

Entry-Level Competencies Sought by Interior Designers: Comparison between Kuwait and the United States	العنوان:
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الكفاءات المطلوبة من المصمم الداخلي المبتدئ: مقارنة بين الكويت والولايات  
المتحدة الأمريكية

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## ملخص البحث

الكفاءات المطلوبة في تخصص التصميم الداخلي والمتوقعة من المصمم تتغير بشكل مستمر وتختلف من مكان إلى آخر حسب طبيعة سوق العمل . لذلك، تهدف هذه الدراسة إلى معرفة كفاءات التصميم الداخلي، والمعلومات، والمهارات الضرورية ذات العلاقة بهذا المجال، بالإضافة إلى المهارات الشخصية المطلوبة من المصمم الداخلي المبتدئ في الكويت بالمقارنة مع متطلبات السوق الأمريكي. استخدم في هذه الدراسة المنهج التحليلي للبيانات التي تم جمعها من خلال مائة وسبعة وثمانون (١٨٧) استبانة أعدت خصيصا لهذا الغرض. قام الباحثان بتوزيع استبانة إلكترونية وأخرى ورقية على معماريين ومصممين داخليين يعملون في السوق المحلي بدولة الكويت. أظهرت نتائج الدراسة أن الكفاءات المطلوبة من المصمم الداخلي المبتدئ في الكويت والولايات المتحدة الأمريكية تتشابه في درجة أهميتها في بعض الكفاءات وتختلف في كفاءات أخرى، حسب طبيعة السوق. قدم الباحثان في نهاية الدراسة مجموعة من التوصيات والتطبيقات لأقسام التصميم الداخلي في دولة الكويت لإعداد مناهجهم وفق متطلبات السوق المحلي، بالإضافة إلى الكفاءات العالمية الضرورية لتخريج جيل كويتي قادر على العمل محليا وفي السوق العالمي.

*الكلمات الافتتاحية: تعليم التصميم الداخلي ، كفاءات التصميم، مهارات التصميم، المعلومات، الكويت.*

## **Entry-level Competencies Sought by Interior Designers: Comparison Between Kuwait and the United States**

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## **Abstract**

Job expectations by entry-level interior designers may vary from one country to country depending on the market needs. This research aims to investigate whether entry level interior designers in Kuwait and United States have compliant job competencies. A quantitative research approach was used through a survey questionnaire to examine interior designers' competencies, design knowledge and skills, as well as personal attributes. Both online and paper-based surveys were distributed to professional interior designers and architects in Kuwait. A total of one hundred and eighty-seven (N=187) responses were collected. The findings of this study revealed that Interior design competencies, design knowledge and skills, as well as personal attributes sought by emerging interior designers in Kuwait and the United States are mostly similar, but they differ in some domains when comparing their mean values. Educational implications and suggestions for future research are discussed.

***Keywords:*** *interior design education, interior designer, design competencies, design skills, knowledge, Kuwait*

## **Introduction**

In a globalized world, the interior designers' preparation has been changing based on job expectations. Interior Design (ID) competencies sought by interior designers in the United States have been changing overtime (Baker & Sondhi, 1989; Douthitt & Hasell, 1985; Hernecheck, Rettig, & Sherman, 1983; Scarton, 2012). Also, the Council for Interior Design Accreditation in North America has been modifying the accreditation standards to meet the market needs (Martin & Kroelinger, 2010). As technology advances and the interior design body of knowledge evolves, interior design competencies sought by entry-level interior designers may differ from country to another depending on the ID practices and accreditation requirements.

The purpose of this cross-sectional study is to investigate ID competencies sought by entry-level interior designers in Kuwait in order to compare them with similar ones research in the United States. Unlike the U.S., Kuwait does not have an interior design accreditation body to set the standards for ID programs to follow. This study is expected to have a significant impact on helping ID programs in Kuwait to pursue international ID accreditation bodies, such as the Council for Interior Design Accreditation (CIDA) and National Association of Schools of Art and Design (NASAD), for accrediting local programs since they share similar competencies for the purpose of preparing globally competitive graduates. Also, this study is expected to help ID faculty members in Kuwait to better understand the design competencies, design skills and knowledge, as well as personal

attributes, sought by entry-level interior designers, and to prepare them based on the importance of these areas.

### ***Operational Definitions***

For the purpose of the study, several definitions were adopted. Competencies are “the knowledge and skills that enable a person to act effectively in a job or situation” (Martin, 2017). Knowledge is defined as “information or understanding of facts gained through study, investigation, observation, or experience” (Merriam Webster’s Collegiate Dictionary, 2005; as cited in McCoy, 2012, p. 1). A skill is defined as “the ability to do something that comes from training, experience, or practice” (merriam-webster.com). Entry-level employee is the one who is at the beginning stage of a job category.

## **Review of literature**

### ***Interior Design Competencies***

In the last few decades, the characteristics, attributes, knowledge, and skills expected from entry-level interior designers in the United States has been well documented in seven studies (Baker & Sondhi, 1989; Douthitt & Hasell, 1985; Hoffman, 1983; Hernecheck et al., 1983; Myers, 1982; Scarton, 2012; Tarver, 2013) and professional practice activities (Benhamou, 1980). Later studies focused on communication, business skills (Tew, 1992) and occupational expectations (Lee & Hagerty, 1996); followed by studies citing the importance of an ongoing connection between practice and education (Black, 2000;

Blossom et al., 2002; Watson et al., 2003) followed by research citing the importance of hard and soft skills needed for hiring emerging interior design professionals (Gale et al., 2017).

As one can gather from the literature, the assessment of entry-level skills has been a well-researched area of interest by interior design scholars in the past. These studies (Baker & Sondhi, 1989; Douthitt & Hasell, 1985; Hernecheck et al., 1983; Scarton, 2012) provide a significant look at the historical competencies of the industry and demonstrate the need for more contemporary studies. Scarton's (2012) examined ID competencies, knowledge and skill areas, as well as personal attributes, sought by entry-level interior designers in the United States. The researcher collected sixty-two (62) returned surveys from the Top 200 Giant Firms, according to Interior Design magazine's annual assessment, practicing architecture and ID. The researcher found that CIDA standards are highly important competences that design employers seek for emerging Interior designers in the market. Also, the researcher emphasized a list of design knowledge, skills and personal attributes that are highly important. Thus, this study adapted Scarton's (2012) study as one of the latest research models conducted in this area in the United States.

A previous study surveyed design firms in the United States employed in their research the Foundation for Interior Design Education Research (FIDER) standards (known today as CIDA) and the National Council for Interior Design Qualification (NCIDQ) exam to find out design employers expectations from interior designers seeking entry-level position (Baker & Sondhi, 1989). These competencies largely

focused on technical skillsets, involving problem solving, oral communication skills, design concept, spatial composition, ethics, space planning, commercial design, conceptualizing, design process, and programming. The majority of the participants believed that the basic hiring decision for entry-level designers, mainly on, candidates' portfolios (Baker & Sondhi, 1989).

Asthana (1997) examined the preferred competencies and attributed sought by emerging interior designers through surveying one hundred and fifty (150) design employers from three professional design associations in the U.S. Findings revealed that several computer competencies that employers prefer, including mastering AutoCAD, word processing, spreadsheet, design graphics, and Internet, respectively. The top (you have more than 4 attributes) personal attributes includes ethics, organization, motivation, team working, resourceful, flexibility, decision making, confidence, and leadership respectively. The top eleven (11) preferred knowledge domains employers seek are design vocabulary, construction, resource, code, work experience, business practices, math skills, internship experience, lighting, and marketing respectively (Asthana, 1997). Today, if this study were to be conducted, it is likely the skill sets would reveal distinctions between design computer programs, which is reflected in most interior design curriculum.

Investigating recent graduates' experience and perception of their academic preparation is crucial to find out the efficiency of the curriculum. Tarver (2013) surveyed alumni working in five regions in



the U.S. who graduated from one of the southern universities in the U.S. to examine their academic preparations for their profession as interior designers. The study reported several skill areas to be favorable in practice. These skills including space planning and design conception, materials and finishes selection, programming creating 2-Dimensional and 3-Dimensional designs, as well as collaborating with allied professionals. Also, subjects reported the most commonly used design programs in the industry are AutoCAD, Photoshop, PowerPoint, InDesign, Revit, and Sketch-up.

With a vast number of research conducted in this area in the U.S. and other countries, the gap remains in the Kuwaiti market. Thus, a precise and an accurate understanding are needed of the competencies required for entry-level interior designers in Kuwait as compared to the U.S.

### ***Interior Design Education and Practice***

Gale et al. (2017) examined practitioners' values relating to hiring interior design interns and entry level positions. Finding revealed that soft skills influenced the willingness of employers to hire interns. The top five soft skills that influence employers' willingness to hire are attitudes, work ethic, interpersonal skills, professionalism, and Willingness to learn. The most highly valued hard skills included well-rounded, CAD, efficient, quick to learn, and computer skills (Gale et al., 2017).

ID educators should also assess the satisfaction of their alumni with their education. In their study, Stone, Reich, Ladjahasan, Cagley, and

Lundquist (2014) investigated the success of ID alumni who had graduated from one US school to examine education influence of their work satisfaction. The researchers found a statistically significant relationship between students' studio courses and their job satisfaction. Moreover, they found a significant relationship between design skills taught at school and alumni's annual salary. This shows an evidence that providing a proper education to ID students would evenly ensure them getting highly annual paid and job satisfaction .

### ***Interior Design Education in Kuwait***

Interior design programs offering bachelor degrees in Kuwait are mainly taught in two schools. The ID department at College of Basic Education (CBE) at the Public Authority for Applied Education and Training (PAAET) which is the first interior design program in Kuwait. The department was established in 1980's and currently the only ID program in Kuwait that provide education for both male and female students in ID. The program was established with a main target to train interior design educators to teach at government middle and high schools (College of Basic Education Manual [CBE], 2009/2010). After graduation, the new interior design educators are expected to become employed by the Ministry of Education. However, few of those graduates chose not to be educators, but to practice interior design for either the private sector or by establishing their own design firms.

The second program is at the Interior Architecture Department (IAD) at Kuwait University (KU). The IAD intentions are to educate design students with a full spectrum of interior environments by incorporating

ID with psychological, cultural, social, technical, environmental, and physical aspects. Furthermore, the IAD intends to provide students with cutting-edge knowledge and skills in design-building systems, human factors, sustainability, theory, history, criticism, and visualization (Kuwait University, 2014).

### ***Global Companies in Kuwait***

Due to the scarcity of big architectural firms that can handle the booming growth in Kuwait, Kuwait's mega projects have significantly attracted global architecture and design firms. Among them, Gensler Design Firm which is working on the Avenues shopping mall, the Four Seasons Hotel projects. Foster and Partners, which is a British international studio for architecture and integrated design, has designed the passengers' Terminal two at Kuwait International Airport, and the Headquarters of The National Bank of Kuwait.

HKS which is an American architectural design company has participated is designing Kuwait Children's Hospital (HKS, 2018). Perkins & Will, which is an American architecture and design firm, designed the schools of both Arts and Education at Sabah Al-Salem University. Alhamra Tower, which is the tallest building in Kuwait and the tallest carved concrete skyscraper in the world, was designed by architectural firms Skidmore, Owings, Merrill and Ramshir, and Callison. In other words, the construction industry in Kuwait is turning to the knowledge and skills of global design and architecture firms.

As a result, the need for internationally qualified Kuwait ID undergraduates is increasing. This need can be satisfied by incorporating the internationally needed competencies, knowledge, and skill in the current ID programs in Kuwait. Thus, it is crucial to examine whether ID competencies sought by designers in the U.S. and Kuwait are relevant or not in order to pursue accreditation by international ID organizations.

### ***Council for Interior Design Accreditation***

The Council for Interior Design Accreditation (CIDA) is a none profit organization in the United States develops standards for accrediting Interior Design programs in North America and Canada. The main aim of CIDA is to set standards for ID programs in order to bridge the gap between education and practice by preparing emerging interior design professionals to the market. CIDA has developed thirteen (13) standards that ID programs seeking accreditation have to illustrate by students' projects or outcomes (CIDA, 2013). When CIDA site visitors go to review an interior design program that is seeking accreditation, students' projects must be presented in order to show evidence of compliance with CIDA standards. Since Kuwait does not have an accreditation ID agency that establishes standards for academia, it is important to investigate the knowledge and skills needed from entry-level interior designers in Kuwait's national and international markets. Thus, the following research question was developed:

### ***Research question***

Do entry-level interior designers in Kuwait and United States have compliant job expectations?

### **Methodology**

A descriptive, quantitative research approach was adopted for this study. The literature review shows that a quantitative approach has been successfully employed in similar studies (Scarton, 2012; Tarver, 2013). The research instrument used in this study is a questionnaire. A six-point Likert scale (1=*not important at all*; 6=*extremely important*) was employed in the survey. Using the six-point Likert scale broadened the spectrum enough to provide telling and accurate responses, and eliminated a middle ground, or neutral, response. A “Not applicable” choice and “others” were added in case the examined area was not relevant to the respondent.

### **Participants**

The targeted population in this study were principals and key individuals from design and architecture firms practicing in Kuwait. A purposive sampling technique, only interior designers, architects, and firm owners were targeted in this study. The targeted population was retrieved from the “*Guide to Kuwait Engineering Offices and Consultant Houses*”, 6<sup>th</sup> Edition (Union of Kuwait Engineering, 2012), and from personal connections.

## **Research instrument**

The research instrument was a self-administered on-line and paper survey questionnaires that contained three sections to address: 1) design competencies, 2) design knowledge and skills, as well as personal attributes (40 items)—, and 3) demographic information (6 items) related to the specialty of the design firm, participants' gender, occupation, age, nationality, and number of projects accomplished. The development of the research survey was guided by previous research (Scarton, 2012; Tarver, 2013). After this research instrument was developed, the survey was tested for validation through a pilot study. The pilot testing was conducted through face-to-face structured interviews with five interior designers to validate the research instrument.

## **Data collection**

The self-administered questionnaire, were distributed by research assistants to ID and architecture firms in Kuwait. The main reason for using the research assistants to distribute and collect the research instrument was to secure a high response rate. Two versions of the survey were developed: one paper-based and one online. The paper-based survey was self-administered to the architecture and design firms, while the online survey was distributed to interior designers who were not members of the Society of Kuwaiti Engineers, through phone messages that invited and directed them to the online survey.

## **Data analysis**

Quantitative data analysis was employed in this study. Due to the nature of the study, the researchers analyzed the data by finding the mean scores for each item to compare it with another finding. A “Don't know” response was considered off the scale and treated the same as a skipped question.

## **Findings**

### ***Demographic information***

One hundred and eighty-seven ( $N=187$ ) respondents participated in this study. As shown in Table (1), 55% ( $n=104$ ) of the participants were males, while 45% ( $n=84$ ) were females. Participants covered a vast range of age groups. The largest age group represented was between 20 and 30 years old (41%), followed by the age group between 31 and 40 (40%). Most of the participants were non-Kuwaitis (63%), while 37% of them were Kuwaitis. Participants accomplished a wide range of work projects. As shown in Table (2), most of the participants had completed fewer than 5 projects (27%), followed by those who completing more than 25 projects (25%). The survey asked how many employees worked at each company to determine the size of the design/architecture firm. Participants occupations were distributed almost equally between interior designers (46%) and architects (47%), followed by firm owners (16%), and project managers (10%) (see table 3). Participants were specialized in a vast range of interior design areas of specializations including Residential Design (80%), Retail Design

(39%), Corporate/Office Design (34%), Government/Institutional Design (26%), Hospitality /Entertainment Design (17), Educational Design (10%), Health Care Design (5%), and others (1%) respectively (see table 4).

**Table 1. Participant’s gender**

<b>Gender</b>	<b>Frequency</b>	<b>Percent</b>
Female	83	45%
Male	104	55%
Total	187	100%

**Table 2. Projects have been accomplished by participants.**

<b>Projects accomplished</b>	<b>Percent</b>
Less than 5 projects	27%
5 -10 projects	22%
11 - 15 projects	14%
16 - 20 projects	7%
21 - 25 projects	6%
More than 25 projects	24%

**Table 3. Participants’ occupations.**

<b>Occupation</b>	<b>Frequency</b>	<b>Percent</b>
Interior Designer	85	46%
Architect	88	47%
Firm owner	29	16%
Project manager	19	10%



**Table 4. Participants' specialization.**

<b>Area of specialization</b>	<b>Frequency</b>	<b>Percent</b>
Residential	149	80%
Corporate/Office	64	34%
Retail	72	39%
Educational	19	10%
Government/Institutional	48	26%
Health Care	9	5%
Hospitality /Entertainment	32	17%
Other	2	1%

### ***Design Skill Areas***

When comparing the results of this study and the findings of similar research conducted in the United States (Scarton, 2012), interior design skill areas sought by entry-level interior designers in Kuwait and the U.S. are similar in their importance in some domains and different in others. The top first skill area sought by emerging designers in Kuwait is producing complete programming documents (Mean [M]= 5.35), followed by designing appropriate spatial layouts (M= 5.33), appropriately selecting and applying color in design solutions (M= 5.19), using computer design softwares to produce design drawings (M= 5.15), producing furniture, fixture and equipment layouts (M= 5.07), producing 2-D design solutions (floor plans, elevations and sections) (M= 5.07). followed by appropriately specifying finishing

materials and furniture (M= 4.97), making informed selection of materials based on properties, performance criteria, and life cycle cost (M= 4.96), quickly sketching design ideas to the customer (M= 4.92), producing 3-D design solutions (M= 4.92), defining and writing design goals, objectives and problems (M= 4.89), generating multiple design solutions of the project (M= 4.86), designing lighting plans (M= 4.82), Designing power and electrical plan (M= 4.79), prepare and review project contracts for interior design preparing proper air conditioning plans (M= 4.74), and the ability to prepare furniture-working drawings (M= 4.44) (see table 5).

**Table 5.** Interior design skill areas expected from entry-level interior designers in Kuwait and the United States

<b>Rank</b>	<b>Interior Design Skill Areas</b>	<b>M KW</b>	<b>M U.S.</b>
<b>1</b>	Produce complete programming documents.	5.35	4.13
<b>2</b>	Designing an appropriate spatial layout.	5.33	5.44
<b>3</b>	Appropriately selecting and applying color in design solutions.	5.19	4.97
<b>4</b>	Using computer design software to produce design drawings.	5.15	5.76
<b>5</b>	Producing furniture, fixture and equipment layouts (furniture plan).	5.07	4.90
<b>6</b>	Producing 2-D design solutions (floor plans, elevations and sections).	5.07	5.26
<b>7</b>	Appropriately specifying finishing materials and furniture.	4.97	4.60
<b>8</b>	Making informed selection of materials based on properties, performance criteria, and life cycle cost.	4.96	4.82
<b>9</b>	Quickly sketching design ideas to the customer.	4.92	5.19

<b>10</b>	Producing 3-D design solutions (perspectives).	4.92	5.26
<b>11</b>	Defining and writing design goals, objectives and problems.	4.89	5.02
<b>12</b>	Generating multiple design solutions of the project.	4.86	5.21
<b>13</b>	Designing lighting plans.	4.82	4.72
<b>14</b>	Designing power and electrical plan	4.79	3.93
<b>15</b>	Prepare and review project contracts for interior design.	4.74	4.58
<b>16</b>	Preparing proper air conditioning plan (locating the distribution of cool air and returns in central air conditioning)	4.62	3.65
<b>17</b>	The Ability to prepare furniture-working drawings	4.44	4.40

(Range: 1=*less important* ; 6=*extremely important* / M= mean value / KW= Kuwait / U.S.= United States).

### ***Design Knowledge Areas***

Ranking in the top position for areas of knowledge in comparison with Scarton's (2012) study, with a mean value of 5.19, was the history of architecture, interior design, and furniture. This was followed by know the relationship between colors and lighting and their effects on the internal environments of the buildings (M= 5.08), awareness of various materials and products used in the built environment (M= 5.07), universal design principles/needs (M= 5.06). Followed by color principles, theories and systems (M= 4.96), sustainable design as it relates to building methods and materials (M= 4.88), knowledge of Building Codes (M= 4.88), principles of acoustical control/design (M= 4.85), knowledge of design principles (M= 4.84), knowledge of human

activities influencing interior environments (M= 4.80), knowledge of design elements (M= 4.79), knowledge of products and materials impact on indoor air quality (M= 4.76), awareness of elements of business practices in interior design (M= 4.76), social/cultural and behavioral norms within different cultures (cultural perspectives) (M= 4.75), knowledge of the relationship between the cooling and ventilation systems with interior design (M= 4.71) (see table 6).

**Table 6.** Interior design knowledge domains expected from entry-level interior designers in Kuwait and the United States.

<b>Rank</b>	<b>Interior Design Knowledge Areas</b>	<b>M KW</b>	<b>M U.S.</b>
<b>2</b>	History of architecture, interior design and furniture.	5.19	3.62
<b>4</b>	Know the relationship between colors and lighting and their effects on the internal environments of the buildings	5.08	5.19
<b>5</b>	Aware of various materials and products are used in the built environment.	5.07	4.60
<b>6</b>	Universal design principles/needs	5.06	4.79
<b>8</b>	Color principles, theories and systems.	4.96	4.84
<b>9</b>	Sustainable design as it is related to building methods and materials	4.88	4.62
<b>10</b>	Knowledge of Building Codes	4.88	4.46
<b>11</b>	Principles of acoustical control/design (e.g. noise and sound control materials/systems, sound distribution) used in the built environment.	4.85	3.79
<b>12</b>	Knowledge of design principles.	4.84	4.84
<b>13</b>	Knowledge of human activities influence on interior environments.	4.80	3.72
<b>14</b>	Knowledge of design elements.	4.79	4.84

<b>15</b>	Knowledge of products and materials impact on indoor air quality.	4.79	
<b>16</b>	Aware of elements of business practice (financial management, project management, collaboration) in interior design.	4.76	4.03
<b>17</b>	Social/cultural and behavioral norms within different cultures (cultural perspectives).	4.75	3.90
<b>18</b>	Know the relationship of cooling and ventilation systems with interior design	4.71	3.93

(Range: 1=*less important* ; 6=*extremely important* / M= mean value / KW= Kuwait / U.S.= United States).

### ***Personal Attributes***

The findings of the study indicated that emerging interior designers in Kuwait are highly expected to have collaboration skills (M= 5.17), followed by oral communication skills (M= 5.09). However, written communication skill is less important with a mean = 4.59. Presentation technique had the lowest mean of all skill areas (M= 4.41) (see table 7).

**Table 7.** Personal skill domains expected from entry-level interior designers in Kuwait and the United States.

<b>Rank</b>	<b>Personal skills</b>	<b>M KW</b>	<b>M U.S.</b>
<b>1</b>	Work in team environments by collaborating with other interior designers and allied professionals.	5.17	5.77
<b>2</b>	Express ideas clearly and effectively in oral communication.	5.09	5.37
<b>3</b>	Express ideas clearly and effectively in written communication.	4.59	5.24
<b>4</b>	Communicate effectively through the different methods and presentation techniques.	4.41	4.89

(Range: 1=*less important* ; 6=*extremely important* / M= mean value / KW= Kuwait / U.S.= United States).

### **Computer software**

Participants were asked regarding the ID computer programs used in their companies. The top five programs were AutoCAD (82%), followed by 3D-Max (71%), Sketch-up (42%), Revit (26%), Cinema-4D (8%) (see table 8).

**Table 8. ID computer programs used at participants company.**

Computer programs	Frequency	Percent
Auto CAD	153	82
3D-Max	133	71
Sketch-up	79	42
Revit	49	26
Cinema-4D	15	8
Other	11	6

### **Discussions**

The authors measured the importance of each competency expected from an entry-level interior designer, in Kuwait and the U.S., based on the mean scores. The findings were categorized into three groups: equally important competencies, competencies that are more important, and less important in the Kuwaiti market. To fulfill the purpose of this study, the survey items were grouped with Scarton's (2012) study findings as level of comparison to illustrate the importance of the

international ID competencies to emerging interior designers in Kuwait. Considering competencies, ID knowledge, skills, and personal attributes, received mean scores 5-6 are highly important competencies, while competencies received mean scores 4-4.99 are important competencies.

Interior design skill areas sought by entry-level interior designers in Kuwait and the U.S. are similar in some domains. For example, entry-level designers in Kuwait are expected to have similar level of design skills in nine areas, which are designing an appropriate spatial layout, using computer design softwares to produce design drawings, producing 2-D design solutions (floor plans, elevations and sections), specifying finishing materials and furniture, making informed selection of materials based on properties, performance criteria, and life cycle cost, designing lighting plans, prepare and review project contracts for interior design, prepare furniture-working drawings (see table 5).

However, emerging interior designers in Kuwait are expected to have higher level of kills in five skill domains such as produce complete programming documents, selecting and applying color in design solutions, producing furniture, fixture and equipment layouts (furniture plan), and designing power and electrical plan. Whereas, four design skill domains were expected to be lower, such as producing 3-D design solutions (perspectives), quickly sketching design ideas to the customer, defining and writing design goals, objectives and problems, generating multiple design solutions of the project (see table 5).

By comparing the mean values for the sought knowledge areas between emerging interior designers in Kuwait and the U.S., there are seven similar design knowledge domains that entry-level designers in Kuwait and U.S. are expected to hold. Those domains are the relationship between colors and lighting and their effects on the internal environments, color principles, theories and systems, sustainable design, Building Codes, design principles, design elements, and elements of business practice (see table 6).

However, emerging interior designers in Kuwait are expected to have higher level of design awareness in seven areas, which are history of architecture, interior design and furniture, various materials and products used in the built environment, universal design principles/needs, principles of acoustical control/design (e.g. noise and sound control materials/systems, sound distribution) used in the built environment. Further areas are human activities influence on interior environments, Social/cultural and behavioral norms within different cultures (cultural perspectives), and relationship of cooling and ventilation systems with interior design.

The findings of this study indicated that emerging interior designers in Kuwait and the U.S. are expected to have similar level of personal attributes in three personal skills which are collaboration (team work) skills, oral communication skills, and presentation techniques. However, interior designers in the US are expected to have higher personal skill in the area of written communication (see table 7).



The findings of the personal attributes needed by emerging interior designers in Kuwait and the US are not surprising given the fact that professionals in both countries need to have those skills. Collaboration and team work skills are highly needed not only by interior designers but also by those who work with other professionals (Gale, Martin, Martin & Duffey, 2014). Also, communication skills for designers are highly important as designers need to communicate with their clients, other designers, and professionals. However, the finding illustrated that entry-level designers in the US are expected to have higher written communication. Based on the researchers' personal experiences, undergraduate interior design students in the United States are taught to express their projects' programming documents in writing as well as verbally.

Design computer programs used in the profession in Kuwait and the US somehow different, even though the most common used program in both countries is AutoCAD. The researchers believed professionals used AutoCAD for two-dimensional plans. However, professionals in Kuwait tend to use 3-D programs such as 3D Max more than Sketch-up and Revit, while in the US professionals use Revit and Sketchup more, according to Tarver (2013). It's believed that due to time consumption and license pricing of 3D Max program, it's seldom used by professionals in the US, as other design programs, such as SketchUp and Revit are more efficient in usage.

## **Research Recommendations**

The findings of this study indicate that ID competencies sought by entry-level interior designers in Kuwait and U.S. can be categorized into three groups: equally important, less important, and highly important based on comparing the mean values of each item. The recommendations extracted from this study are summarized as follows:

- ID educators in Kuwait should play a vital role in integrating ID competencies sought by emerging designers based on global needs through implanting the findings of this research in their curricula.
- ID accreditation agencies in Kuwait, particularly, or the Arabian Gulf region is needed to set the standards for ID programs. This agency should implement ID competences based on the market need thought the findings of this research.
- ID programs in Kuwait preparing their graduates for the international market should not only focus on the Kuwaiti market expectations, but also implement the findings of Scarton's (2012) study that surveyed international design firms.
- The main personal attributes sought by designers in both countries is collaboration skill. This shows the importance of integrating interdisciplinary collaboration between design and other students during their academic years as way for sharpening their skills. ID educators should encourage collaborative projects in class assignments and projects as well as outside classroom. Meanwhile, educators should coach and prepare their students in

team work structure through following Webb and Miller (2006) recommendations, who believed educators can create studio collaborations as most successful when coaching students for effective teamwork.

Computer software skills used by professionals in Kuwait and US are somehow different in usage, but the most important program to learn is AutoCAD. This sets the foundation of interior designers works, such as floor plans, sections, and elevations because this program is suitable for 2-D design solutions.

### **Conclusion**

As the ID market evolves for being globalized, the need to educate ID students in Kuwait based on the international market expectations and standards will continue to increase. The need for ID accreditation agencies in the Middle-east is crucial to site standards based on the regional market expectations. In the meantime, getting ID international accreditation agencies, such as CIDA, is an important step to strengthen the academia in Kuwait. Since ID competencies in Kuwait and the United States are closely mutual, there is a strong evidence to get international accreditation services.

### **Limitations & Further study**

Although the results of this study provide important implications for the field of interior design education, there were several limitations. This study is limited to ID competencies, design knowledge, and skills sought by global ID firms from entry-level interior designers, as reported in similar research (Scarton, 2012; Tarver, 2013) and reflected

in the CIDA standards (CIDA, 2013). This study was limited to collecting the needed data through questionnaire. Additionally, these competency sets may shift in the future as industry values shift. It is, also, important to note that these competencies are currently valued by participants surveyed in this particular sample, and it is likely if this study was performed elsewhere there could be differences in responses.

This study raises additional concerns and suggestions possible for future research. A longitudinal study would be particularly useful to examining potential changes over time to responses on the same items tested in this study. This would help to explain potentially changing roles in the ID profession five years from now. Another future study could be conducted through using interviews with interior design employers to examine the most important competencies for hiring interior designer in the Kuwaiti market.

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