underrepresented (Albarwani, Alghabshi, & Alzadjali 2006). There seemed to be an obvious gender digital gap that motivated our research.

Our Approach

In response to the need in more information about the status of Omani women in the ICT sector, we started this research to conduct a gender sensitive assessment of the ICT sector in Oman and the status of women within it, and to develop the seeds of an information base that provides gender analysis of opportunities and challenges in the ICT space.

In order to achieve this objective, a comprehensive research on the situation of Oman's ICT sector detailing women's location and specific needs was conducted. The research presents an overview of the current situation of the ICT sector in Oman with focus on the gender dimension. The research also identifies the obstacles and opportunities that exist within the ICT sector for women and means of mainstreaming gender issues within national plans at all levels. It includes statistics and data regarding the labor market, the policies and strategies concerning IT and the status of both the private and public sectors.

This research is also an initiative geared towards developing a model of gender sensitive indicators that may be adopted to assess government and policy makers to evaluate the gender digital divide by other countries in the region, and more importantly, used to establish better ICT policies, program and projects, and thereby promote gender equity to ICT.

Eight sets of research were conducted to gather all related information. These include:

1. Desk and Internet Research
2. University Field Research: Research that targeted 10 Omani academic institutions.
3. Field Research of ICT Students: A questionnaire- based field survey that targeted 500 female high school and intermediate college students.
4. Field Research of Unemployed and Head of Houses: A questionnaire- based field survey that targeted 500 unemployed and head of houses females.
5. Field Research on Omani women: Random walk interview-based field research was carried out with 500 Omani women from the five largest urban centers in Oman.
6. ICT Employers and Stakeholders Qualitative Research: This research was conducted through one-to-one interviews with 100 employers and stakeholders in the ICT industry, as well as educational experts and ICT Instructors.
7. ICT Training Centers Field Research: A telephone-based field survey was conducted with 10 ICT Training Centers in Muscat, the Capital.

8. ICT Employment Research: 100 organizations were contacted to gather information about their ICT labor force, and in particular their female ICT workers in terms of the positions they were holding and their numbers in each reported position.

The data gathered are analyzed using scientific sampling using international standards for drafting questionnaires, conducting surveys, and calculating and minimizing error will be utilized. We have employed P- Tests, F-Tests, and measure of significance. We employed the statistical packages SPSS to analyze the quantitative data. On the other hand, correlation, integration, and forecasting techniques were employed to produce significant results that were used to build some of the listed recommendations in this manuscript.

QUALITATIVE AND QUANTITATIVE ASSESSMENT OF WOMEN IN THE ICT SPACE

From the previous discussion, it is evident that Omani women face many obstacles that prevent them from entering the field of technology, adopting it as a career and working in the ICT sector. These obstacles play a significant role in shaping the decision-making of women and limiting their choices in the ICT space. They are also factors that have for a long time affected their awareness of their inner strengths and of the benefits of ICT to their social, career, and family lives.

In order to investigate the issues that inhibit women from succeeding in the ICT arena further, two sets of field research were conducted. One, qualitative in nature, included interviews with several key stakeholders in the ICT industry. The interviews focused on the obstacles and opportunities for females in the ICT sector. Field research was also conducted among 300 Omani females from different walks of life living in the major three cities of Muscat, Sohar and Salalah. The research examined their knowledge and involvement in ICT. Following are the most prominent insights:

Family pressure and socio-cultural norms

Omani socio-cultural norms that trap and chain women's thinking and abilities, determine their behavior, constrict their interaction with males and limit their mobility are the factors most limiting their access to ICT. Family support or its non-existence affects almost all of a woman's decisions. The family approval is crucial in her choice of education, in the type of job she takes up, in the choice of workplace and its location, as well as the working hours she keeps (Chatty 2000).

Time is something that females have less of. In most cases how a female spends her time is not her decision. The girl, female student, or mother is burdened with responsibilities that fill the time she needs to study and achieve more at work. A married woman's time is even more rationed and she faces demands from every member of the family. The underlying element to this discussion is that what is needed from women is to be better at time management (Chatty 2000).

The above-mentioned findings regarding the obstacles facing women are supported by field research showing that 40% of the women respondents, and 45% of SQU students viewed family responsibilities and socio-cultural norms as being instrumental in prohibiting them personally from developing their ICT knowledge. The research also indicated that this obstacle affects females of all ages and that they are always burdened by family responsibilities. Obstacles based on social norms are those that females tend to expect especially at a younger, less mature age.

The field research indicated that 25% of the women (above 24 years old) and 44% of the young female students (15-23 years old) perceive and expect social norms to be a barrier for woman in studying ICT related fields or working in the ICT sector. Strongly tied to the social norms that are deeply entrenched within the female are the self-imposed limitations on the type of job she can do. Therefore, the perception of future work in ICT sector to be hard with long hours and late

nights spent at work prohibits women from contemplating it as a career. In support of this fact, 21% of the 15-23 years old female students reported such a perception and considered it as an obstacle for females to study ICT. In addition nearly 55% of them said that they would hesitate to accept an IT-related job if it required working after regular office hours.

Mobility in terms of traveling for business or education is another restricting factor for the female depriving her of specialized training, life exposure and the chance to further her career. A mixed gender environment, whether at the work place or classroom, is another deterrent for females, in most cases not because the female herself objects, but because of family and social norms pressure. The field research touched on this issue when 23% of women (above 24 years old) and 18% of young female students (15-23 years old) reported that a mixed environment is an obstacle perceived as discouraging woman from studying ICT-related fields or working in ICT. Furthermore, 34.5% of the students reported that they would hesitate to accept an IT-related job if it is in a mixed work environment and 26% would even hesitate if the job requires dealing with males as well as females.

The innate character issues of Omani females

From the employer's perspective, the female needs to start thinking out of the box. Omani females are put in a frame of thinking that imprints the innate "do's" and "don'ts" deep into their psychological build. Another destructive streak is a deeply inbred dependency mechanism that she relies on in most aspects of her life. The male family members or the husband provide for a female in most cases; this dependency becomes manifested in the women's lack of seriousness at work.

From the female employee's perspective, and based on the results of the field research conducted among women above 24 years old in all walks of life, around 38% of the respondents agreed that the innate characteristics of the female in shying away from more responsibilities at work and the self-imposed duties needed for developing her career, do present an obstacle to her career advancement. However, nearly 62% disagreed and found this not to be true of females or to be an obstacle to her career advancement. Also, only 28% of the women respondents thought that females lacked the initiative and the ambition necessary for competing in the ICT field.

Another two revealing statistics that are suggestive of the students' desire to adopt ICT as their career path were obtained from the interviewed students on the one hand, 72% reported that they are planning to work in ICT-related fields in the future; on the other hand, nearly 50% indicated that if they could not have a job suitable for them in IT, they were ready to shift to a non ICT-based career.

Female stereotyping

The consensus among all employers was that women are more organized, dedicated, meticulous, precise, persistent and loyal. A lot of good qualities are attributed to the female worker, but still she is not the decision maker nor does she occupy positions at the top of the ICT job scale. ICT companies in Oman, as well as other organizations, boast equal opportunity employment for men and women. One issue is that men tend to take advantage of women's timid nature. When a woman is skipped over in promotion to favor a more ambitious and assertive male, she does not generally object.

Discrimination also lies in stereotyping the female within the common framework of social norms. The other stereotyping that is ongoing is categorizing ICT jobs into "female" or "male" jobs. Field research confirmed the above stereotyping, and more so by the females themselves. Almost 72% of the young female students (research set 3) prefer software related and IT training jobs and

actually 62% of female ICT labor force (research set 8) are working in such fields. In addition, around 73% of B.Sc. Degree female students (research set 2) are enrolled in software related ICT subjects such as programming, system analysis and information system managements.

Career counseling and mentorship

The other crucial issue, apart from education that affects an Omani female's decision to join the ICT sector is the availability of career counseling and mentorship. Young females do not know what ICT is all about; they have their misconceptions that are not discussed or demystified by counselors or mentors. Females are not exposed to success stories of other females or their experiences and there is no forum available for raising their awareness about ICT and helping them to choose it as a career.

Entrepreneurship

Entrepreneurship is another area where an Omani female can excel but she is not taught entrepreneurial thinking, nor is it acceptable from the point of view of social norms. Still, the research indicated that a few women entrepreneurs do actually use ICT in generating more income for themselves. Out of the interviewed females (research sets 4, 6, and 8) who have access to a PC of their own, only 18% reported that they use their PC in private income generating activities. Of those, only 8% have been exposed to training in ICT-based business development skills or e-commerce.

The research conducted among women (research sets 4 and 5) indicated that nearly 44% of them do not know how to operate and use a PC, and less than 32% have access to a computer of their own, with only 45% of those actually using the PC they have. This limits entrepreneurship and employment activities especially, when the Internet is one method that women can use to find markets for their goods and to educate themselves through e-learning.

Access to PC and Internet

Barriers to ICT access are not only about the national availability of telecommunications infrastructure and PC equipment. The know-how is equally or more important than the access itself, as though it was sufficient to provide women with PCs and Internet connections to overcome their enabling problems.

Barriers to individual access are also economic and educational. Therefore, lack of sufficient access to ICT to be able to use it as a tool in their lives is due to a combination of factors, some of which can be summarized as follows:

- Not having access to a PC or the Internet due to the prohibitive costs of owning one.
- ICT illiteracy.
- Lack of Arabized local contents and as well as English language knowledge.
- Lack of awareness of ICT benefits and their effect on human life issues and decisions.

The research conducted among women indicated that nearly 44% of them do not know how to operate and use a PC, and less than 32% have access to a computer of their own, with only 45% of those actually using the PC they have. This limits entrepreneurship and employment activities especially since the Internet is one method that women can use to find markets for their goods, learn about their rights, and educate themselves through e-learning.

These obstacles are magnified when combined with the lack of knowledge in the English language and the lack of financial means to learn PC skills. In fact, 28% of the students (research sets 2 and 3) said that the lack of financial means is an obstacle preventing females from enrolling in ICT specializations at private universities and colleges, and 35% reported that the

same obstacle prevents females from acquiring further education in ICT specializations through certification or post graduate studies. Additionally, nearly 22% of the women (research sets 4 and 5) reported fear and lack of ICT awareness and knowledge as an obstacle stopping them from developing their ICT knowledge.

CONCLUSION AND POLICY IMPLICATIONS

One major factor that demands attention is that ICT is a tool that can either be used to transform and liberate or to continue reproducing traditional ways of life that exclude women. Female users may come to ICT with goals that fit rigidly within the confines of socially defined gender roles but it is possible that, once they are exposed to ICT, they can undergo a process of empowerment. For this to happen, ICT should be promoted within the larger goal of enhancing the capabilities of women and empowering them through information and knowledge gain. In order for the above to take place, the major issue of cultural transformation must be addressed. The process of transformation, where the basic underlying belief system of the individual or organization undergoes a fundamental shift, is what will drive the empowerment at all levels, whether of the rural or urban, male or female, macro or micro levels. This cultural transformation has the goal of broadening the imagination and enhancing the problem solving ability among both females and males. As far as ICT goes, there is no doubt that these deep changes must occur at the level of the woman user, the patriarchal male, and the policy maker. This cultural transformation is not a quick process, however, ICT tools are the most suitable for its acceleration.

Another concern the research team would like to raise is that programs designed to introduce ICT to females are much more likely to be effective if they are designed on the basis of women-centered demand-driven than if they are technical solutions supply-driven. Projects of the latter kind risk becoming experiments that will last while there is external support, but are unlikely to be sustainable or result in appropriation of the technology. Training methods are often 'ad-hoc,' alienating and not customized to women's needs. Learning practices for women should be extended to girls and women, made gender-sensitive (making training women-specific, ensuring ongoing user support, and mentoring in the communities where women live) and deepened (for women as users, technicians, and policy-makers). Moreover, training programs for women should focus not only on how to use the technology and software, but also on how to find, manage, produce and disseminate information. This in turn calls for a serious investment in developing a sustainable strategy, in training people within the program-owning organizations in areas such as information management and production and in developing organizational policies in communications and coordination. If policy makers are unable to do so, we might end up merely solving yesterday's problem and the gender digital gap will remain or even widen. Policy implication

The analysis and recommendations presented here are intended to assist policymakers who are willing and committed to reorienting ICT policy to take account of the needs, aspirations, and constraints of women in the Omani society. The following are some of the most prominent identified gaps and possible recommendations:

Gender information and statistics Gap

There is no information upon which decisions regarding the development needs of females can be based. There are also no indicators that measure and monitor the effects and changes. Identifying gender indicators in ICT initiatives whether in policies, strategies, programs, projects or activities can be an effective way of ensuring that women's particular needs are considered in the planning processes at all levels in the ICT space. ICT gender-sensitive indicators are useful tools in measuring or evaluating the impact of development initiatives in the ICT field and in

advocating for engendered policies. Mechanisms for continuous collection and synthesis of this information must be devised and systematically applied.

Outreach to Oman females Gap

Statistics indicate that there is a huge market of females to train in ICT, but the challenge is how to reach them. The hardest issue in development work is coordination among the different NGOs, programs and parties involved. ICT is becoming a major focus for a wide range of development actors but the lack of coordination can lead to duplication of effort, incompatibility of solutions, and compromised sustainability. In such a situation where coordination is lacking, development actors end up as competitors and not partners in the service of the national good. The fact that ICT is more effective when carried out as part of a network system is completely lost.

The newly established Information Technology Authority (ITA), the body in the government in charge of all ICT activities, is well positioned among different stakeholders to lead and coordinate women's empowerment through ICT (ITA 2006). ITA, in partnership with Ministry of Education for example, can sponsor initiatives to utilize many female schools in all regions of Oman in the afternoon to act as (telecenters) for girls and job seekers with the aim of increasing ICT access among all communities.

Omani Women Association (OWA 2007) has also started in partnership with Microsoft the Women in IT program (WIT-Oman 2007). The goal of such a program is to transform the 50 branches of the OWA all over Oman into community technology learning centers (CTLCs). Selected graduates from these two initiatives can be appointed as system administrators and trainers who could respond to the women's needs for information, raise their awareness and mentor them and their children about ICT and its economic benefits.

Gender sensitive policies Gap

Gender blindness among the ICT strategies, as well as ICT blindness among female development-related policies is damaging to both the economic situation of Oman and enhanced female contribution to its development. Affirmative actions related to women's role in ICT, whether as students or workers, are essential in the infancy period of these policies. Strategies must be monitored through gender-disaggregated statistics that measure performance, guide actions, and monitor the accomplishment of goals. Above all, strategies must be communicated to females and their female development support components be made known to their female audience.

ITA could take the lead role, in partnership with the Ministry of Manpower, in reviewing national ICT policy frameworks, as well as existing ICT projects and initiatives, and examining them from a gender viewpoint in order to narrow the wide gender gap and advocate for mainstreaming of gender in the different policies. This is the first step towards correcting a situation that could lead to leaving half of Oman's population in information isolation and a declining economic situation. Raising gender and ICT awareness among policy makers and members of the government agencies involved in telecommunications, science and technology is another intervention possible through the above partnership. Gender sensitization training is a starting point in gender mainstreaming and policymakers need to be made aware of the specific issues related to the impact of ICTs on women. This type of training must be conducted with the goal of transforming the perspective of the individuals and the institutions, as opposed to simply informing them.

Entrepreneurship Gap

There is abundant capacity building, business development, and entrepreneurial skills training offered by many NGOs and international organizations and donors. However, none of those organizations combine ICT training or adopt ICT-based business development skills or e-commerce. On the other hand, ICT training does not combine such creativity building, business development and entrepreneurial skills in its offerings. In addition, very few NGOs offer business incubation for female entrepreneurs let alone those with ICT related businesses. There are also no linkage mechanisms between the would-be ICT entrepreneurs and the sources of jobs in the ICT and non-ICT markets.

Graduates from both initiatives (ITA-Telecenters and WIT-Oman) could be instrumental in educating women to utilize the opportunities offered by the provision of them and raising their awareness of the economic benefits of ICT and how it can be a tool for them to re-enter the labor force.

Combining SQU research capacity and the above mentioned initiatives' graduate knowledge of ICT, economic-ICT needs assessment studies could be conducted in the various communities around these community centers. Based on these studies, appropriate ICT programs that respond to these needs could be devised and developed with the female communities. These centers in turn could be used as incubators for identified ICT-based women-owned businesses, thus transforming the center into a business hub where ICT is used as a tool for economic empowerment of women.

Combining the above with the option of obtaining finance from microfinance institutions to enable the incubated ICT-based businesses to graduate and operate outside the community centers, would add to the empowerment of women and the economy of the community. Linking channels between ICT female entrepreneurs and companies needing their services could also be built through a specialized and widely publicized website where both meet in an e-commerce B2B presence.

Female Labor Gap

Females are still responding to gender stereotyping of ICT jobs. Few are attempting to enter the non-conventional engineering and hardware-based ICT space, and even fewer fight their way to the top positions of the ICT scale. Employers are not being encouraged to provide the flexible work environment for females (flexible working hours, on-site daycare, or teleworking from home), nor are they made aware of the benefits of employing and retaining female employees.

Oman is in need of programs to raise the awareness of both employers and employees regarding the benefits of employing females and of creating more professional employees. Such programs could consider exposing young females to successful females in the ICT space in their communities, who could act as role models as well as devising methods for mentoring activities. Efforts are needed among many stakeholders such as government, private sector ICT companies, and larger corporations to facilitate job placement opportunities for ICT female graduates. Graduates could be engaged in the e-government programs and could play a supportive role to work with the infrastructure projects, and to develop integrated system architecture for proper information sharing and protection.

Socio-cultural norms and other ICT obstacles Gap

Socio-cultural norms are perceived and constantly expected by females to be a barrier discouraging them from joining the ICT areas when studying and working. This lower degree of determination to adopt ICT as a career and the discrepancy between how the employer views the

female employee and how she thinks and views herself are issues that must be addressed. This can be achieved through career counseling, campaigns to raise the awareness of ICT career benefits and work opportunities relating to females.

Although ICT is one effective tool to empower women socially and economically, chatting is still considered the most common usage of Internet in Oman among females harnessing the targeted goals of using ICT for female economic empowerment and social empowerment. Moreover, there are no Arabic-based community portals through which women could network and share knowledge and information relevant to their homes, work experiences, and social problem solving. NGOs are often the most important initiators, implementers, intermediaries and beneficiaries of ICT projects, especially those that target female access and other more developmentally minded endeavors. However, to date the majority of such national gender-related NGOs in Oman (mainly the OWA) use the Internet mainly to disseminate static information about the organization and its programs.

Few strategies that advocate women's status, and even fewer allow women to network using their gender advocacy websites. However, the new OWA-WIT program can be extended to tackle all the abovementioned gaps with special programs that respond to the needs of raising awareness, mentorship, and disseminating information to women. Another arena for raising awareness is advertising and advocating ICT through seminars, brochures, and flyers, as well as through radio and TV channels.

REFERENCES

- Albarwani, A., Alghabshi, H. & Alzadjali, T. (2006), "Gender Equal Access to IT", Final Year Project Report, Sultan Qaboos University.
- Chatty, D. (2000), "Women Working in Oman: Individual Choice and Cultural Constraints", *International Journal of Middle East Studies*, vol. 32, issue 2, pp. 241-254. Available from <http://journals.cambridge.org>
- Copper, J. & Weaver, K. (2003). *Gender and computers: Understanding the digital divide*. Mahwah, NJ: LEA.
- Cisco Networking Academy Program (2005), *Gender Module*, Available from <http://cisco.netacad-currdev.net/gender/start.html>
- Geldof, M. & Unwin, T. (2005), "Becoming an Information Society: The Role of New IT in Development", *Wilton Park Conference*.
- Gurumurthy, A. (2004), "Gender and ICTs: Overview Report", Brighton, United Kingdom: *Bridge*. Available from <http://www.bridge.ids.ac.uk/reports/CEP-ICTs-OR.pdf>
- Hafkin, N. & Taggart, N. (2001). "Gender, Information Technology and Developing Countries: An Analytical Study", Washington, D.C.: Academy for Educational Development. Available from http://learnlink.aed.org/Publications/Gender_Book/Home.htm
- Huyer, S. & Sikoska, T. (2003), "Overcoming the gender digital divide: understanding ICTs and their potential for the empowerment of women", *INSTRAW Research*, Paper Series No.1. Available from http://www.un-instraw.org/en/docs/gender_and_ict/Synthesis_Paper.pdf

- Information Technology Authority (ITA). (2006), *eOman Initiative*, Oman, Available from <http://www.itec.gov.om>
- Internet World Stats. (2005), *Middle East Internet Usage and Population Statistics*, Available from <http://www.internetworldstats.com/stats5.htm#me>
- Ministry of Information (2005), *Women in Oman*, Oman, Available from <http://www.omamet.om/english/social/dev2.asp?cat=hist>
- Ministry of National Economy. (2006), *Statistical Year Book*, Oman, Available from <http://www.moneoman.gov.om/>
- Omani Women Association (OWA) (2007), Available from <http://www.owam.net/english/indexeng.html>
- Rainer, R., Laosethakul, K. & Astone, M. (2003), "Are gender perceptions of computing changing over time?" *Journal of Computer Information Systems*, 108.114.
- Sultan Qaboos University (SQU) (2005), Oman, Available from <http://www.squ.edu.om>
- UNDP-POGAR (2005), *Conditions of Women in Oman*, Available from <http://www.pogar.org/countries/gender.asp?cid=13>
- United Nations Division for the Advancement of Women (2005), *Women 2000 and Beyond*, Available from <http://www.un.org/womenwatch/daw/public/w2000-09.05-ict-e.pdf>
- Women in IT (WIT-Oman) Program in Oman (2007), Available from <http://www.witoman.org/english/program/mission.asp>

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