Bahraini Women in the Field of Engineering:
Opportunities, Challenges, and Future Expectations

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Bahraini Women in the Field of Engineering: Opportunities, Challenges, and Future Expectations

A research paper presented to the Supreme Council for Women on the occasion of Bahraini Women’s Day 2017 under the theme “Women in Engineering”

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On behalf of the Senior Management at the Royal University for Women (RUW) we would like to extend our sincere words of appreciation to the Supreme Council for Women (SCW) for their trust and continuous support, and for choosing RUW as its research associate and partner. We have been honored to be part of this collaboration and look forward to conducting many important projects together.

As SCW has declared 2017 the “Year of Women in Engineering in Bahrain”, RUW has been honored to have been able to offer its support on this occasion. This paper has come as one of the results of this outstanding collaboration and trust. In this regard, I personally have been honored to have been assigned by RUW to work on this research paper which addresses a very important topic; the role of Bahraini Women Engineers in the Kingdom of Bahrain. It has been my great pleasure to have had the exceptional opportunity to work with the outstanding women at SCW who have provided me and my team with continuous support to complete this paper. I would like to extend my sincere thanks and appreciation to them all for their professionalism and support.

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Thank you

Dr. Janon Kadhim
RUW, 2017
Executive Summary

In its quest to develop a knowledge based economy, the Kingdom of Bahrain has been dedicating great efforts towards encouraging all activities and professions that lead towards this goal, ensuring that both its men and women contribute equally in this process. Over the past decades Bahraini women have pursued careers in many leading fields which were previously looked upon as male-dominant. However, in spite of their pioneering roles in many such fields, the role of Bahraini Women in some of these fields still need to be further enhanced and developed. In this regard the field of Engineering can be observed as such, for in spite of the fact that Bahraini women have been present in various fields of Engineering for many years, it seems that their contribution has not yet been utilized to its full capacity.

In an outstanding initiative to support Women Engineers, the Supreme Council for Women (SCW) has chosen “Women in Engineering” as its theme for year 2017. In celebration of the Year of Women in Engineering in the Kingdom of Bahrain, this paper focuses in particular on the role of Bahraini Women in the field of Engineering. The main objective of this paper is to highlight the role of Bahraini Women in the field of Engineering in the Kingdom of Bahrain.

The paper will explore Bahraini women engineers’ role in this regard; focusing on the opportunities and expectations, highlighting the challenges and obstacles they face that prevent them from fully contributing to the profession, and means and ways to overcome these issues. The paper aims to deliver significant recommendations that seek to further support Bahraini Women Engineers and providing Equal Opportunities for them in the profession to further enhance their role and provide them with the supportive, creative environment that will allow them to excel in their profession.

In order to achieve the paper’s objective, the research follows an Analytical “Quantitative” and “Qualitative” methodology approach. This has been achieved through a thorough data collection from primary and secondary sources. The data has been thoroughly analyzed, arriving at a number of findings that highlight the role of Bahraini women in the fields of Engineering and the main challenges they face. Finally a number of recommendations are presented to enhance the role of Bahraini women in Engineering in the Kingdom of Bahrain.

The main sources of data collection have been:

- Data provided by the Supreme Council for Women (SCW),
- Data collected from participants and discussions of focus groups and symposiums organized by the Supreme Council for Women (SCW) that specifically addressed Bahraini Women Engineers’ issues,
- Online literature and resources,
- Scientific research obtained from the Royal University for Women (RUW). This included a Master Design Management recently completed entitled “Employability of Women in Art and Design in the Kingdom of Bahrain”, and other available resources.

For the purpose of this research, the paper has been divided into an introduction and four main parts. Part One provides an overview of the Bahraini Women in Engineering, including a historical timeline of their contribution to the profession and opportunities available through Engineering education and others. Part Two addresses the issue of Employment and employability of Bahraini Women Engineers and Equal Opportunities. Part Three addresses the main obstacles and challenges that Bahraini Women Engineers face in their professional career which prevent them from further developing and accelerating in their profession. The final part, Part Four, focuses on providing a number of recommendations that aim at overcoming the obstacles and challenges that were highlighted in part three, in order to provide Bahraini Women Engineers with the suitable working and professional environment that will allow them to further excel and to ensure Equal opportunities between men and women in the workplace.

The study finds that although Bahraini Women Engineers have accomplished a lot in their quest to achieve professionalism, perfection, and great advancement in the field of Engineering, however there are still many challenges that they face which may be summarized in the following categories: stereotyping in the workplace, lack of role models from the field,
education system related issues, employability skills, work-life balance, accessibility for women engineers with disabilities and special needs, the laws and regulations of practicing engineering in the Kingdom of Bahrain, and lack of awareness and equal opportunities issues.

The study finally concludes with a number of recommendations that seek to enhance the role of Bahraini women in the field of Engineering. The main recommendations are:

- **Eliminating stereotypes in the profession** by further enhancing and implementing laws and legislations. This issue can be tackled by raising social awareness through campaigns using creative tools such as social media portals, and others.

- **Empowering young Bahraini women** who are interested in entering the field of Engineering through providing access to mentors, guidance, academic advising, and exposure to experts in the field that will be able to guide and mentor them and support their professional growth.

- **Promoting Engineering education for women** and encouraging them to actively attempt engineering programs. The promotion of engineering can be done through orientation programs introduced to senior high school students about the field of Engineering and offering scholarships and training programs and other support systems for women students.

- **Enhancing and further developing Employability Skills.** This is a major area in which educational institutions with the support of the Higher Education Council (HEC) can work together on promoting and enhancing the Engineering profession for Women. In this regard putting in place a suitable workforce plan that takes into account the future workforce needs and the specific set of skills required to ensure proper development and employability of future Women Engineers. In addition, Employers and the Higher Education Sector must work together to determine the skills and competences they require from graduates so that the current mindset can be shifted away from only acquiring an education for the sake of the degree to the mindset of obtaining a qualification plus a set of skills required by the industry. As such, employability skills must be embedded within the curriculums of every program provided and supported by the Ministry of Labor and Social Development to help graduates find better employment opportunities.

- **Providing more “Women Friendly” working environments.** This can be addressed by the concerned entities, so women in the field are able to arrive at a proper balance between family and career. In addition, adjusting policies regarding woman working hours and accessibility to field work, and other restrictions that prevent women Engineers from receiving equal opportunities, in addition to allowing them equal training programs opportunities that help with developing their skills.

- **Companies should hire Bahraini women engineers with special needs based on their qualifications and merits and not solely on their physical abilities.** Furthermore, the working environment should be designed to be accessible to all people including women engineers with special needs.

- **Laws and legislations that support Bahraini women engineers** must be reviewed and amended to ensure sufficient support for Bahraini women engineers. This includes ensuring that all policies in companies are sensitive to the specific needs of women. The laws and regulations should be reviewed and benchmarked with international norms in order to further enhance the engineering profession in Bahrain.

- **Further developing policies and initiatives that support equal opportunities in career progression in the field.** Women must be given equal opportunities and fairness in recruitment. In addition, ensuring that women are involved in making key-decisions in companies must become a practice that all seek to accomplish.

As the Kingdom of Bahrain moves towards a knowledge-based economy where every member of the society should be allowed to be an active member and play a sufficient role, “Equal Opportunities” becomes a must. The Engineering field requires the involvement of all its men and women in all areas of engineering.

Finally, it is highly appreciated and admirable to see that great accomplishments and advances are underway in this
regard in the Kingdom of Bahrain. This dialogue that has been generated about the issues of women empowerment and enhancement in all fields including engineering reflect an outstanding awareness of the role of women in society and the desire to assist Women in overcoming any obstacles that may face them in their quest to professionalism and perfection. The continuous support (SCW) offers is unique in the region and in the world and will defiantly empower Bahraini Women in general and Women Engineers in particular to excel.

**Key Words:**

Women in Engineering, Women Empowerment, Equal Opportunities, Employability Skills, Stereotyping, Women Friendly Environments.
Introduction

In its quest to develop a knowledge-based economy, the Kingdom of Bahrain has been dedicating great efforts towards encouraging all activities and professions that lead towards this; ensuring that both Bahraini men and women contribute equally in this process. Over the past decades, Bahraini women have pursued careers in many leading fields which were previously looked upon as male-dominated, as medicine, banking, law, information technology, sports, design, engineering, and others. In spite of her pioneering roles in many of the above fields, the role of Bahraini Women in some of them still needs to be further enhanced and developed.

In regards to the field of Engineering, it can be observed that in spite of the fact that Bahraini women have been present in various fields of Engineering for many years, however, it seems that their contribution has not been utilized to its full capacity. Bahraini women in this field have much to offer, however, their roles continue to be limited in terms of development, unlike their fellow men Engineers.

The Supreme Council for Women (SCW) has chosen "Women in Engineering" as the theme for the year 2017. In celebration of "The Year of Women in Engineering in the Kingdom of Bahrain", this paper focuses in particular on the role of Bahraini women in the field of Engineering. The main objective of this paper is to explore their role in this regard; focusing on the opportunities and expectations, and highlighting the main challenges they face in this profession, in order to arrive at a number of recommendations to further enhance and support the role of Bahraini women in the field of Engineering.

Objectives

The paper’s main objective is: To highlight the role of Bahraini Women in the fields of Engineering in the Kingdom of Bahrain.

In attempting this the following aspects will be considered and discussed:

- Reviewing the historical overview of the role of Bahraini women in Engineering.
- Highlighting the opportunities that are available for women Engineers in Bahrain.
- Understanding the main challenges that face Bahraini women in this profession.
- Presenting recommendations to further utilize the potentials of Bahraini Women Engineers and enhance their roles as important members in the Kingdom’s development process.

The Research Questions

In achieving the main objective, the paper will focus on answering the following questions:

- What are the main fields of engineering that have been attracting Bahraini women over the past years?
- What is the nature of the contribution of Bahraini women in the various fields of Engineering?
- What are the expectations of Bahraini Women in the fields of Engineering?
- What kind of support is provided for Bahraini women pursuing careers in Engineering?
- What are the main challenges that face Bahraini women in this field? Do the challenges include cultural barriers, economic, social, and others?
- To what extent does equal opportunities between men and women exist in the field of Engineering?
- What are the main means to further support and enhance the role of Bahraini Women in the field of Engineering?

Significance of the Study

The main significance of the study is to help improve the status of Bahraini women in the field of Engineering in the Kingdom of Bahrain, highlighting the obstacles they may face that prevent them from fully contributing to the profession.
and means and ways to overcome them. This will contribute towards significant recommendations to further facilitate and enhance their future role in this regard.

**Scope of Study**

For the purpose of this paper, the scope of study will be limited to a general overview of the role of Bahraini women in the various fields of Engineering. It will highlight the main Engineering fields that have been attracting Bahraini Women, their future employment opportunities and career paths, the available opportunities for them in the profession, the general challenges they face, the scope of future enhancement and development.

**Research Methodology**

In order to achieve the paper’s objectives, the research follows an analytical “Quantitative” and “Qualitative” methodology approach. This has been achieved through a thorough data collection from primary and secondary sources. The data has been thoroughly analyzed, arriving at a number of findings that highlight the role of Bahraini women in the fields of Engineering and the main challenges they face. Finally, a number of recommendations are presented to enhance the role of Bahraini women in Engineering in the Kingdom of Bahrain.

- The main sources of data collection have been:
  - Data provided by the Supreme Council for Women (SCW),
  - Data collected from participants and discussions of focus groups and symposiums organized by the Supreme Council for Women (SCW) that specifically addressed Bahraini Women Engineers’ issues,
  - Online literature and resources,
  - Scientific research obtained from the Royal University for Women (RUW). This included a Master Design Management recently completed entitled “Employability of Women in Art and Design in the Kingdom of Bahrain”, and other available resources.

For the purpose of this research, the paper has been divided into an introduction and four main parts. Part One provides an overview of the Bahraini Women in Engineering, including a historical timeline of their contribution to the profession and opportunities available through Engineering education and others. Part Two addresses the issue of Employment and employability of Bahraini Women Engineers and Equal Opportunities. Part Three addresses the main obstacles and challenges that Bahraini Women Engineers face in their professional career which prevent them from further developing and accelerating in their profession. The final part, Part Four, focuses on providing a number of recommendations that aim at overcoming the obstacles and challenges that were highlighted in part three, in order to provide Bahraini Women Engineers with the suitable working and professional environment that will allow them to further excel and to ensure Equal opportunities between men and women in the workplace.
1. Bahraini Women in Engineering: An overview

1.1- A Career for Women in Engineering:

The career path a person decides to follow varies significantly depending on their capabilities and interests. However, it is essential to note and acknowledge that in the Middle East; culture has a considerable impact on the career decision that a person makes.

Society has often viewed men as the sole providers for their families, and women’s duties are significantly drawn towards domestic responsibilities. However, the recent years have seen a commendable improvement in the role women play in the society and economy at large. They are continuously getting engaged in careers that were traditionally regarded as male-dominated, such as medicine, engineering, information technology, science, and others. Nevertheless, their roles in these fields are being undermined based on the traditional stereotypes concerning their capabilities.

Engineering is considered an important profession that steers a country in the direction of industrial development and modernization. However, for many years Engineering has been perceived as one of those professions that could be unsuitable for women due to the physical and other specific requirements of the profession. Despite the fact that Bahraini women have been part of this profession for years and many are very passionate, have great potentials and energy to put forth, however, they continue to face this issue, which leads to their limited contribution to the field.

In recent years women have received tremendous support in the passion they have shown in pursuing the Engineering profession. Statistics show that Bahraini women have been perusing Engineering since the 1970s, engaging in fields of Engineering that are considered male-dominated even in the Western World. The first Bahraini Woman Chemical Engineer and Women Architectural Engineer joined the local workforce in 1977 (Fig 1) (Bahraini Women Database, 2017). Others followed in their footsteps in other fields as well.

![Fig 1 - Bahraini Women and Engineering: Timeline and first roles](Bahraini Women Database, 2017)

However, these women had to face the fact that they must be prepared to deal with the traditional stereotypes that exist in the profession. Many professions continue to be male-dominant where the main positions in the field of the engineering...
profession, which include fieldwork, project management, and other positions including managerial positions still remain dominated by men.

Recently, stakeholders in this field have come out to support women engineers, becoming more and more aware of the positive impact of their full involvement. This is an extraordinary turning point in the history of Women's empowerment, involvement, and appreciation, and many great achievements are expected to follow.

The Supreme Council for Women (SCW) continues to acknowledge the role of Bahraini Women in Engineering, offering numerous areas of support to these women. In this regard, SCW has declared the year 2017 the “Year of Women in Engineering”. Many activities have taken place throughout the year and great efforts have been set forth to celebrate these women and to research, study, and discuss the obstacles women Engineers face in the workplace. They have discussed the means of providing support to help women Engineers overcome these obstacles and further enhance their work experience, allowing them to be productive members of the profession. As part of the activities organized by the Supreme Council for Women in this occasion numerous “Focus Group” discussions have been organized throughout 2017. Each session has focused on addressing a certain aspect of the Women's Engineering profession, discussing the issues of concern to Women Engineers in each and identify the gaps in executing equal opportunities between women and men in the field. Conducted focus groups included the status of Bahraini Women Engineers, issues of Women Engineers in the Oil and Gas Sector, Women Engineers with Disabilities, the role of Bahraini Laws and Regulations in the field of engineering, and others. In addition, a variety of symposiums and conferences have been taking place in 2017 which further address issues related to the state of Bahraini Women Engineers and their role in the future development of the Kingdom of Bahrain. This support offered by (SCW) will definitely play a great role in promoting Bahraini Women Engineers allowing them to achieve their aspirations and professional dreams.

1.2 - Bahraini Women in the Field of Engineering:

The number of women who have enrolled in educational institutions to pursue traditionally male-dominated careers is increasing over the years, especially since the inception of global women empowerment programs. In the Kingdom of Bahrain, this is clearly evident when looking at the Alumni of the University of Bahrain. Between the years 2012 and 2016 the total number of graduates from the College of Engineering in the University of Bahrain (UOB) was a total of (1364) students, (679) of them were women, which represents a percentage of (49.8%) women graduates in comparison to (50.2%) males graduates (Fig 2 and Fig 3) (Bahraini Women Database, 2017). The very similar numbers of graduates not only indicates that the interest of Bahraini female students in the fields of Engineering education is increasing and is similar to the interest of

![Fig 2- Number of UOB Graduates in the fields of Engineering 2012-2016](University of Bahrain, 2017)
the male student body, but it also indicates that if the same types of employment opportunities are not provided for the women graduates, the potentials and energy of half the alumni population are not taken into consideration.

![Fig 3 - The ratio of women to men graduates from the College of Engineering at UOB (2012-2016)](University of Bahrain, 2017)

1.3- Engineering Education in the Kingdom of Bahrain:

Since 1977, when the first female engineer graduated in Bahrain (Bahraini Women Database, 2017), other women have developed a keen interest in this profession. A great increase can be noted in the number of women who enroll for various programs in Engineering at higher education institutions whether in Bahrain or in other international institutions (Bahraini Women Database, 2017).

In the Kingdom of Bahrain, both public and private universities offer Degrees in Engineering. All of these institutions offer this program for women as well as for men.

1.3.1- Public Universities in Bahrain offering Engineering Education:

1. University of Bahrain (UOB): Is a public university, which was founded in 1986 by merging the Gulf Polytechnic (previously established in 1968) and the University College of Arts, Science, and Education (established in 1979). The College of Engineering at UOB offers various undergraduate degree programs and a number of postgraduate degree programs in Engineering such as: Architecture, Chemical Engineering, Civil Engineering, Electrical Engineering, Electronics Engineering, Mechanical Engineering and Process Instrumentation, and Control Engineering.

It is important to mention that all Engineering programs at UOB are open to both female and male students. Statistics obtained from the numbers of graduates indicate that some of those programs/fields seem to be more popular and desired by female students. (Fig 4) indicates that the field of Architecture is the most popular, followed by Civil Engineering, Interior Design, and Electronic Engineering. Fields like Control and Mechanical Engineering have shown to be the least popular for women students at UOB, which may indicate other issues related to employment, cultural obstacles, or others.

UOB women Engineering graduates have been able to achieve the confidence and respect of local employers in the public and private sectors, as many of them continue to play a great role in the local workforce and are a source of inspiration to the new generation of young Bahraini women Engineers.
2. Bahrain Polytechnic: is a Governmental Higher Education Institution. It offers a Bachelor of Engineering Technology with two majors: Mechanical Engineering and Electronic Engineering. It is open to both female and male students.

1.3.2-Private Universities in Bahrain offering Engineering Education:

In addition to UOB, there are other private universities that offer Engineering Education for men and women. Many of the programs are relatively new and employers still remain reluctant at times when hiring some of the graduates. The following private Bahraini universities offer Engineering programs:

a. Royal University for Women (RUW): Established an Architecture department in 2014 offering a Bachelor in Architecture. The first batch is expected to graduate in June 2019.

In its quest to empower women, the architecture program at RUW aims to develop a generation of women architects that will play a great role in the urban and architectural development of the Kingdom of Bahrain.

In summer 2017 the first group of RUW architecture students conducted internships as part of their program course requirement. Women students were engaged in a variety of jobs in the field at public and private related entities. Their enthusiasm and passion to actively engage in the workforce has been complemented by employers and indicates great potential for its future graduates.

In view of RUW’s quest to support Women’s education in Engineering, the College of Engineering was established in July 2017 to accommodate new Engineering Programs, including the plan to host distinguished international Engineering programs. In October 2017, RUW launched a West Virginia University (WVU), USA, Civil Engineering program hosted by RUW and the College of Engineering. The program was conceived based on the market needs analysis of the Kingdom and the region. The co-ed program intends to provide a new engineering opportunity to attract women and men in this field.

b. Ahlia University: offers Bachelor programs in Mobile and Networking Engineering and a Bachelor of Computer and Communication Engineering.

c. Applied Science University (ASU): has recently begun hosting 2 Bachelor programs provided by London South Bank
University, UK. The programs are a Bachelor’s degree in Architecture and a Bachelors’ Degree in Civil Engineering and Construction. These programs have been launched in Academic Year 2017-18.

d. AMA International University: Offers a Bachelor in Informatics Engineering and Mechatronics Engineering.


f. Gulf University: Currently does not offer any pure engineering programs, but only a program in Interior Design under the College of Engineering.

The main observation is that in all the previously mentioned universities in the Kingdom of Bahrain there is no discrimination between women and men when it comes to admissions to these fields of study. The programs accept students based on qualifications and merit and not based on gender.

1.3.3-Women Engineering Alumna from International Universities:
In addition to the local opportunities in engineering education, many Bahraini women have chosen to obtain their education abroad. It is certain that these women have definitely played a notable role in the engineering field in Bahrain.

1.4-Support of Women Engineering Education in Bahrain:
The College of Engineering, Science and Information Technology in the University of Bahrain realized an average of 57% enrolment rate of women in this field between 2014 and 2016. It is much higher than the average 42% global rate recorded worldwide by UNESCO in 2015 (Dizikes, 2016). This high enrolment rate in engineering courses shows the interest women have developed with time in engineering.
2. Employment and Employability of Bahraini Women Engineers

2.1- Graduates in the Field of Engineering:

The number of women graduates from the universities mentioned above was averagely 48% between 2014 and 2016 in Bahrain. The percentage difference between the enrollment and the graduates of women in engineering indicates that the education system faces challenges in providing support to these women. The average number of female graduates between 2015 and 2016 in chemical engineering, for example, was 5% while those who were in mechanical engineering were 1% (University of Bahrain, 2017). This indicates that there continues to be fields of Engineering that are yet to attract more women. This low percentage of women who complete their engineering courses in various fields is also evident (Fig 4). This could be due to social issues, employment opportunities, or a lack of engineering scholarship programs offered for Bahraini women in Engineering (Silbey, 2016).

During the celebration of the Bahraini Women’s Day this year, Bahrain is appreciating the role women play in the development of the Kingdom. In particular, they have acknowledged the career paths that women have pursued in the field of engineering (Silbey, 2016).

2.2- Equal Opportunities Program:

Women pursue engineering programs with the aim of becoming active members of their society. They would like to solve major problems in the society and have a positive impact on people’s lives. Assigning women simple managerial tasks in engineering does not address the career prospects of this profession. The passion a person has towards the profession varies significantly depending on their degree of involvement in technical aspects.

In the case of Bahrain, the National Model for Mainstreaming Women’s Needs in Development has been introduced by the Supreme Council for Women (SCW) with the objective to enhance equal opportunities between men and women and incorporate the rights of women as well as their needs in every career.

These efforts are implemented in collaboration with partners from all sectors. The National Model for Mainstreaming Women’s Needs in Development is a leading mechanism for those responsible for setting policies, public strategies, legislators, program implementers and plans, and by setting a general framework for those parties to ensure proper mainstreaming and sustainability for Bahraini women. It seeks to balance the distribution of resources in reducing gender gaps that affect achieving equality between men and women at a National level. It also defines the roles and responsibilities of the different sectors in the framework of national responsibility for achieving a sustainable impact for mainstreaming women’s needs and equal opportunities. Equal opportunities, on the other hand, is ensuring equality and nondiscrimination in offering opportunities in all areas, such as family, education, work, attaining senior positions, while taking into consideration the needs, capabilities, and abilities (Supreme Council for Women, 2017).

The Supreme Council for Women (SCW) must be credited for its outstanding work on initiating the “National model for mainstreaming women’s needs in development” and all the support it has provided for this model and the initiatives and programs that are being implemented to support the model as implementation of the Equal Opportunities pillar within the National Plan for the Advancement of Bahraini Women. In addition, dedicating the year 2017 to “Bahraini Women in Engineering” as one of the initiatives the (SCW) has set forth in this realm. Throughout 2017 numerous activities have been organized in this regard, as focus groups, symposiums, workshops, conferences, and other activities that aim at focusing on the role of Bahraini Women Engineers, the obstacles they may face in their profession and means of further enhancing their role as main contributors to this field in the Kingdom of Bahrain.

The “Equal Opportunities” policy has addressed the career concerns of women in engineering. It has changed people’s mindset about the capabilities and preferences of women in this profession. Companies have had to find a compromise in the labor law article that does not allow women to work during night shifts. In addition, it states that, the certificates
issued to women engineers must be nationally accredited. It also guarantees equal employment opportunities for women in this career path (Crawford & ASME.org, 2012). Other issues that this policy has addressed include the limited leadership positions granted to women in this field and the lack of support services during career development.

2.3- Employment of Bahraini Women Engineers:
The rising number of women who enroll in higher education institutions in the Kingdom of Bahrain to study Engineering is quite encouraging. However, it is very important to follow up on the employment status of these graduates. Between 2013 and 2014, the General Secretariat of the Higher Education Council in Bahrain indicated that 57% of the graduates from the colleges of Science, Information Technology, and Engineering were female (UOB News, 2016). It shows their desire to develop career paths in this field. During the first Scientific, Technology, Engineering, and Mathematics First Women Scientific Forum (STEM) symposium organized by the University of Bahrain in 2017, the Government sector was accredited for employing 31% female engineers in its top positions, whereas the private sector employed only 16% women engineers out of the total number of engineers in Bahrain (fig 5). The high employment rate of female engineers shows a change in the initial reservations employers previously had concerning women.

![Fig 5 - Employment of Bahraini Women Engineers in the Private and Government Sector in 2017.](Civil Service Bureau + General Authority for Social Insurance, 2017)

Statistics for 2017 by the Supreme Council for Women show that job opportunities for Bahraini women engineers in Electronics and Control Engineering are very few. Those within an average level of employed women Engineers are Civil, Electrical. While these employed in the field of architecture are the largest (Fig 6) (Bahraini Women Database, 2017).

![Fig 6 - Percentage of employed Bahraini Women Engineers in various Fields in the Governmental Sector](Civil Service Bureau, 2017)

(Fig 7) indicates the percentage of Bahraini women Engineers employed by the public sector while (Fig 8) shows the percentage of Bahraini women Engineers employed by the private sector. This highlights an important aspect, which is,
that there still remains to be a large number of Women Engineering graduates who do not pursue a career in Engineering. This means that there is an issue not in the education of women but in pursuing the career of engineering.

In general, the public sector is better at employing women than the private sector. However, the private sector is beginning to step up in this realm realizing their national responsibility in encouraging women employment. In addition, the private sector has been very active in raising “Equal Opportunities” awareness providing special provisions for women employees and working towards improving the work environment.

It is quite noted that the Government sector in the Kingdom of Bahrain tends to be much more supportive in employing Bahraini women Engineers with a percentage of 35% of its Engineer employees being women. Whereas the private sector shows a lower percentage, as 21% of its Engineering population are women (Fig 7 and 8).

When exploring women Engineers employment in the Government sector it may be noted that the percentage of women in the Bahrain Authority for Culture and Antiquities at 67% and Ministry of Industry and Commerce at 50% are notably high, whereas, Electricity and Water Authority, and Ministry of Health are the lowest (Fig 9).
Fig 9 - Percentage of Bahraini Women Engineers employed in the Government sector in comparison to men
(Bahraini Women Database, 2017)

As for the private sector, entities as Bahrain Real Estate (Edamah) has an impressively good body of Bahraini women Engineers at 43%, whereas entities such as ALBA 6%, and Gulf Air 3% have a low percentage, taking into account that the first Bahraini women Aviation Engineer in 2014 was employed at Gulf Air (Fig 10).

Fig 10 - Percentage of Women Engineers in comparison to men in the private sector
(Bahraini Women Database, 2017)

Additional statistics from 2016 show that Bahraini women Engineers employed in Higher Education positions in Bahrain are impressively high, forming 40% of the academic faculty body at UOB, 33% of the academic body at the Gulf Academy of Aviation, and 50% of the academic body at RUW (Fig 11) (Bahraini Women Database, 2017).
The Board of Bahraini Engineers Society contains 22% body of Bahraini Women Engineers, which reflect a good representation and activity of Bahraini Women Engineers in the community.
3. Obstacles and Challenges that Face Bahraini Women in Engineering:

Although Bahraini women engineers strive to achieve professionalism, perfectionism and great accomplishment in the field there are many obstacles and challenges they face especially that the number of engineers is growing annually. Some of the main obstacles fall into the following categories:

3.1- Stereotyping in the workplace:

Stereotyping may be considered the greatest problem that faces Bahraini women engineers in the workplace. Though the educational system allows equal opportunities for Women to peruse education in all fields with no reservations, however in the workplace this is not always the same situation, as men must be willing to accept the input of women in this profession.

Many Bahraini male Engineers face this issue when it comes to dealing with their pre-conceived ideas of women Engineers in the workplace, especially those conducting site work. In a discussion session one woman engineer expressed that her main issue was that her manager does not allow her to go on site visits because he thinks that “she will be tired” and “it’s a man’s role to do so.” (SCW Focus Group, September 2017)

This stereotyping does not encourage women to become a part of this profession especially in a culture that prefers women to work only in offices instead of being engaged and productive on a work/project site. It creates a boundary with great limitation and lots of discouragements for Women Engineers.

In a study conducted at the University of Bahrain, UOB (Alansari, 2017), it was found that pre-conceived ideas employers have towards women in the workplace are not necessarily related to a negative attitude towards women, but it can also be due to their concerns to women’s safety. This study mentioned a number of additional factors that lead employers to be reluctant to employ women, as mentioned in (Fig 12).

This issue of stereotyping and the restraints it creates is looked upon by employers as an additional reason to discourage them from employing women. This in turn accounts for the slow growth of women in the profession and results in an untapped resource of capable women that is not properly utilized.

![Fig 12 - Main constraints employers have when employing women in STEM in Bahrain (Alansari, 2017)](image-url)
3.2- Lack of Role Models:

Young women engineers lack role models in their careers. As a male-dominated field, most of the engineers are men. They are employed to top positions in companies and assume all the important and motivating roles of the profession. The high involvement of males in challenging projects helps them build their career profile and a reputation in the market. On the other hand, few women are granted opportunities to participate in high profile projects or to take on tasks that require more involvement and decision-making.

This problem begins during the college years, as female students often report of the lack of motivation they receive during their internship programs compared to their male classmates. Thus, they lack confidence in their profession, and are unable to compete competitively with their male counterparts. This was also discussed in a focus group where most of the engineers said that “women in this field need to have mentors to guide them through decision making especially in the beginning of their career” (SCW Focus Group, August 2017).

However, it must be noted that in the Engineering Education sector in the Kingdom of Bahrain there is a noticeably high percentage of Women Engineering faculty members. Statistics show that in UOB (40%) of the Bahraini faculty members are Women (Bahrain University, 2017). These women do act as motivating role models for many female engineering students, however this needs to be further enhanced to include exposure of students to other women engineers practicing in the field, especially introducing these young women Engineering students to Bahraini Entrepreneur Women Engineers who have been able to create a place for themselves in the Bahraini workplace.

3.3- The Education System:

Another challenge may lay in the Engineering education system itself (Dizikes, 2016). As per the higher education admission requirements in Bahrain, a woman may choose to enroll in any program she desires with no constraints or limitations, as long as she fulfills the general admission criteria and requirements (Alnassir, 2017). This defiantly encourages women to enroll in Engineering programs in Bahrain. However, statistics show that there is a noticeable number of women who do not complete their engineering education; they either change majors or not completing their degree (University of Bahrain, 2017). This indicates there seem to be other issues, which remain unresolved that create a barrier to women’s Engineering education. For example, cultural barriers will result in some women avoiding or being discouraged from enrolling in certain engineering fields and studies that require participation in certain field work, lab work, internships or others. In some instances, to overcome this obstacle, institutions may allow their women students to be excused from these assignments or not providing them the proper mentoring, support, and guidance to deal with this issue. This will only cause these issues to accelerate and increase the gap between reality and expectations (SCW Focus Group, Aug. 2017). Providing proper mentoring, student support, advising, and guidance becomes essential.

Some female students hearing at an early stage of their studies the realities of the workplace such as women being denied leadership roles, and the low representation of women in the important aspects of some workplaces may discourage them from doing their best during their studies. All the above may result in a number of women Engineering students changing their major while still in college and others who change their profession upon completion (SCW Focus Group, Aug. 2017).

This issue needs to be addressed since it can be easily overcome through proper mentoring, students advising, and proper course planning, ensuring proper engagement of all students despite their gender.

Universities in Bahrain are very concerned to offer a supportive learning and educational environment. Focusing on providing proper internship opportunities, workshops, guest lectures, career counseling, and other related activities for students have become an important part of every university’s student life experience. However, some graduates still feel many of these activities are not as effective as they would expect. In a study on Employability of Women in Art and Design in the Kingdom of Bahrain (Kadhem, 2017), surveyed women graduates¹ in the field of Architecture stressed that their education did not properly prepare them for the workplace. They felt that their curriculum should be further enhanced to provide latest technology and the employability skills, more workshops, and career guidance that would prepare them to be active members of the future workforce (Kadhem, 2017).

¹ Based on the results from 38 Bahraini Women graduates in the fields of Architecture and Design (Kadhem, 2017)
Internship and Industry Placements  Not very Effective
Career Counselling and Guidance  Least effective
Seminars and Workshops on employability and Quality Set Skills  Not very Effective
Extracurricular Activities related to Skills enhancement  Effective
Appropriate Courses for Discipline  Effective

Fig 13 - Students’ feedback on university sponsored activities  
(Kadhem, 2017)

Some also felt that some of the activities provided by the university did not meet their expectations and needs (Fig 13), which means institutions need to closely monitor these activities and ensure continuous development and enhancement.

3.4- Employability Skills:

One of the main requirements of today’s employment world is that graduates acquire the proper employability skills for the profession. The main challenge is that in many instances institutions are focusing on education while employers, when recruiting, focus on a set of skills they find fundamental and essential for the profession and workplace. It has been found that the skills that are taught in universities and the skills employers look for are sometimes very different. This was a clear finding in a research thesis conducted at the Royal University for Women (RUW) which included Design and Architecture educators, students and employers. A noticeable difference was found between the skills educators consider most important and those students and employers do (Fig 14) (Kadhem, 2017).

<table>
<thead>
<tr>
<th></th>
<th>Graduates Mean</th>
<th>Graduates SD*</th>
<th>Employers Mean</th>
<th>Employers SD</th>
<th>Academics Mean</th>
<th>Academics SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self – Management</td>
<td>4.16</td>
<td>0.679</td>
<td>4.13</td>
<td>0.776</td>
<td>4.72</td>
<td>0.458</td>
</tr>
<tr>
<td>Team Work</td>
<td>4.21</td>
<td>0.777</td>
<td>4.30</td>
<td>0.877</td>
<td>4.56</td>
<td>0.583</td>
</tr>
<tr>
<td>Business and customer awareness</td>
<td>3.92</td>
<td>0.850</td>
<td>4.13</td>
<td>0.860</td>
<td>4.16</td>
<td>0.688</td>
</tr>
<tr>
<td>Critical Thinking</td>
<td>3.78</td>
<td>0.821</td>
<td>4.33</td>
<td>0.758</td>
<td>4.64</td>
<td>0.569</td>
</tr>
<tr>
<td>Ability in Problem Solving</td>
<td>4.00</td>
<td>0.697</td>
<td>4.38</td>
<td>0.820</td>
<td>4.79</td>
<td>0.415</td>
</tr>
<tr>
<td>Communication: verbal &amp; written</td>
<td>4.11</td>
<td>0.924</td>
<td>4.30</td>
<td>0.794</td>
<td>4.68</td>
<td>0.557</td>
</tr>
<tr>
<td>Application of Numeracy &amp; IT</td>
<td>3.55</td>
<td>0.891</td>
<td>3.87</td>
<td>0.819</td>
<td>4.08</td>
<td>0.759</td>
</tr>
<tr>
<td>Knowledge</td>
<td>3.76</td>
<td>0.675</td>
<td>4.03</td>
<td>0.850</td>
<td>4.54</td>
<td>0.509</td>
</tr>
<tr>
<td>Motivation</td>
<td>4.24</td>
<td>0.590</td>
<td>4.14</td>
<td>0.875</td>
<td>3.96</td>
<td>0.735</td>
</tr>
<tr>
<td>Wide network / Enterprise</td>
<td>3.68</td>
<td>0.775</td>
<td>3.77</td>
<td>0.774</td>
<td>4.32</td>
<td>0.748</td>
</tr>
<tr>
<td>Initiative</td>
<td>3.76</td>
<td>0.883</td>
<td>4.20</td>
<td>0.805</td>
<td>4.24</td>
<td>0.597</td>
</tr>
<tr>
<td>Planning and Organizing</td>
<td>3.87</td>
<td>0.875</td>
<td>4.17</td>
<td>0.950</td>
<td>4.52</td>
<td>0.586</td>
</tr>
<tr>
<td>Leadership</td>
<td>3.97</td>
<td>0.716</td>
<td>3.67</td>
<td>0.884</td>
<td>4.17</td>
<td>0.702</td>
</tr>
<tr>
<td>Smart &amp; Pleasing Personality</td>
<td>4.08</td>
<td>0.784</td>
<td>4.03</td>
<td>0.999</td>
<td>4.08</td>
<td>0.759</td>
</tr>
</tbody>
</table>

Fig 14 - Significance of Employability Skills in Design and Architecture
(Kadhem, 2017)

2 The surveyed sample consisted of 25 academics, 38 Bahraini Women graduates, 30 Bahraini employers, and 30 Bahraini Women Entrepreneurs in the fields of Architecture and Design (Kadhem, 2017)
In this same study it was found that IT knowledge, networking and Entrepreneur initiative, Business Awareness, Critical thinking and communication skills, were at the top of the skills gaps as per a sample of surveyed graduates ³ (Fig 15) (Kadhem, 2017).

![Fig 15 - Employability Skills gap according to graduates (Kadhem, 2017)](image)

This in fact aligns with international norms, which find that the main employability skills employers find women graduates lacking (Kadhem, 2017) are:

- Networking abilities
- Critical Thinking
- Team work (not a team player)

The survey highlighted other interesting facts; that while employers found the above to be very important skills and attributes for the profession, graduates themselves did not think these were important. This can defiantly be a reflection of graduates limited practical experience and exposure to the industry, which could also be a result other aspects during their university education such as insufficient or ineffective internships, lack of field trips and industry exposure (Fig 15).

In the same study (Kadhem, 2017), for Women Entrepreneurs ⁴, the issue of finding a job didn’t exist since they were self-employed, however skills like communication skills, networking abilities, leadership qualities are very effective skills for their career (Fig 16).

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³ Based on results from 38 Bahraini women graduates in the fields of Architecture and Design (Kadhem, 2017)

⁴ Based on results of 30 surveyed Bahraini entrepreneurs in the field of Architecture and Design (Kadhem, 2017)
### Challenges Faced by Women in Career Opportunities

<table>
<thead>
<tr>
<th>Employability Skills</th>
<th>Employers</th>
<th>Entrepreneurs</th>
<th>Academics</th>
<th>Graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation Coefficient (p-value)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Management</td>
<td>0.015 (0.937)</td>
<td>-0.111 (0.583)</td>
<td>0.035 (0.868)</td>
<td>0.057 (0.741)</td>
</tr>
<tr>
<td>Team Player</td>
<td>-.419* (0.021)</td>
<td>-0.047 (0.815)</td>
<td>0.014 (0.948)</td>
<td>0.17 (0.321)</td>
</tr>
<tr>
<td>Business and Customer Awareness</td>
<td>-0.108 (0.568)</td>
<td>0.049 (0.806)</td>
<td>-0.0047 (0.825)</td>
<td>-0.12 (0.485)</td>
</tr>
<tr>
<td>Critical Thinking</td>
<td>-.0400* (0.029)</td>
<td>-0.0251 (0.208)</td>
<td>-.0225 (0.279)</td>
<td>-.182 (0.295)</td>
</tr>
<tr>
<td>Ability in Problem Solving</td>
<td>-0.146 (0.45)</td>
<td>-0.18 (0.368)</td>
<td>-0.017 (0.938)</td>
<td>-0.067 (0.705)</td>
</tr>
<tr>
<td>Communication, Verbal and Written</td>
<td>-0.286 (0.125)</td>
<td>0.008 (0.97)</td>
<td>0.115 (0.584)</td>
<td>0.123 (0.473)</td>
</tr>
<tr>
<td>Application of IT</td>
<td>0.199 (0.291)</td>
<td>-0.066 (0.743)</td>
<td>-0.021 (0.92)</td>
<td>0.204 (0.233)</td>
</tr>
<tr>
<td>Knowledge</td>
<td>0.281 (0.132)</td>
<td>0.053 (0.793)</td>
<td>-0.071 (0.742)</td>
<td>0.192 (0.262)</td>
</tr>
<tr>
<td>Networking Ability</td>
<td>.550** (0.002)</td>
<td>-0.238 (0.231)</td>
<td>-0.261 (0.207)</td>
<td>0.109 (0.527)</td>
</tr>
<tr>
<td>Initiatives</td>
<td>-0.261 (0.164)</td>
<td>-0.092 (0.647)</td>
<td>-0.147 (0.482)</td>
<td>0.008 (0.962)</td>
</tr>
<tr>
<td>Planning and Organizing</td>
<td>0.043 (0.822)</td>
<td>-0.014 (0.943)</td>
<td>-0.041 (0.846)</td>
<td>0.161 (0.347)</td>
</tr>
<tr>
<td>Leadership</td>
<td>0.145 (0.444)</td>
<td>-0.08 (0.692)</td>
<td>-0.039 (0.855)</td>
<td>0.323 (0.055)</td>
</tr>
<tr>
<td>Smart and Pleasing Personality</td>
<td>0.134 (0.48)</td>
<td>0.022 (0.914)</td>
<td>0.032 (0.881)</td>
<td>0.021 (0.905)</td>
</tr>
<tr>
<td>Visual Literacy and Creativity</td>
<td>0.135 (0.486)</td>
<td>0.115 (0.567)</td>
<td>-0.086 (0.684)</td>
<td></td>
</tr>
</tbody>
</table>

**Fig 16 - Employability skills gaps for women**

(Kadhem, 2017)

Academics expectations were in many cases much different than the expectations of the industry/employers. This may be due to the lack of practical experience and engagement in the field. This could be overcome by encouraging academics to practice the profession in addition to teaching. Also the current practice in universities in Bahrain of having College Advisory Committees, which include professionals from the related industry has been a great aid in connecting academia with the industry and developing a healthy communication and relationships between both worlds.

### 3.5 Work-Life Balance:

Finding that suitable balance between work and family is considered to be the main challenge Bahraini Women Engineers face. The issue of working hours is among one of the main obstacles in this realm facing Bahraini women engineers. The Bahraini labor law does not allow women to work in shifts or have flexible hours, so as a result many women drop out of this profession or take a different path in their professions. “I had to choose between raising my kids and working, so I chose to quit my job and stay at home to raise my kids instead”, said one woman engineer (SCW Focus Group, 2017). This issue was discussed in a special focus group by SCW, which addressed obstacles that face women engineers. Many participants expressed that when they were faced to choose between being a mother and taking care of their children, or climbing the ladder in their careers, many women engineers chose to stay home.

In the RUW Master’s thesis on Employability of Women in Art and Design (Kadhem, 2017) when researching challenges women engineers face in the workplace, other related issues surfaced. Inflexible working hours, the difficulty to balance between career and family life, having children while building a career, and others were some of the main concerns (Fig 17 & 18).

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*The surveyed sample consisted of 25 academics, 38 Bahraini Women graduates, 30 Bahraini employers, and 30 Bahraini Women Entrepreneurs in the fields of Architecture and Design (Kadhem, 2017)
Fig 17- Life-work balance challenges that face Bahraini Women Engineers (Kadhem, 2017)

<table>
<thead>
<tr>
<th>Item</th>
<th>Graduates M* SD</th>
<th>Entrepreneurs M* SD</th>
<th>Employers M* SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Career opportunities</td>
<td>3.54 0.931</td>
<td>3.72 1.032</td>
<td>3.17 0.985</td>
</tr>
<tr>
<td>Harassment</td>
<td>3.22 1.098</td>
<td></td>
<td>2.90 0.960</td>
</tr>
<tr>
<td>Having children while building career</td>
<td>3.62 1.063</td>
<td>3.72 0.922</td>
<td>3.83 1.053</td>
</tr>
<tr>
<td>Work / life balance</td>
<td>3.62 1.053</td>
<td>4.21 0.774</td>
<td>3.93 0.858</td>
</tr>
<tr>
<td>Superior male appreciation at work</td>
<td>3.19 1.151</td>
<td>3.55 1.183</td>
<td>3.27 1.048</td>
</tr>
<tr>
<td>Working hours</td>
<td>3.08 1.056</td>
<td>4.07 0.753</td>
<td>3.80 1.031</td>
</tr>
<tr>
<td>Tight schedule and deadlines</td>
<td>3.41 0.927</td>
<td>3.79 0.940</td>
<td>3.70 1.119</td>
</tr>
<tr>
<td>Holidays</td>
<td>3.73 0.990</td>
<td>3.62 0.942</td>
<td>3.53 1.157</td>
</tr>
<tr>
<td>Cultural / Racial Discrimination</td>
<td>3.30 1.175</td>
<td>3.31 1.004</td>
<td>3.10 1.155</td>
</tr>
<tr>
<td>Scarcity of Recognition</td>
<td>3.38 1.063</td>
<td>3.38 1.015</td>
<td>3.37 1.033</td>
</tr>
<tr>
<td>Gender Stereotyping</td>
<td>3.49 1.239</td>
<td>3.28 1.066</td>
<td>3.34 1.111</td>
</tr>
<tr>
<td>Retrograde representations</td>
<td>3.44 0.969</td>
<td>3.24 0.872</td>
<td>3.03 0.944</td>
</tr>
<tr>
<td>Gender Inequality</td>
<td>3.35 1.136</td>
<td>3.03 0.981</td>
<td>2.97 1.129</td>
</tr>
<tr>
<td>Marital Status</td>
<td>3.38 1.037</td>
<td>3.14 1.026</td>
<td>3.60 1.037</td>
</tr>
<tr>
<td>Inadequate opportunities and number of spaces provided top</td>
<td>3.41 0.956</td>
<td>3.24 1.123</td>
<td>3.33 0.922</td>
</tr>
<tr>
<td>Educational Gaps</td>
<td>3.54 0.960</td>
<td>3.46 0.999</td>
<td>3.32 1.056</td>
</tr>
<tr>
<td>Less access to funding</td>
<td>3.57 0.987</td>
<td>3.41 1.018</td>
<td>3.30 0.952</td>
</tr>
</tbody>
</table>

Fig 18– Main challenges Bahraini Women Engineers face that are related to work-life balance
(Kadhem, 2017)

3.6- Accessibility for Women Engineers with Disabilities and Special Needs:

There are many Bahraini women with physical disabilities who are eager to be a part of the engineering work force. Unfortunately, the working environment and the educational environment make it very difficult for them to peruse their

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The surveyed sample consisted of 38 Bahraini Women graduates, 30 Bahraini employers, and 30 Bahraini Women Entrepreneurs in the fields of Architecture and Design (Kadhem, 2017)
dream. Although both private and public universities in Bahrain accept students with disabilities, but in many cases the spaces are not accessible in terms of their needs. “In university I was always late to class because I had to move from building to building with my wheelchair. I couldn’t access the bus because it does not have a ramp”, was a comment received from a women Engineer (SCW Focus Group, October 2017).

This issue continues in the working environment where spaces are not accessible. Many disabled Bahraini women engineers quit their jobs because of how hard it is to move around. One participant explained “I graduated with a bachelor in Engineering. I really wanted to work and when I got my job I was very happy. However, when I began my job, my office was on the 12th floor and every time I needed to use the washroom I had to go to the 1st floor because it's the only floor that has a washroom for people with disabilities” (SCW focus Group, October 2017).

Furthermore, when Bahraini engineers with disabilities apply for a job they usually get rejected when they are in a wheelchair. Another woman engineer stated, “I would receive phone calls regarding job interviews, but when they saw that I am disabled I automatically get rejected” (SCW Focus Group, October 2017).

This is a major problem that needs to be addressed in order to provide equal opportunities for all those in the profession.

3.7- The Laws and Regulations of Practicing Engineering in the Kingdom of Bahrain:

Although the Bahrain has adjusted many of the laws regulating engineering practice in Bahrain, many engineers still consider these laws to be “inefficient” and “very difficult” to follow. (Focus Group, October 2017)

- One the main issues may be noted in (Chapter 5, Article 17) of the terms of “License Expiry” discussing death of a license holder (The Council for Regulating the Practice of Engineering Profession, 2014). As per this article the engineer’s license for an engineering firm will expire in the case of the death of the owner/ license holder. This will result in other implications as the liquidation of the company and cancelation of all its activities. In many instances several private engineering companies have no choice but to close down upon the death of the owner. Furthermore, all the employees lose their jobs and the ongoing projects will have to be stopped or transferred to a different engineering company.

- Other laws, including working with a joint venture creates limitations and difficulties for Entrepreneur Women Engineers and other employed women. The Bahraini law does not allow work as joint ventures or merge more than two fields of engineering in a company, which again is a huge obstacle for both men and women who are running a business in this field (The Council for Regulating the Practice of Engineering Profession, 2014).

- Moreover, private engineering companies pay a large amount of money for insurance and it is not clear what they are insured for. As mentioned in the focus group in October 2017 by an architect “I am an architect. I pay 2000 BD every year for insurance. When I ask the insurance company what am I being insured for they do not give me a clear answer, which truly worries me.” In addition as discussed in Chapter 4, Article 16 stating “Fees shall be imposed upon license applications, renewal, amendments to their particulars, and having access to the register indicated in Article (14) of this Law, as well as obtaining official excerpts or copies particulars therefrom.” All these issues of fees and all are main concerns especially for Entrepreneur Women Engineers (The Council for Regulating the Practice of Engineering Profession, 2014).

- The laws that declare the rights for foreigners to start their engineering companies in Bahrain is also not fair to Bahrainis. One of the main issues discussed in the focus group in October 2017 was that there are a lot of talented engineers in Bahrain but they do not receive their fair share of projects and jobs since there is no clear criteria of assigning projects by the government. Therefore, a law must be promulgated regarding the distribution of projects between Bahraini and non-Bahraini companies (Focus group, October, 2017).

- Another important issue that was mentioned in a special focus group, which was considered to be an obstacle, is the Engineering representation in the Parliament. It was felt that there should be additional representation of Parliamentarians who have a background in Engineering (Focus group, October, 2017). They feel this would further
enhance the development of laws and legislations that will benefit the field. Engineers need to be consulted because the professionals will be able to give better recommendations based on their experience (Focus group, October, 2017).

- Furthermore, the law of not allowing women to work in shifts is also considered a barrier for Bahraini women engineers to reach their highest potential (Focus group, October, 2017).

3.8- Lack of Awareness:
Many Bahraini women engineering graduates lack awareness of their rights and are unaware of the next step they should take to progress in their career after graduating. This includes knowing their rights as engineers and the registration process, which has to be done through the Council for Regulating the Practice of Engineering Profession in the Kingdom of Bahrain (CRPEP).

Also many high school graduates do not understand the nature of the field of engineering, which requires site visits and long working hours. Many of the students are excited about the title of an engineer but are then discouraged when they graduate and have to go to site visits which many Bahraini women feel uncomfortable to do, due to cultural concerns (Alnassir, 2017), (Silbey, 2016).

3.9- Equal Opportunities:
Another obstacle Bahraini women engineers face is “equal opportunities” in obtaining leadership and top management positions in the field. Studies indicate that in many cases though women graduate university with higher grades and merits than men, however the best jobs and the top positions are still male-dominated (Alansari, 2017). In this context the “National Model for Mainstreaming Women’s Needs” and the impact of “Equal opportunities in the National Plan for the Advancement of Bahraini Women” strive that all sectors, including governmental and private, revise policies and mandates and adopt the methodology of budgeting that is sensitive to the needs of both men and women, spread knowledge and study the gaps in addition to providing support services and career development for women in the field in pursuit of a work environment that provides and sustains equal opportunities to female and male employees.

Upon completion of their studies, women expect to be granted equal opportunities in the work environment as their male counterparts. They expect to be allowed to handle challenging projects that will make use of their analytical, technical, and problem-solving skills. Women expect their engineering efforts to be useful in tackling national and global problems. They believe that their technical skills will help create a sustainable future, build the physical and cyber infrastructure, improve health, and boost social and personal security (Vongalis-Macrow, 2016).

However, some employers still may think women employees are not able to handle difficult tasks. They prefer females to handle the basic, and administrative duties in engineering. As such, they will assign them tasks such as sorting papers, copying, writing notes and collecting equipment (Vongalis-Macrow, 2016). These activities do not build on the skills that are relevant to their profession. Employers believe that advancement in technology is largely for the men. This misconception needs to change in order to fully utilize the potential of Women Engineers.

To overcome the above, the Supreme Council for Women (SCW) has closely worked with several national partners to maintain “Equal Opportunities” between men and women in the field, as previously mentioned. Through these efforts SCW seeks to provide ultimate support for women following international norms and standards. As a result of all these efforts many Governmental and Private sectors in Bahrain have come on board in developing means to introduce “Equal Opportunities” in the workplace. A vivid example of these is establishing equal opportunities committees within the organization to study the gaps facing the implementation of equal opportunities between men and women employees and the challenges women face in the work environment in order to develop and execute plans and programs to fill these gaps and overcome the challenges.
4. Recommendations and Future Prospects

Every profession has its challenges and obstacles. Understanding the particular problem and the intensity of its impact on society and the career helps create a priority in addressing each of the challenges. In Bahrain, the engineering profession faces the challenges outlined above that have a great impact on the success of women in this field. In order to overcome these obstacles the following recommendations may be proposed:

4.1- Stereotyping in the workplace:

- Institutions should work on eliminating stereotypes in the profession. The images of power and identity in the society concerning women can change by associating them with team-based achievements and concentrating on the capabilities of women and success stories. The more a group advocates for a woman and her talents, the more the stereotype issue changes.

- The Governmental and Private sectors as well as international organizations should provide the support needed to improve the participation of women in engineering in Bahrain. This can be in the form of providing additional professional development opportunities and training for women, engaging them in more challenging professional related tasks, and providing them with a safe working environment, providing Enterprise development opportunities, transparency measurements and reporting and others (Jawahery, 2017).

- Raising social awareness is another aspect that will have great impact in this regard. This matter can be achieved through “awareness raising campaigns” using media, social media, and other portals. Though this may take a longer time to achieve, but in time it will have a great impact on the society and will allow great growth and prosperity.

4.2- Role Models:

This also has social implications and should be treated as a very important matter.

Women should be granted access to mentors and experts in the field of Engineering to guide them and allow them to develop their network and be prepared for leadership roles.

This should start with women at a very young age beginning at the early education years. Being surrounded by great women who guide and mentors these students and act as role models to them will help women grow in a health environment. This professional intervention and support from women engineering role models will encourage young engineering students and young graduates allowing them to set high expectations for themselves in the profession.

4.3- Educational Systems:

As previously discussed, the education systems can at times act as an obstacle in developing Women Engineers in Bahrain. Therefore, a number of measures should be taken into account to overcome these obstacles:

- Further promoting Engineering education for women and encouraging them to actively attempt engineering programs that have been known to be male-dominated in Bahrain and in the world. The Royal University for Women is a great example of a university that supports women by solely focusing on educating women. The programs in Architecture, and other engineering programs to come will ensure a safe and healthy educational environment in which future women engineers will be developed.

- Orientation programs should be introduced to high school seniors regarding the field of engineering. This will educate them more about the nature of this field and further prepare them with realistic expectations.

- Offering scholarships and training programs to help further develop Bahraini women engineers.

- Internships are a very important element of any Engineering program. They allow students to gain work-related experiences while they are still students. It helps the student gain that exposure that helps builds her personality
and work ethics. In many cases internships provide the students with future employment opportunities, as may be seen a lot these days in Bahrain. Over the past few years great attention has been directed towards this issue and internship have become a mandatory course requirement by HEC for all programs including all engineering majors. This is a great opportunity that needs to be fully utilized by institutions, employers, and students. Institutions must work hard to ensure that they develop good relations with the industry to provide good internship opportunities for their students. Moreover, women engineering students must be encouraged to take advantage of this opportunity, and though some social barriers and concerns may still arise from students and their families, however, over time and with proper guidance and supervision institutions will eventually be able to overcome this obstacle allowing all women engineering students the chance to experience and benefit of an internship experience.

4.4- Enhancing Employability Skills:
This is another issue that is closely related to the Higher education system. The Higher Education Council of the Kingdom of Bahrain (HEC) has done outstanding work over the past few years to ensure Employability Skills become an essential element embedded in all HE program curriculums. Conferences, symposiums and workshops have been dedicated to promoting this concept resulting in great enhancements and development in curricula of programs offered at universities in Bahrain. According to Mirza (2016) the following strategic steps should be implemented by HE institutions and followed up by the Bahrain Higher Education Council (HEC) to enhance employability across all sectors in the Kingdom of Bahrain. These are:

- Addressing employability first requires **improved workforce planning**. Employers and the Higher Education Sector must plan five to six years ahead to understand the future skills required so supply can be adjusted. Such forecasting does have risks but at the end it will ensure availability of suitable employment opportunities for those who have the required skills.
- Employers and the Higher Education Sector must work together to determine the skills and competences they require from graduates so that the current mindset can be shifted away from only acquiring a qualification to acquiring a qualification plus a set of required skills by the industry.
- Universities must work with employers and sector leaders to shape curriculums.
- Employability skills must be embedded within the curriculums of every program, provided and supported by the Ministry of Labor and Social Development to enhance graduates for better employment opportunities.

It must be mentioned here, that this issue has been part of a national conversation in Bahrain, and that since 2015 onwards many achievements have been introduced through HEC in this regard. Universities have been advised to think of innovative ways of embedding employability skills in their curriculums. This has encouraged universities to further develop and enhance their curriculums and programs to ensure the future generation of graduates are fully prepared for the work force.

4.5- Work-Life Balance:
Many of the issues raised by Bahraini Women Engineers as obstacles were related to the issue of Work-life balance.

- The work-life balance challenge faced by Bahraini Women Engineers due to circumstances such as domestic responsibilities and childcare must be **addressed carefully by the Ministry of Labor and Social Development** through devising more “Women Friendly” policies and ensure that employers do not misuse or circumvent these rules. It must be noted that a number of private sector firms and industries have been working hard to create these “Women Friendly” work environments. A good example is that of GPIC who has established an “Equal Opportunities Council” to ensure support for women in the workplace (Jawahery, 2017).
- A woman should be able to balance her family and career based on **flexible working hours**.
- The policies in organizations should compromise the labor law article and **assign women challenging and night shift tasks**.
Women engineers should be provided with equal opportunities to receive extra training and professional certificates to further develop their skills.

Special regulations should be set unifying the benefits women engineers receive from in the governmental and private sectors which will make women working in the private sector be equal with their counterparts in the governmental sector and enjoy more benefits that help them in their work-life balance (Kadhem, 2017).

4.6- Support for Women Engineers with Special Needs:

- Companies should hire Bahraini women engineers based on their qualifications and merits and not solely on their physical disability. Though physical abilities may present a limitation at times, however special provisions should be taken for this.
- Special legislation should be initiated in this regard. These would include providing support, and protection for women Engineers with special needs.
- Accommodating Women Engineers’ with special needs must also consider their additional special needs as in times of pregnancy, child birth and others similar situations.
- Working environment should be designed to be accessible to all people including women engineers.

4.7- The Laws and Regulations of Practicing Engineering in Bahrain:

- Laws and regulations that may been found to limit women’s role in the workplace, as some of those mentioned in (3.7) must be reviewed and amended to ensure sufficient support for Bahraini women engineers.
- Provide a high level of support and direct policies to ensure equal opportunities between men and women in both the private and governmental sector.
- Ensure all policies in companies are sensitive to the specific needs of women.
- Respect diversity of men and women in the workplace, as this will allow a healthy environment where all can have an effective role.
- All organizations that are related to engineering should collaborate and share good practices in the field.
- The laws and regulations related to the Engineering professional practice must be reviewed and benchmarked with international norms while ensuring respect of positive society trends and norms in order to further enhance the engineering profession in Bahrain, especially in regards to women in the engineering profession in Bahrain.

4.8- Raising Awareness:

- A continuous conversation through conferences and symposiums should be maintained that follow-up and address all new challenges that are of concern to the engineering profession among Bahraini women.
- Bahraini women and the Bahraini society must become aware of the great opportunities provided through the National Plan for the Advancement of Bahraini Women” and the “National Model for Mainstreaming Women's Needs” Policies and regulations that are being developed will ensure an equal opportunity work environment in addition to support services such as career development for women in the field
- The civil society organizations can play a great role in raising awareness in this regard. They can highly effective in identifying the gaps and providing additional support for women through special awareness raising campaigns and program, and emphasizing the role of Equal opportunities between men and women in the society.
- Raising awareness and guiding graduates towards a great career path in engineering with the help of mentors in this field.
4.9- Equal Opportunities in career progression:

- **Further developing policies and initiatives** that support equal opportunities in the workplace and equality of career progression in the field.

- The **promotion of individuals** in organizations should be based on merit, productivity, and achievements.

- **Employers should give special attention to merit and achievements during promotions**, providing equal opportunities between women and men in this regard. An employer should emphasize the importance of hard work and qualifications rather than gender, allowing women equal opportunities in obtaining managerial and senior management positions if they prove qualified for the job. This motivates women towards high achievements in their engineering profession.

- **Women must be allowed fairness of recruitment.** As mentioned before, employment opportunities should be based on merit, qualifications, capabilities and skills, providing equal opportunities for women to enter engineering fields, jobs and tasks based on their qualifications rather than being based on a preconception of her overall capabilities.

- **Ensure the full involvement of women in key decision-making and in strategic planning.**

5. Final statement

As the Kingdom of Bahrain moves towards a knowledge-based economy where every member of the society must be allowed to be an active member and play a sufficient role, “Equal Opportunities” between men and women becomes a must. The Engineering field requires the involvement of the men and women in all areas of engineering. The more involved women are with the technical aspects, the more likely they are to stay in their profession and excel.

Employers are required to grant women leadership opportunities and support them in their careers.

Raising awareness towards the role women can play in the field is a necessity and should begin in the family, schools, higher education institutions, media, and the workplace. But most of all it should begin from the women themselves. Women bear the responsibility to change the social stigmas and misconceptions by being great role models and active members of the workforce and society and at the same time maintaining their traditional roles as homemakers and supporters of the new generations to come.

Finally, it is highly appreciated and admirable to see that great accomplishments and advances are underway in this regard in the Kingdom of Bahrain. The conversation that has been generated about the issues of women empowerment and enhancement in all fields, including engineering, reflect an outstanding awareness of the role of women in the society and the desire to assist Women in overcoming any obstacles that may face them in their quest to professionalism and perfection. The continuous support SCW offers is unique in the region and in the world and will support the advancement Bahraini Women in general and Women Engineers in particular to excel.
Reference:

6. EWA. (October 2017). Bahraini Female Engineers Forum. Bahrain International Exhibition and Convention Center: Bahrain
20. Vongalis-Mascrow, A. (September 28, 2016). What it will take to keep Women from leaving STEM. Boston, MA: USA
تمكين المرأة البحرية المعاصرة: التشاور في مجال الاعتراف في مجال العمل، من خلال توفير وسائل الدعم المختلفة لمن خلال العمل في بناء المهنة للمشاركات في مجال stdin المعمودية في مختلف المجالات. أن هذا التحقيق ممكن أن يتم من خلال الدراسات الموضوعية، وذلك من خلال الدراسات النقدية المعمودية التي تعريف طالبات الدراسة المتقدمة في البرامج المعمودية المتفرقة في مملكة البحرين وписываونية العمل والهندسي والقدرة والمهمة المختلفة.

• التأكيد على دعم وتطوير ممارسات التوظيف، وهي مهمة وطنية مشتركة بين الجامعات، وتعاليم العالي في البحرين وعقل العمل، حيث أن من الضروري توفير خطة طويلة الأمد لاحتياجات سوق العمل في المجال الغذائي للسنين القادمة وليست الممارسات المعمودية لسد هذه الاحتياجات، ومن ثم تتضمن موجة الممارسات الملمحة رفعًا إجراءًا في مجال العمل، وبحثًا عن فرص العمل لكهنت النساء البحرينيات.

• الخريجين على صياغة رؤية تعلم للمرأة" الصيغة للمملكة" بما يضمن للمؤسسة المعمودية التواصل إلى تحقيق الموازنة المبتكرة، فلا بين العمل والعائلة، بين المهنة والتعاوناء الحياتية الأخرى في هذا المجال. يمتد دور وزارة العمل والتنمية الاجتماعية للثورات المعمودية كهية في مجال البحث المحلي، وولادة التطور في بعض القوانين التي تقوم على عمل المرأة المعمودية في بعض المجالات، ومعدة لنقلها في مواقع العمل Shapes أو الأدوات في سنوات العمل المشروعية وغيرها. وذلك توفير فرص التدريب، وتطوير المهنة أسوة مع زميلها الرجل، وفقًا لحافظاً لها الدخول في التطور المهني والرسمي في العمل السابق.

• الخريجين في الشراكات، ويطورها والعمل على تطبيق الموازنة المختلفة. مثلاً من خلال توسيع نطاق وتدابير التطور المتفرع منها. في هذا الاتجاه، يجب أن ي защитن الحياة، يجدها نابعة، لتكون من الفرصة للمرأة المهنية في بعض المجالات، وتعليقاتها بالتجارب العالمية الرائعة، والرسوم في تطور المهنة، والهندسة في البحرين.

• الخريجين على ضوء محافظات التشريعة المتعلقة بمارسات المهنة البحرية ودعم المرأة المعمودية، فأنه يتأكد على شمول صيانة وتطويرها، والعمل على تطبيق الموازنة، والوقوف مع الفرصة في مجال العمل، واثارة الشروط، ومواجهة القوانين المتفرعة، والحقوق المعمودية في مجال العمل. استثمار غالبًا عمل المرأة المهنية في مجال العمل بشكل فعال، وتحقيق الفائدة، وتقنية فعالة في مجال العمل، والتي تحتوي على كفاءة العمل، وعملاء في ساعات العمل السماوية وغيرها. وفقًا لتوفير فرص التدريب، والتطور المهني أسوة مع زميلها الرجل، وفقًا لحافظاً لها الدخول في التطور المهني والرسمي في العمل السابق.

• الحرمن على دعم وتطوير ممارسات تمكين المرأة في مجال العمل، ومن خلال التطور في مجال العمل، وانعكاس الخاصة بهما في المجالات والآليات والحقوق، وهو من الفرصة للمرأة المعنية في مجال العمل، وطموحًا في مجال العمل، والذي يوفر الفرصة في مجال العمل والتحرك في مجال العمل، وربطًا في مجال العمل ودعمًا للمؤسسات الحكومية والفنية والمتقدمة ذات القيامات، حيث أن مجال العمل الهندسي.

• الخريجين في مجال البحرية، وفي مجال البحرية، وتنمية المجتمع، وفي مجال البحرية، وتنمية المجتمع، وتعزيز التطور في مجال البحرية، وفي مجال البحرية، وتنمية المجتمع، وتعزيز التطور في مجال البحرية، وفي مجال البحرية، وتنمية المجتمع، وتعزيز التطور في مجال البحرية، وفي مجال البحرية.
الملخص التنفيذي:
في سعيها لتحقيق المجتمع القائم على اقتصاد المعرفة، تكرس مملكة البحرين جهوداً كبيرة وعميقة لتعزيز هذا الهدف من خلال تشجيع جميع الأنشطة والمحور التي تساهم في تحقيق ذلك. ومركزة على أن يكون بعض أبناء المجتمع، رجلاً وسناً، قادرين على قدرة والليرة البيضاء البحرينية دوراً في بناء المجتمع من خلال إخراطها في العديد من المجالات. مع ذلك، تركز مملكة البحرين على تحقيق ذلك من خلال إنجازات وتشجيع جمعية الأنشطة والمهن التي تساهم في تحقيق ذلك، وتمكينها من السفر في العديد من المجالات. وجزء من ذلك الإطار فإن دور المرأة البحرينية في مجال الهندسة يعد واحداً من تلك المجالات التي أثبتت المرأة البحرينية إمكاناتها المشروعة فيها، وبالرغم من ذلك فإنها هناك الكثير من الظواهر والتحديات الممكن تقديمها في هذا المجال.

بينادرة ميزة من المجلس الأعلى للمرأة، تم تخصيص العام 2017، على مرأة في المجال المهني. وذالك ضمن أحد ميادينه تخصص يوم للمؤسسة البحرينية بحث دوري، في مجال ما خلال العام 2017، وفق ذلك فإن هذه الورقة البيضاء تهدف بشكل أساسي إلى تسليط الضوء على دور المرأة البحرينية في مجال البحرينية على أساس، مع بداية التأكد في الشروط البحرينية في مملكة البحرينة. ومن ثم تهيئة وتبسيط الضوء على أهم المعوقات والتحديات التي تواجه المرأة البحرينية، تتعلق أدائها وتطورها واحتياجاتها، وتليبها استغلالها في السياق المالي. وتوجه الورقة إلى مجموعة من التوصيات الخاصة التي تهدف إلى دعم المرأة البحرينية، وتوفير فرص تأهيل الفرصة، وتكامل الفرص، وتحقيق التكافؤ، وتمكين المرأة وتحقيق تكافؤ الفرص، وتحقيق تكافؤ الفرص.

نُتّناول الجزء الأول من البحث استعراض ونظرة عامة لواقع المرأة البحرينية والبحث من خلال المجلة الأعلى للمرأة خلال العام 2017، والتي تناولت موضوعات متنوعة ذات علاقة بعمل المرأة المدنية البحرينية في المجالات المختلفة. وتم ذلك بتقديم وتزييدها من مراجعة لأدبيات السابقة المتوفرة في المكتبات الإلكترونية وغيرها.

أتوجه ماجستير في إدارة التصميم بعنوان "وظيفة المرأة في مجال الفن والتصميم في مملكة البحرين"، وتولي هذه الورقة البحثية على جمال المرأة في المجالات المختلفة، وتحقيق تكافؤ الفرص في المجالات المختلفة، وتحقيق تكافؤ الفرص في المجالات المختلفة.

نُتّناول الجزء الثاني من البحث استعراض ونظرة عامة لواقع المرأة البحرينية والبحث من خلال المجلة الأعلى للمرأة خلال العام 2017، والتي تناولت موضوعات متنوعة ذات علاقة بعمل المرأة المدنية البحرينية في المجالات المختلفة. وتم ذلك بتقديم وتزييدها من مراجعة لأدبيات السابقة المتوفرة في المكتبات الإلكترونية وغيرها.

في الجزء الثالث يُتّناول وتحقيق فرص التوظيف في مجال البحرينية، وتحقيق تكافؤ الفرص، وتحقيق تكافؤ الفرص، وتحقيق تكافؤ الفرص.

خليص الدراسة إلى العديد من التوصيات الخاصة التي تهدف إلى معالجة تلك المشاكل المذكورة، والتي تشميسها في المجالات المختلفة، وتعزيز فرص الخروج من المجال المختلفة، وتعزيز فرص الخروج من المجال المختلفة.

إن أهم ما تم التوصل إليه في البحث، هو أن المواقف والتحديات التي تعاني منها المرأة البحرينية يمكن ادراجازها ضمن مجموعة من العوامل، في مجال البحرينية، من خلال تقديم التوصيات الخاصة، والتي تهدف إلى معالجة تلك المشاكل المذكورة، والتي تشميسها في المجالات المختلفة، وتعزيز فرص الخروج من المجال المختلفة.

العمل على تغيير فكر المستغليات في حقن العمل، وتعزيز تكافؤ الفرص بين الجنسين وذلك من خلال دعم واشناد، وتقديم التوصيات والتشريعات الخاصة في مجال العمل. هذا الموضوع يمكن معالجته أيضاً من خلال حضانة رفع الوعي المجتمعي من خلال الوسائل الإبداعية الحديثة مثل مواقع التواصل الاجتماعي ووسائل الإعلام الأخرى.
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ورقة بحثية مقدمة إلى المجلس الأعلى للمرأة بمناسبة يوم المرأة البحرينية ٢٠١٧ تحت شعار «المرأة في المجال الهندسي»

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