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Gaps in soft skills of new interior design graduates and potential employment

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Gaps in Soft Skills of New Interior Design Graduates and Potential Employment

by

Diane L. Guevara

Thesis

Submitted to the School of Visual and Built Environments

Eastern Michigan University

in partial fulfillment of the requirements

for the degree of

MASTER OF SCIENCE

in

Interior Design

Concentration in Design Education

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Ypsilanti, MI

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Abstract

Keeping abreast of the changes in skills desired by potential employers is an ongoing challenge in all fields. Gaps in those skill sets can produce a ripple effect in any industry. This study looks at the interior design industry and whether the undergraduate curriculum is keeping up with the skills desired by potential employers who require employees to have a bachelor degree in interior design. Undergraduate interior design program directors want their programs to be well known for the employment-ready graduates they produce, and that their students possess the skills requested by potential employers in the interior design field. This study uncovers the soft skills perceived as most important for new interior design graduates to possess, as surveyed by those that work along side them. This study also uncovers the gaps in non-Council for Interior Design Accreditation (CIDA) required soft skills that the new interior design graduates are lacking. Interior design students spend four years learning how to communicate graphically; however, the results have gaps that potential employers feel are not being filled.

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GAPS IN SOFT SKILLS

Gaps in Soft Skills of New Interior Design Graduates and Potential Employment

Chapter 1: Introduction and Background

Keeping abreast of the changes in skills desired by potential employers is an ongoing challenge in all fields. Gaps in those skill sets can produce a ripple effect in any industry. This study looks at the interior design industry and if the undergraduate curriculum is keeping up with the skills desired by potential employers, who require employees to have a bachelor degree in interior design. Could there be gaps in undergraduate courses that involve developing the soft skills (as defined in Definition of Terms), which hinder the chance of producing employment-ready graduates? The majority of the current undergraduate population are Millennials, born from 1982 to 1999, and they have the largest student loan debt in history (Twenge, Campbell, Hoffman & Lance, 2010, p.1118). This debt could cause them to leave the industry if well paid employment is not attainable. Therefore, if there are gaps in their soft skills, it could produce a negative effect on the interior design industry.

Definition of Terms

The following terms will be referred to within this study:

- "CIDA" is defined as the Council for Interior Design Accreditation, which assists the "Interior design profession through identifying, developing and promoting quality standards for the education of entry-level interior designers" (Council for Interior Design Accreditation, 2014).

- “Employment-ready” is defined as a graduate that possesses the skills (both hard skills and soft skills) that are valued in the current work force and that require a Bachelor degree in that particular field.
- “Underemployment” is defined as an interior design graduate taking a job that does not require a bachelor degree in interior design.
- “Soft skills” is defined as skills that are required to build relationships with other people.
- “Hard skills” is defined as skills that can be developed alone through rote practice and/or memorization.

Statement of Problem

Undergraduate interior design program directors want their interior design programs to be well known for the employable students they produce. This involves wanting their graduates to be employment-ready, possessing the skills requested by potential employers in the interior design field. Undergraduate interior design program directors already know about the general CIDA requirements needed in order for their program to be accredited through CIDA. They work diligently to include those requirements in their undergraduate interior design curriculum. The accreditation process has strict requirements for producing well-rounded interior design graduates, trained to look out for the health and well-being of the public, as they relate to their surrounding interior spaces. Much goes into the training of interior design students therefore granting them the degree to call themselves Interior designers and not interior decorators (for which no degree is required). Why is it that after spending four years in college, that some new interior design graduates still end up in jobs

they are overqualified for? Are there gaps in the skill set that potential employers see are missing, that are not covered in the CIDA accreditation (or even that are covered)? Are there ways that our undergraduate (four-year) interior design curriculum is failing our students? Underemployment (as defined in Definition of Terms) in the interior design field could be considered a problem. This study uncovers the soft skills perceived as most important for new interior design graduates to possess, as surveyed by those that work along side them. This study also uncovers the gaps in non-CIDA required soft skills, that the new interior design graduates are lacking in. Interior design students spend four years learning how to communicate graphically; however, the results are gaps that potential employers feel are not being filled, and potential underemployment.

Purpose of the Study

The purpose of this study is to attempt to uncover gaps in the soft skills of new interior design graduates, which could be contributing to the underemployment of new interior design graduates. The study will look at skill sets and survey potential employers about these skill sets as they relate to the potential (or hindrance) in hiring new interior design graduates. The study will survey both perceived missing soft skills as well as perceived soft skills of great importance. For the purpose of this study, “soft skills” is defined as skills that are required to build relationships with other people, and are critical for the interior designer-client relationship and for teamwork crucial in this field.

The primary objective of this study is to understand the feedback from people who work along-side new interior design graduates (zero to one-year experience) and potential employers as to why or why not employers chose to hire new graduates. This feedback was

analyzed to determine potential effects of employment (or under-employment) of new graduates in the interior design field.

Significance of the Study

Underemployment could be a deterrent for a person choosing interior design for their potential career. If this deterrent causes a reduction in the number of people entering this field, then society could end up with a shortage of people trained to look out for the health and well-being of the public as they relate to interior spaces (the goal of interior designers). Through this study, the researcher hopes to spotlight this problem by drawing out the gaps that potential employers see as the soft skills missing from new graduates as well as the soft skills perceived as the most important. If this profession can employ their people in viable, satisfying, employment, versus employing them in jobs that they are over-qualified for, then the profession can gain more acclaim and demand, due to salaries that are at a rewarding level. The National Center for Public Policy and Higher Education produced “Measuring up 2006”, which reminds us of the Millennials have the largest student loan debt in history: “Large debt burdens may discourage some students from careers that are not highly remunerative” (Hunt, 2006, p.19). Employment with rewarding salaries needs to be available to this generation in order to keep them interested in Interior design as a profession. Therefore, educators are responsible for training the Millennial generation to be ready for employment and to not short change them in the skills that employers are looking for.

Limitations of the Study

This study's data may need further analysis. This researcher reports these limitations of the study in order to highlight factors that could potentially compromise the findings and threaten the internal validity.

There are four limitations of this study: prior related work experience, relocation of the graduate to work in a different census region (see Figure 1 for census regions defined), the gender of the respondents, researcher error, or reasons that have to do with sample quantity and sample bias.

The first limitation involves the main attribute desired by employers, that is, prior related work experience. For the purpose of this study, prior interior design experience will be a limitation of this study and will not be factored in. The survey design will only include soft skills listed in job postings requesting zero-to-one year of experience. The unit of analysis of this study will be the opinions of potential employers, as they relate to soft skills possessed in new graduates as well as the soft skills perceived as being the most important.

The second limitation is that it is assumed that graduates secure employment in the same census region that they are educated in. However, if the graduate changed census regions this was not be identified. Therefore, the results of the survey by employer's region, refer to graduates employed within that region.

The third limitation of this study is that gender of the respondents was not surveyed and therefore was not analyzed to look for connections. This topic is mentioned in Chapter 5 as a possible future study.

For the purpose of this study, the fourth limitation will assume that the opinions are accurately reflected in the Likert Scale surveys that were received by the researcher. Sample quantity, sample bias, and sample error were not taken into account, and may threaten the internal validity of this study.

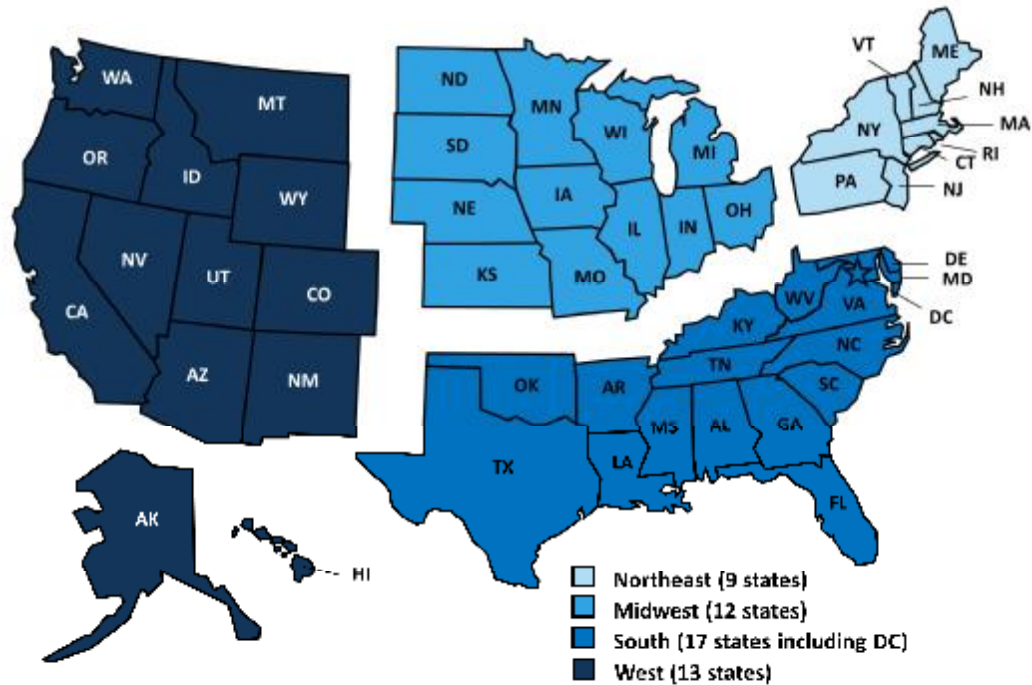


Figure 1. US map with four census regions defined.

Chapter 2: Literature Review

A variety of topics were researched in the literature review: CIDA required skills, employment rates of new college graduates in the interior design field, employment in the field (industry trends), salaries, relevance, soft skills in current employment advertisements, higher-education curriculum development, and adult learning.

Council for Interior Design Accreditation (CIDA) Required Skills

The accreditation body for interior design is named Council for Interior Design Accreditation (CIDA). This body verifies that interior design college programs “prepare students for entry-level interior design practice and position them for future professional growth” (Council for Interior Design Accreditation, 2014). Their philosophy is “CIDA is firmly committed to setting high standards for interior design education, challenging others to meet and exceed those standards, and seeking ways to continuously elevate and evolve the standards, thus significantly contributing to the advanced professionalism of the interior design field” (Council for Interior Design Accreditation, 2014). These standards are spelled out in a document titled *Professional Standards 2014* (Council for Interior Design Accreditation, 2014). The researcher looked for overlaps between CIDA required soft skills and the soft skills in interior design employment advertisements. Five, out of the eleven, soft skills in this study were also CIDA required skills. Six, out of the eleven, soft skills in this study were not CIDA required skills. There are five skills that overlap both this study and CIDA required skills. This research project attempts to look for an overlap between skills missing in new graduates and skills covered and not covered within the CIDA process.

Employment Rates of New Interior Design Graduates

In a previous independent study, this researcher attempted to correlate employment rates with the software taught within undergraduate interior design programs. Employment rates were collected from interior design program directors from US universities. The study compared the percent that ended up in positions that require a four-year degree, versus those that ended up “underemployed” as defined in “Definition of Terms” of this current study. At that time, only hard skills (software types) were addressed. However, a correlation was found between the employment rates of new interior design graduates and the hard skills (software types) in the undergraduate curriculum they were exposed to (Guevara, 2015).

Employment in the Industry

As of October 4, 2015, there were 54 open jobs listed in the website *www.interiordesignjobs.com*, one of the common sources for employment advertisements. Thirty of those 54 listings required a bachelor degree in interior design. Eleven were titled “sales” positions and did not require any college degree at all. If graduates have trouble securing employment within a job that requires a degree, the researcher can see how they can fall into the underemployment of jobs that do not require a degree. The question is what could help them to secure employment in those jobs that require an interior design degree?

Salaries

For interior designer salaries, “The top 10 percent of workers made more than \$86,430 a year, while the bottom 10 percent earned less than \$25,720” (Hamel, 2015). This is a very large salary range.

Keep in mind these statistics “A full-time minimum wage employee earns \$15,080 annually. In 2012, the poverty threshold for a single person was \$11,945. For a family of four with two children it was \$22,283” (University of California Davis). Therefore, an interior designer at the bottom of the pay scale would be close to poverty level if supporting a family of four. This could indicate that the salary research includes jobs that are advertised with the title designer but do not require the college degree.

The author of *Curriculum Development* leaves us with a thought-provoking idea “Match the curriculum studied, to the economic needs. For schools that fail to make this adjustment, there may be economic turmoil” (Wiles & Bondi, 2015, p. 243).

Relevance

When looking at a possible curriculum for juniors with interior design as their major, the possibilities could be endless. It is the duty of the professor to connect the chosen curriculum to real-life situations. Students could benefit by seeing how the lessons will relate to them in real-world situations. The author of *Curriculum: Foundations, Principles, and Issues* states "Curriculum planners must first deal with perceptions of relevance before they can deal with relevance itself" (Ornstein & Hunkins, 2008, p. 421). Students have an innate desire to see how a topic will benefit them now, as opposed to a remote possibility of benefiting them far into the future. They may ask themselves "are there internships readily available that require this skill?" since preparation for a career is of extreme importance to students at this level. Connecting the soft skills desired by employers, to the classroom situation, shows the students useful tangible skills in a related context.

Soft Skills in Current Employment Advertisements

This researcher searched for current job listings that required a bachelor degree in interior design; however, she analyzed only those with zero to one-year experience required. The next criterion collected was qualifications desired that fall under the category of soft skills, as defined by this study. The websites of Gensler and HOK were sought out, since these two firms rank #1 and #2 in *Interior Design Magazine's* "2015 Top 100 Giants Ranking Interior Design Companies" (Interior design Magazine, 2015). The eleven soft skills desired were inserted into the survey used for this research study. The survey did not designate which of the eleven softs skills falls under the CIDA accreditation process, in order to not influence the sample people taking the surveys. Of the eleven skills in the survey, skills 1 through 5 fall under CIDA requirements, and skills 6 through 11 do not. Skills 6 through 11 were included in the survey because they were consistently listed as desired in the job advertisements. Chapter 4 will discuss the results found in relation to the CIDA requirements.

Higher Education Curriculum

Curriculum development is a cyclical process that always needs to be changing, just as industries change. In discussing how a curriculum director can encourage keeping up with how their curriculum relates to changes in industry, the author of *Curriculum: Foundations, Principles, and Issues* states "bring new people into education ... who consider education to be a second career...people from high tech fields where change is embraced and recognized as essential for the continued well-being of any institution" (Ornstein & Hunkins, 2008, p. 256). A positive trait of being a higher education professor is the additional time encouraged

to either freelance or research in the related field. This can assist with closing the gaps between what is happening in the work world and in higher education.

Another author reminds us that “schools are institutions created by any society to accomplish certain ends” (Wiles & Bondi, 2015, p. 31). This researcher has kept this in mind as a reflection on the mission of the interior design program at one university which states “academic preparation of students (is) to enable them to creatively solve problems related to the function and quality of interior environments that meet human needs and fulfill human aspirations” (College of Technology, 2014). However, how does this relate to employability? This researcher also reflects on the same author’s statement: “the world outside school operates much differently than that inside school” (Wiles & Bondi, 2015, p. 78). Should the mission statement change to reflect changes in the field? Should higher-education’s goal be to bridge the gap between education and the work world?

Adult Learning

The author of *Adult Learning: Linking Theory and Practice* emphasizes an important idea about teaching adults: “students need to be prepared as self-directed, life-long learners” (Merriam & Bierema, 2014, p. 5). Adults, as compared to children, have life experiences that support their readiness to refine their soft skills. The college years are prime years in the student’s adulthood that can shape their progression of these skills.

The related current literature can support the importance of these research topics; however, there was no literature found on the exact topic of this study. The previously mentioned topics should be kept in mind, when analyzing the results of this study.

Chapter 3: Research Design and Methodology

The research design involved variables listed within survey research. The surveyed sample population included people who work in the interior design industry, have experience working with new interior design graduates, and/or could be potential employers. Only considered for the survey, were people who work with, or are, interior designers in positions that require completion of a bachelor degree in interior design. The units of analysis were soft skills of interior designers, which are desired by potential employers, as listed in current employment advertisements. The survey measured the skills possessed and desired. The survey prompted the subject to answer all of the questions and did not allow the surveyed person to proceed if all questions were not answered. This eliminated the possibility of having incomplete surveys.

Sample Defined

Where the sample selection of 106 people came from, however, was not limited to interior design firms, architectural firms, and businesses with interior design departments. The sample population included people such as design managers, design directors, designer/interior designers, account managers, project managers, design principals, and architects. A category titled “other” was included in the survey in order to capture all titles surveyed. People with titles were chosen due to their proximity in working with new interior design graduates, and their influence on them if new graduates are to be hired. The majority of the sample (40) were designers/interior designers. The next largest portion of the sample were people that manage interior designers: design directors (10), design managers (8), and design principals (6), for a total of 24. The portion of the sample that work alongside interior

designers, had titles of account managers (13) and project managers (8). The final category titled "Other" included people from executive management, sales, or specific specialties. For example, executive management titles were vice president, director of sales, owner, business director, executive director, and general manager. Titles of specific specialties were workplace consultant, furniture specialist, senior application consultant, healthcare planner, and workplace strategist (see Figure 2).

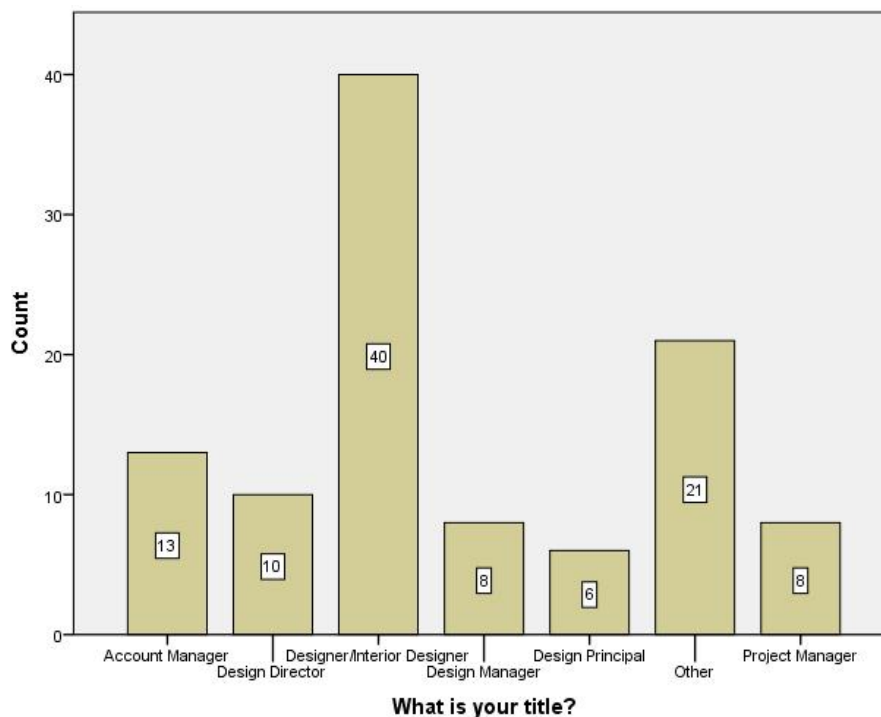


Figure 2. Bar graph of the sample's distribution of job titles.

The number of designers in the sample firms ranged from 1 to 2000, with a mean number of designers of 58.75. This shows that the data came from a wide range of employees of interior design departments (see Table 1).

Table 1

Number of Designers in Firm

	N	Minimum	Maximum	Mean	Std. Deviation
# of Designers employed in your firm? Include yourself if relevant. - Open-Ended Response	106	1	2000	58.75	268.545
Valid N (listwise)	106				

The sample came from all four census regions of the US. See Figure 3 for the distribution of the 106 people who returned surveys. This summarizes the delineation of the sample population for this study.

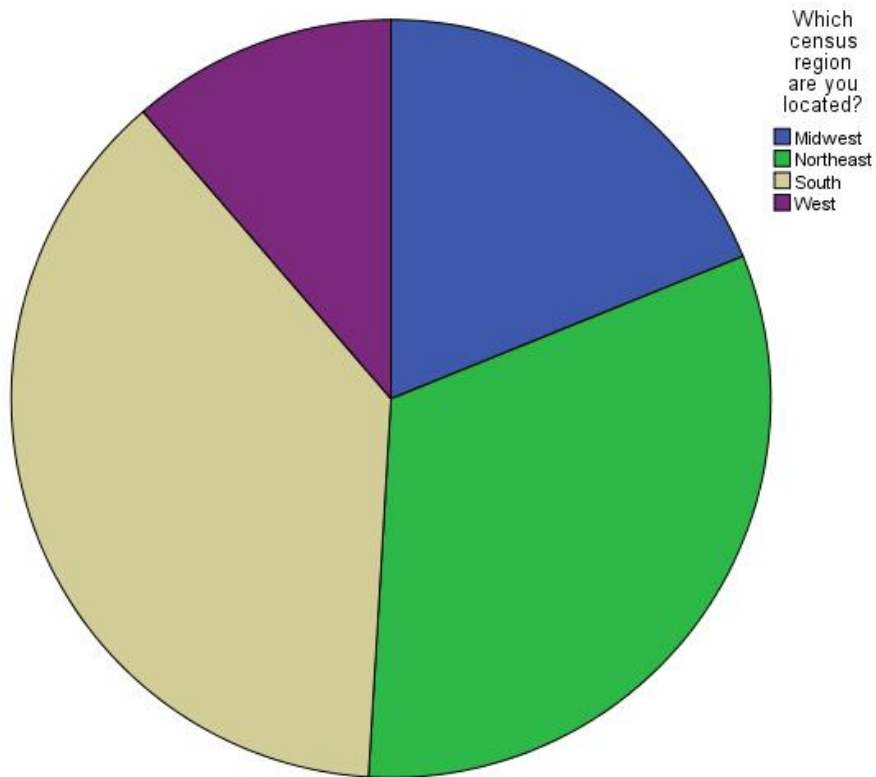


Figure 3. Pie graph of the sample's distribution by US census region.

Procedure

The steps in conducting this research study were survey design, human subjects' approval, data gathering, and data analysis. Each step is explained further in this study.

Sample Procedure. The sample population was confirmed by the researcher as only those that have experience working alongside people with a bachelor degree in interior design. The sample population was gathered from employment websites (www.InteriorDesignJobs.com, 2015), top ranked interior design firms lists (Interior design Magazine, 2015), LinkedIn.com profiles, and Facebook.com profiles.

Variables to be Studied

The dependent variables were collected from potential employers and listed as preferred skills, in current employment advertisements that required a bachelor degree in interior design (the independent variable) and zero to one year of related working experience (see Figure 4). The star designates CIDA accreditation required skill:

- Communicate design ideas.*
- Work in a team environment.*
- Verbal presentation skills.*
- Communicate in writing.*
- Problem solving.*
- Organizational skills.
- Ability to work on multiple projects at the same time.
- Prioritize to meet deadlines.

- Provide high-level service to clients.
- Motivated self-starter.
- Willing to relocate (geographically).

The intervening variables could potentially be (however, not limited to):

- Geographic location (student’s location vs. location of employment procured).
- Inherent skills lacking in designer.
- Sample error on surveys.
- Sample error in perception of dependent variables (by subjects).

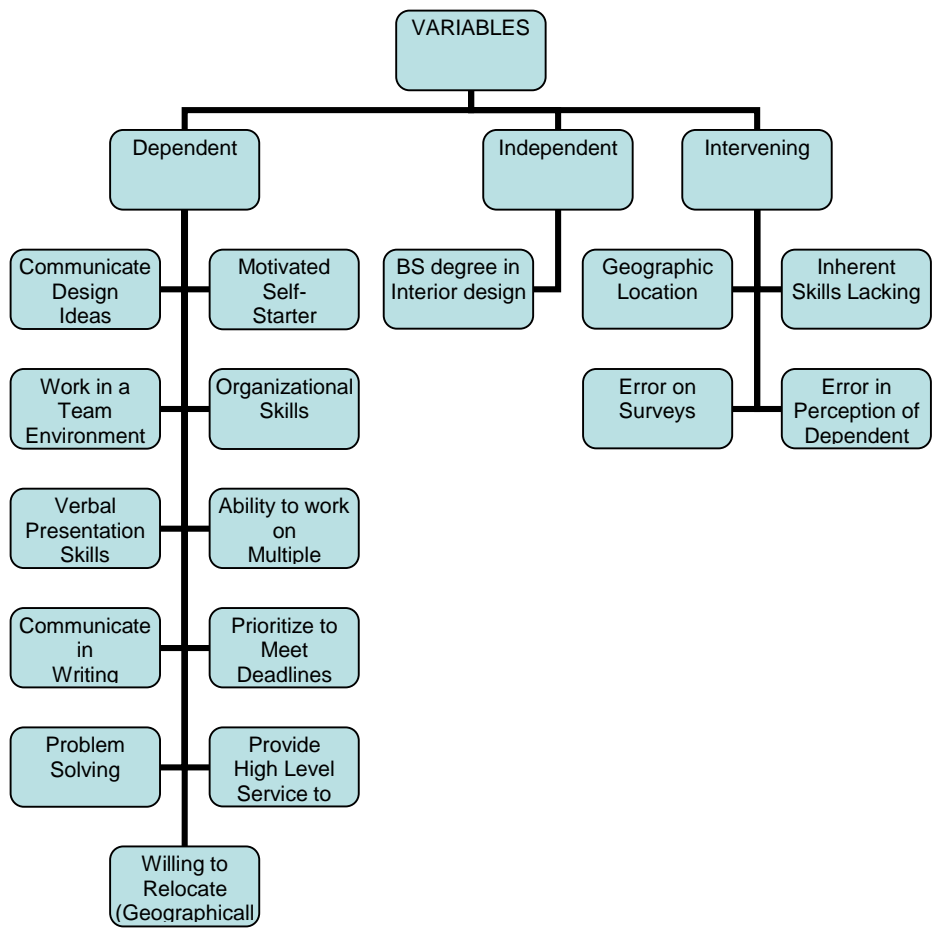


Figure 4. Variables to be studied within categories.

In regard to variables, there were six dependent variables that are NOT covered under the CIDA accreditation process; however, they are skills requested in current employment advertisements for Interior designers with zero to one year experience and a bachelor degree in interior design from a CIDA accredited program. Those six skills will be an important factor in this study and are as follows: organizational skills, ability to work on multiple projects at the same time, prioritize to meet deadlines, provide high-level service to clients, motivated self-starter, and willing to relocate (geographically). The later not being a skill however desired by potential employers.

Procedures and Instrument. The analysis technique used for collecting information from the sample was a researcher-designed survey on www.surveymonkey.com. The survey was sent via email, LinkedIn.com or Facebook.com, to the 132 identified people. The email included an attachment that contained the letter introducing study and the consent (see Appendixes B and C). Each person was contacted separately via a separate message; therefore, 132 messages were sent out. The survey sought Likert Scale responses for each soft skill desired by employers, and responses were to be based on the sample's previous experiences with new graduates. The Likert Scale was used because of its strength in finding variances in survey results. This survey technique was chosen because it is an efficient way to collect the exact answers needed as they relate to the identified variables. In terms of validity, the survey asked questions to the sample:

- What census region are you in? (Northeast, South, Midwest, West).
- How many designers are employed in your firm?

- What is your job title? (account manager, design director, designer/interior designer, design manager, design principal, other, project manager).
- Rate the % of new interior design college graduates possessing these skills?: (communicate design ideas, work in a team environment, verbal presentation skills, communicate in writing, problem solving, organizational skills, work on multiple projects at the same time, prioritize to meet deadlines, provide high-level service to clients, motivated self-starter, willing to relocate geographically).
- Which four skills are the most important for new interior designers? (same choices as previous question).

See Appendix D for the sample survey.

Measure to Ensure Safety and Confidentiality of Human Subjects. The following items were included in order to ensure safety and confidentiality of the human subjects: the letter introducing the study stating that human subjects approval was anticipated within one month (see Appendix C). For confidentiality, IP address option was turned off. The researcher and the thesis committee were the only people receiving the results.

Data Analysis Procedure. The researcher proceeded with the following data analysis procedure, which began with the collected data used to support three research questions. This continued with recoding of the data, in order to streamline the analytic technique process. This was then followed by analyses such as descriptives, frequencies, correlations, and ANOVAs . The results were evaluated for their support of the hypothesis.

Research Questions. This study began with research questions that required inductive logic, by drawing conclusions from surveys. For the purpose of this study, the three research questions were defined as:

- Are there soft skills missing from new interior design graduates that are requested by potential employers with interior design departments that include those with 0-1 years of experience?
- Is there a difference, in the soft skills possessed by new interior design graduates, between those covered under CIDA accreditation requirements and those not covered under CIDA?
- Are there soft skills most important for new interior design graduates (as perceived by people working with them), however, NOT covered under CIDA accreditation requirements?

Within the duration of this study, thorough evaluation took place to answer the research questions. Answers to the research questions and recommendations for future research are included in Chapter 5.

Analyses run to answer research questions. The following analyses were run to assist in data analysis: descriptives, frequencies, Pearson R correlations, One-way ANOVAs, paired samples t-tests, and Chromebach's Alpha.

Hypothesis. The researcher hypothesizes that there are missing soft skills in new interior design graduates, as perceived by potential employers that have interior design departments and that employ interior design (four-year degree) graduates with zero to one year of experience. It is also hypothesized that this study may uncover a soft skill perceived as important that is not covered under CIDA accreditation requirements.

Chapter 4: Presentation and Analysis of Data

The original data, resulting from the surveys, were collected from 106 subjects. To answer the research questions, the results portion of this study is divided into sections: survey question #4 (skills possessed by new graduates), data and analysis, and survey question #5 (skills desired by employers), data and analysis.

Survey question 4

Survey question # 4 rated if new interior design college graduates possess the skill. The answers ranged from 10% to 100% and were in increments of 10.

Descriptives. Descriptive Table 2 shows a variety of scores ranging from 53 to 73 with most in the 60% proficiencies.

The skill students are perceived as most competent in is "Work in a team environment" ($m=73.01$). This skill is covered under the CIDA accreditation requirement.

The skills perceived that graduates are least competent in are "Verbal communication" ($m= 59.81$) and "Willingness to relocate geographically" ($m= 53.77$). The first is a CIDA required skill and the latter is a non-CIDA skill.

Table 2

Descriptive Statistics for Survey question 4 (soft skills possessed)

	N	Minimum	Maximum	Mean	Std. Deviation
Communicate design ideas.	106	10.00	100.00	66.5094	21.02345
Work in a team environment.	106	20.00	100.00	73.0189	21.95970
Verbal presentation skills.	106	10.00	100.00	59.8113	22.92768
Communicate in writing.	106	10.00	100.00	61.0377	24.53100
Problem solving.	106	10.00	100.00	63.2075	21.93267
Organizational skills.	106	20.00	100.00	62.9245	23.70320
Work on multiple projects at the same time.	106	10.00	100.00	63.9623	24.94486
Prioritize to meet deadlines.	106	10.00	100.00	61.8868	25.63900
Provide high level service to clients.	106	10.00	100.00	61.9811	24.55004
Motivated self-starter.	106	10.00	100.00	65.5660	22.89022
Willing to relocate.	106	10.00	100.00	53.7736	23.84285
Valid N (listwise)	106				

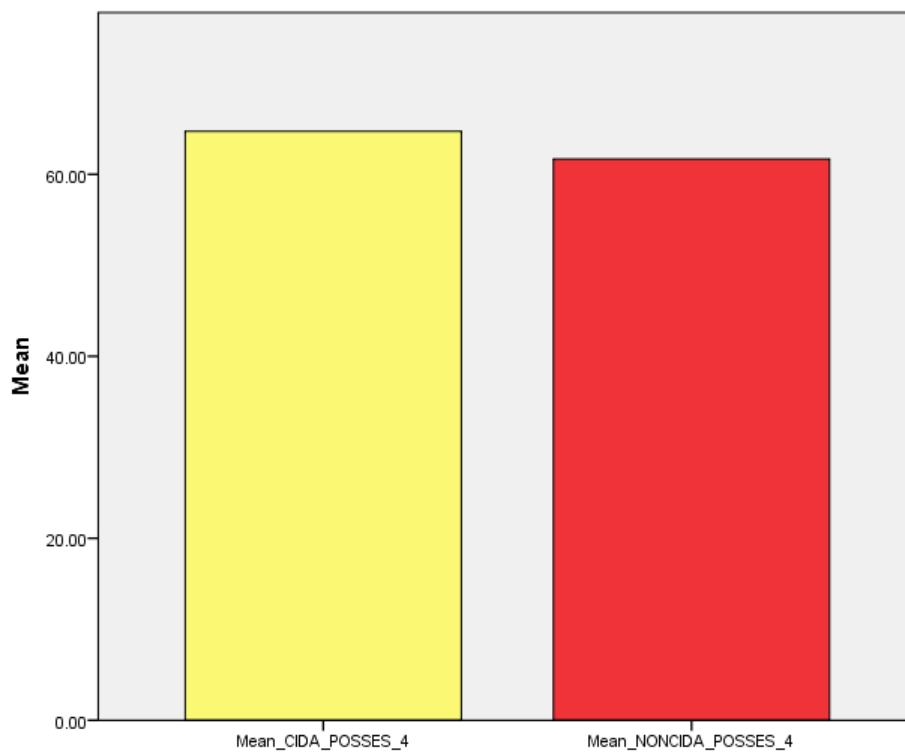
After examining the patterns by survey question 4, This researcher explored the overall average and the CIDA/non-CIDA averages. Table 3 shows a variety of mean scores ranging from 61 to 64. The average of all of the skills fell between the CIDA and non-CIDA scores ($m=63.06$). The overall score with perceived highest percentage of competency was in CIDA required skills ($m=64.71$), supporting that undergraduate interior design programs are emphasizing CIDA required skills overall, in order to complete their accreditation process. The overall score perceived as lowest percent of competency was in non-CIDA required skills ($m=61.68$). These latter two means shown in Figure 5.

There was a strong, significant correlation between CIDA and non-CIDA skills possessed by recent program graduates ($r = .91, p < .001$). See table 5.

Table 3

Descriptive Statistics for the Means of Survey Question 4 (soft skills possessed)

	N	Minimum	Maximum	Mean	Std. Deviation
MEAN_r_4	106	14.55	100.00	63.0617	19.02558
Mean_CIDA_POSESSES_4	106	14.00	100.00	64.7170	19.83396
Mean_NONCIDA_POSSE	106	15.00	100.00	61.6824	19.14508
S_4					
Valid N (listwise)	106				

*Figure 5.* Bar chart of the means of survey question 4.

Paired sample *t*-test. The paired sample *t*-test shown in tables 4, 5, and 6 reveal the means comparison and the difference in perception of the sample surveyed in regard to survey question 4. CIDA skills resulted in the highest possessed skills ($m=64.71$) which is significant in revealing the perception of CIDA skills.

Table 4

T-test Paired Samples Statistics

		Mean	N	Std. Dev.	Std. Error Mean
Pair 1	Mean_CIDA_POSSES_4	64.7170	106	19.83396	1.92644
	Mean_NONCIDA_POSSES_4	61.6824	106	19.14508	1.85953

Table 5

T-test Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Mean_CIDA_POSSES_4 & Mean_NONCIDA_POSSES_4	106	.912	.000

Table 6

T-test Paired Samples Test

		Paired Differences							
		Mean	Std. Dev.	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2- tailed)
					Lower	Upper			
Pair 1	Mean_CIDA_P OSSES_4 - Mean_NONCID A_POSSES_4	3.034	8.223	.798	1.450	4.618	3.799	105	.000

Pearson R Correlations. To examine the associations of this study, Pearson R correlations were produced and analyzed for the following variables: skills possessed, CIDA skills versus non-CIDA skills, and skills possessed versus number of designers in firm. Table 7 displays the correlations achieved between skills possessed. Most of the correlations are significant and ranged from .820 to .267, with the strongest between "Organizational

skills" and "Prioritize to meet deadlines" .820 (82%) ($r=.820, p<.001$). The lowest, least significant correlation was between "Willingness to relocate" and "Organizational skills" which was .105 (11%) ($r=.105, p<.001$). Also, "Willingness to relocate" was not significantly correlated with all other items on the instrument. See Table 7 in appendix E, on page 48.

Table 8 displays the correlations sought between skills possessed that are covered under CIDA versus skills possessed that are not covered under CIDA. All correlations are similarly high; however, the highest being between the "mean of all skills possesses", and "non-CIDA possessed skills" which was .981 (98%) ($r=.981 p<.001$).

Table 8

Correlations for Means of Survey question 4 (skills possessed)

		MEAN_ r4	Mean_CIDA_ POSSES_4	Mean_NONCIDA_ POSSES_4
MEAN_r_4	Pearson Correlation	1	.974**	.981**
	Sig. (2- tailed)		.000	.000
	N	106	106	106
Mean_CIDA_POSSES_4	Pearson Correlation	.974**	1	.912**
	Sig. (2- tailed)	.000		.000
	N	106	106	106
Mean_NONCIDA_POSS ES_4	Pearson Correlation	.981**	.912**	1
	Sig. (2- tailed)	.000	.000	
	N	106	106	106

** . Correlation is significant at the 0.01 level (2-tailed).

Table 9 displays the correlations sought between the skills possessed and the numbers of designers employed in firm. No significant correlation was found between size of firm and responses on their perception of proficiency overall ($r = .03, p = .77$), the CIDA subscale ($r = -.01, p = .98$), or the non-CIDA subscale ($r = .06, p = .54$).

Table 9

Correlations for Survey Question 4 and # of Designers in Firm (skills possessed)

		MEAN _r_4	Mean_CIDA_ POSSES_4	Mean_NON CIDA_ POSSES_4	# of Designers employed in your firm? Include yourself if relevant. Open-Ended Response
MEAN_r_4	Pearson Correlation	1	.974**	.981**	.029
	Sig. (2-tailed)		.000	.000	.767
	N	106	106	106	106
Mean_CIDA_POSSES_4	Pearson Correlation	.974**	1	.912**	-.008
	Sig. (2-tailed)	.000		.000	.937
	N	106	106	106	106
Mean_NONCIDA_POSESSES_4	Pearson Correlation	.981**	.912**	1	.060
	Sig. (2-tailed)	.000	.000		.542
	N	106	106	106	106
# of Designers employed in your firm? Include yourself if relevant. - Open-Ended Response	Pearson Correlation	.029	-.008	.060	1
	Sig. (2-tailed)	.767	.937	.542	
	N	106	106	106	106

** . Correlation is significant at the 0.01 level (2-tailed).

Therefore, no association was found between the number of designers in firm, and the skills possessed. These findings reveal that the opinions surveyed are consistent across varying sizes of interior design departments.

ANOVAs. In order to explore whether other background characteristics explained patterns of perceived proficiency, we conducted ANOVAs for the seven job title groups. There were no differences in perception by respondent job titles. These findings reveal that the opinions surveyed are consistently similar across the varying job titles surveyed. See Table 10.

Table 10
ANOVA for Survey Question 4 (skills possessed)

		Sum of Squares	df	Mean Square	F	Sig.
MEAN_r_4	Between Groups	548.449	6	91.408	.242	.962
	Within Groups	37458.701	99	378.371		
	Total	38007.150	105			
Mean_CIDA_POSSE S_4	Between Groups	814.336	6	135.723	.332	.919
	Within Groups	40491.174	99	409.002		
	Total	41305.509	105			
Mean_NONCIDA_P OSSES_4	Between Groups	547.121	6	91.187	.238	.963
	Within Groups	37938.964	99	383.222		
	Total	38486.085	105			

Given the number of titles, we collapsed the categories to four groups, reran the ANOVA, and still found no significant differences in perception by job category (this ANOVA is not included in the thesis): Group 1=design manager, design director, design principal. Group 2=designer/interior designer. Group 3=account manager, project manager. Group 4=other.

Next to explore whether there were differences in perceptions of proficiency by respondent's geographic locale, we conducted ANOVAs for the four US census regions. There were no differences in perception by US census region. These findings reveal that the opinions surveyed are consistently similar across the four US census regions surveyed (see Table 11).

Table 11

ANOVA Survey Question 4 Census Region

		Sum of Squares	df	Mean Square	F	Sig.
MEAN_r_4	Between Groups	278.761	3	92.920	.251	.860
	Within Groups	37728.389	102	369.886		
	Total	38007.150	105			
Mean_CIDA_POSSES_4	Between Groups	314.574	3	104.858	.261	.853
	Within Groups	40990.935	102	401.872		
	Total	41305.509	105			
Mean_NONCIDA_POSSES_4	Between Groups	370.205	3	123.402	.330	.803
	Within Groups	38115.880	102	373.685		
	Total	38486.085	105			

Survey Question 5

Survey question # 5 rated which 4 skills are the most important for new interior designers to possess. The survey allowed the respondent to select only four skills, from the list of eleven skills used in this study.

Descriptives. Descriptive Table 12 shows a variety of scores ranging from 0 to 8 with most in the 50% valued as most important.

The skills valued as most important (two are equal with the highest rating) are "Work in a team environment" ($m=.58$) and "Prioritize to meet deadlines" ($m=.58$). The first is a CIDA required skill and the latter is a non-CIDA required skill.

The skills least valued are "Communicate in writing" ($m=.08$) and "Willingness to relocate" ($m=.00$). The first is a CIDA required skill and the latter is a non-CIDA required skill.

Table 12

Descriptive Statistics for the Survey Question 5

	N	Minimum	Maximum	Mean	Std. Deviation
Communicate design ideas.	106	.00	1.00	.4811	.50202
Work in a team environment.	106	.00	1.00	.5849	.49508
Verbal presentation skills.	106	.00	1.00	.1887	.39311
Communicate in writing.	106	.00	1.00	.0849	.28007
Problem solving.	106	.00	1.00	.5000	.50238
Organizational skills.	106	.00	1.00	.3208	.46898
Work on multiple projects at the same time.	106	.00	1.00	.5000	.50238
Prioritize to meet deadlines.	106	.00	1.00	.5849	.49508
Provide high level service to clients.	106	.00	1.00	.2925	.45705
Motivated self-starter.	106	.00	1.00	.4623	.50094
Willing to relocate.	106	.00	.00	.0000	.00000
Valid N (listwise)	106				

After examining the patterns of survey question 5, I explored the overall average and the CIDA/non-CIDA averages. Table 13 shows the mean scores ranging from a highest at 54

to a lowest at 46. The overall score for the CIDA skills perceived as important was the lowest ($m=45.99$). The overall score perceived to be the most important skills to have, was in the non-CIDA skills ($m=54.00$). These latter two means are shown in Figure 6. This is the opposite of the descriptive findings of most possessed skills, in Table 3 in which CIDA skills (possessed) scored higher ($m=64.71$).

Table 13

Descriptive Statistics for the Means of Survey Question 5

	N	Minimum	Maximum	Mean	Std. Deviation
Mean_CIDA_IMP_5	106	.00	100.00	45.9906	21.30750
Mean_NONCIDA_IMP_5	106	.00	100.00	54.0094	21.30750
Valid N (listwise)	106				

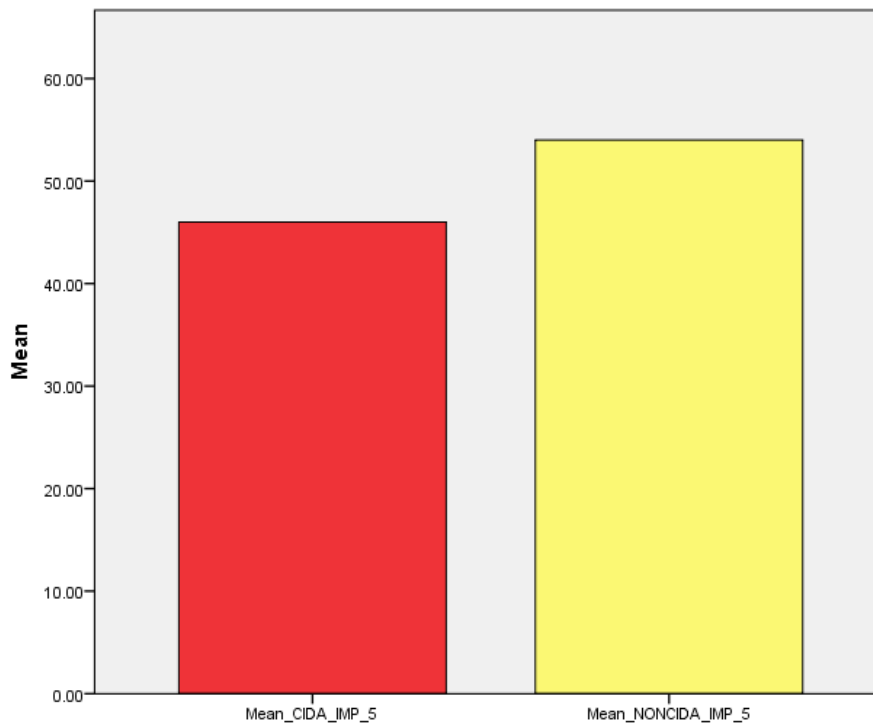


Figure 6. Bar chart of the means of survey question 5.

Paired sample *t*-test. The paired sample *t*-test shown in tables 14, 15, and 16 reveal the means comparison and the difference in the perception of the sample surveyed in regard to survey question five. Non-CIDA skills deemed most important to have and resulted with the highest score ($m=54.00$). There were no significant differences in the average percentage of importance for CIDA and non-CIDA soft skills ($t = 1.94, p = .06$).

Table 14

T-test Paired Samples Statistics Survey Question 5

Pair 1		Mean	N	Std.	Std. Error
				Deviation	Mean
	Mean_CIDA_IMP_5	45.99	106	21.30750	2.06957
	Mean_NONCIDA_IMP_5	54.00	106	21.30750	2.06957

Table 15

T-test Paired Samples Correlation Survey Question 5

Pair 1	Mean_CIDA_IMP_5 & Mean_NONCIDA_IMP_5	N	Correlation	Sig.
		106	-1.000	.000

Table 16

T-test Paired Samples Test Survey Question 5

Pair 1	Mean_CIDA_IMP_5 - Mean_NONCIDA_IMP_5	Std. Dev.	Paired Differences		t	df	Sig. (2- tailed)
			Std. Error Mean	95% Confidence Interval of the Difference Lower Upper			
		42.614	4.139	-16.226 .188	-1.93	105	.055

Pearson R correlations. To examine the associations of the study, Pearson R correlations were produced and analyzed for the following variables: most important skills, CIDA skills versus non-CIDA skills, and most important skills versus number of designers in firm. Table 17 displays the correlations sought between most important skills to have. Most correlations are negative and range from the lowest at $-.362$ to $.128$. The strongest correlation (not significant) was between "Work in a team environment" and "Motivated self-starter", which was $.128$ (13%). ($r=.128, p<.001$). The lowest, least significant correlation was between "Work in a team environment" and "Communicate in writing", which was $-.353$ (-35%) ($r=-.353, p<001$). Also, "Willingness to relocate" was not able to be computed because the variable was constant (no one chose this answer). The survey only allowed the sample to choose four out of the eleven. See Table 17, in appendix F, on page 51.

Table 18 displays the correlations sought between most important skills and the number of designers employed in firm. The correlation, between the number of designers employed in firm, was very low $-.115$ (-12%) ($r=-.115, p<.001$).

Table 18
Correlations for Survey Question 5 and # of Designers in Firm

		Mean_CIDA_IMP_5	Mean_NON_CIDA_IMP_5	# of Designers employed in your firm?
Mean_CIDA_IMP_5	Pearson Correlation	1	-1.000^{**}	.115
	Sig. (2-tailed)		.000	.239
	N	106	106	106
Mean_NONCIDA_IMP_5	Pearson Correlation	-1.000^{**}	1	$-.115$
	Sig. (2-tailed)	.000		.239
	N	106	106	106
# of Designers employed in your firm? Include yourself if relevant. - Open-Ended Response	Pearson Correlation	.115	$-.115$	1
	Sig. (2-tailed)	.239	.239	
	N	106	106	106

** . Correlation is significant at the 0.01 level (2-tailed).

Therefore, no association was found between the number of designers in firm, and the skills perceived as most important. These findings reveal that the opinions surveyed are consistent across varying sizes of interior design departments.

ANOVAs. In order to explore whether other background characteristics explained patterns of perceived most important skills, we conducted ANOVAs for the seven job title groups. There were no differences in perception by respondent's job title. These findings

reveal that the opinions surveyed are consistently similar across the varying job titles surveyed (see Table 19).

Table 19

ANOVA for Survey Question 5 Job Title of Sample

		Sum of	df	Mean	F	Sig.
		Squares		Square		
Mean_CIDA_IMP_5	Between Groups	1521.780	6	253.630	.544	.773
	Within Groups	46149.210	99	466.154		
	Total	47670.991	105			
Mean_NONCIDA_IMP_5	Between Groups	1521.780	6	253.630	.544	.773
	Within Groups	46149.210	99	466.154		
	Total	47670.991	105			

Given the number of job titles, we collapsed the categories to four groups, reran the ANOVA, and still found no significant difference in perception by job category (this ANOVA not included in thesis). The seven job title groups were utilized and then collapsed into four group categories: Group 1=design manager, design director, design principal; Group 2=designer/interior designer; Group 3=account manager, project manager; Group 4=other.

Next to explore was whether there were differences in perception of most important skills by respondents' geographic region. We conducted ANOVAs for the four US census regions. There were no differences in perception by US census region. These findings reveal

that the options surveyed are consistently similar across the four US census regions surveyed.

See Table 20.

Table 20

ANOVA for Survey Question 5 Census Region of Sample

		Sum of	df	Mean	F	Sig.
		Squares		Square		
Mean_CIDA_IMP_5	Between Groups	1587.044	3	529.015	1.171	.325
	Within Groups	46083.946	102	451.803		
	Total	47670.991	105			
Mean_NONCIDA_I MP_5	Between Groups	1587.044	3	529.015	1.171	.325
	Within Groups	46083.946	102	451.803		
	Total	47670.991	105			

Chromebach's Alpha

In order to confirm the reliability of the statistics in this study, a Chromebach's Alpha was run and produced a score of .95. This supports the degree to which the result of the measurements is accurate.

Comments from the Sample

The comments section of the survey was optional. From the 106 respondents, 22 of them desired to include comments. The common theme among the comments was reemphasizing certain skills that the respondent felt needed reinforcing and more clarification. The characteristics listed in the comments aligned with the survey instrument of this study. Seven of the comments are included in this thesis and list the job title of the respondent, in order to conceptualize the meaning.

Comments from 3 different interior designers. #1 Interior designer: "I've been working at a small commercial firm in Nashville for nine years. The new hires we've had generally struggle with taking ownership of projects they're assigned to as well as communicating professionally to clients." #2 Interior designer: "We have hired eight designers right out of college within the past few years at Tangram Interiors. They generally have great computer, verbal and design skills. Their work ethic and ability to be self-starters is sometimes lacking." #3 Interior designer: "Critical thinking/problem solving and being self-motivated are crucial traits/skills for designers hoping to progress in this profession. The ability to present yourself and your ideas in all formats is also critical if the designer expects to be in front of clients. Of course, firms expect business skills including meeting deadlines and juggling multiple projects as well."

Comment from a design director. "Most important: ability to learn and adapt quickly and remain flexible, ability to understand technical concepts and information and able to be resourceful."

Comment from a design manager. "Finding designers to work in the commercial furniture world is hard. New students mostly want to go to an A&D firm or residential and they don't really get the knowledge at school to understand the commercial side of things."

Comment from a project manager. "I work for Gensler and it is such a fast paced environment that it is really hard for new team members to integrate into the culture of our firm if they aren't good at working on multiple projects and on a team."

Comment from an account manager. "I believe the students today are not given enough real-life experience before graduating. They come out of school expecting to be doing senior-level design work when they don't have the necessary skills to perform at that level. They lack the basic work/communication skills common to most employees regardless of emphasis. These skills can be developed over time but would be very valuable to have learned while in school. It seems they feel they can work less but deserve more before putting in the time to learn and gain experience. Everyone has dreams but I think a little dose of reality is necessary prior to graduation so that there is better understanding of what lies ahead hard work, growth and challenges."

Comments summary. A common theme throughout the surveyed comments is that the people who work alongside new interior design graduates, perceive the universities as not sufficiently preparing the students for employment. This creates a balance of topics to teach within the four-year curriculum, the requirements needed to meet the CIDA accreditation, and while also meeting the needs of the industry.

Summary of Data Analysis

This study's findings revealed that no matter what region of the US, no matter how many designers in the firm, and no matter what title the sample person has, the results show a pattern and a commonality. The results being that the most common skill possessed is the ability to communicate design ideas and thought to be the most important skills are the ability to work in a team environment and the ability to prioritize to meet deadlines.

Chapter 5: Research Answers, Summary, and Recommendation for Further Research

Research Answers

In conclusion, this study focused on the qualitative attributes of new interior design graduates. The data collected and analyzed supports all of this study's research questions:

1. Are there soft skills missing from new interior design graduates that are requested by potential employers with Interior design departments that include those with 0 to 1 years of experience? Yes, the most often missing soft skills are verbal presentation skills and willingness to relocate.

2. Is there a difference, in the soft skills possessed by new interior design graduates, between those covered under CIDA accreditation requirements and those not covered under CIDA? Yes, CIDA required skills are more commonly found in new interior design graduates.

3. Are there soft skills most important for new interior design graduates (as perceived by people working with them), but that are NOT covered under CIDA accreditation requirements? Yes, the ability to work on multiple projects at the same time, was perceived as most important, but is not covered under CIDA requirements.

Findings as related to previous literature reviews. The findings in *Professional Standards 2014* (Council for Interior Design Accreditation Professional Standards 2014) state the skills required to be taught within accredited undergraduate Interior design programs. The first five out of the eleven soft skills in this research study were found in this document. The remaining six soft skills were not found.

Of those five skills included in the CIDA accreditation process, “verbal communication skills” were perceived to be the most often missing in new graduates, and “work in a team environment” was perceived to be the most important soft skill. This is important information for CIDA and university program directors to consider.

Of those six skills NOT included in the CIDA accreditation process, “prioritize to meet deadlines” was perceived to be most important to potential employers, and “willingness to relocate” was perceived to be the most often missing.

Implications. In terms of publication, the results of this study could be published in the *Journal of Interior Design* for IDEC (Interior design Educators Council) for interior design program directors to see which soft skills are perceived as most often missing and which skills are perceived as most important and therefore work on improving those skills within their undergraduate interior design curriculum. Skill sets desired by potential employers are important for undergraduate program directors to be aware of. Gaps in those skill sets can produce an effect of underemployment.

Summary

In conclusion, research indicates that the first key finding in this study (question 4 of survey) is that the sample surveyed placed equal importance on the top two skills “work in a team environment” and “prioritize to meet deadlines,” even though the first is included in CIDA and the latter is not. Within this topic, perceived as the two most lacking skills were “verbal communication skills” and “willingness to relocate”. The findings in *Professional Standards 2014* (Council for Interior Design Accreditation Professional Standards 2014)

states the skills required to be taught within accredited undergraduate interior design programs, one of which is verbal communication skills. Since "Verbal communication" is covered under CIDA accreditation, this shows a very low mean relative to other scores and should be taken into consideration by universities and CIDA. This research study helps us to understand this relationship to interior design undergraduate program's CIDA accreditation requirements. The second main key finding of this study (question 5 of survey) is that the two soft skills that are valued most for interior designers to have, are "Work in a team environment" and "Prioritize to meet deadlines." Both of these topics score the same and the highest among the eleven topics. The first is covered under CIDA and the latter is not, highlighting that there is a skill perceived as important that CIDA is not covering and may not be aware of. A recommendation, therefore, is that CIDA revise their accreditation requirements to include this soft skill.

The summary of this study shows that the undergraduate curriculum is not keeping up with the skills desired by potential employers. Undergraduate interior design program directors could either alter their programs to match what is desired in the work force, or CIDA could make additions to their accreditation procedures. Undergraduate programs want to be well known for the employment-ready graduates they produce. Potential employers already have preconceived notions about which universities they want to hire from. This study attempts to reduce the disconnect found between those potential employers and the universities. Interior design students spend four years learning how to communicate graphically; however, the resulting sacrifices need to be addressed nationwide.

Recommendations for Further Research

Possible future research topics:

- Survey sample to inquire about comparison of which CIDA skills graduates are competent in. Include all skills listed in the CIDA accreditation requirements.
- Survey sample to include more characteristics of the respondents such as gender and age.
- Define how interior design programs could close the gaps found within this study and make recommendations for best practices that could be included to target each soft skill gap.
- Focus survey on technology skills and competency.

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Appendices

Appendix A

Human Subjects Approval Letter

RESEARCH @ EMU

UHSRC Determination: EXEMPT

DATE: February 18, 2016

TO: Diane Guevara
School of Visual and Built Environments
Eastern Michigan University

Re: UHSRC: # 843644-1
Category: Exempt category B2
Approval Date: February 18, 2016

Title: Gaps in Soft Skills of New Interior Design Graduates and Potential Employment

Your research project, entitled **Gaps in Soft Skills of New Interior Design Graduates and Potential Employment**, has been determined **Exempt** in accordance with federal regulation 45 CFR 46.102. UHSRC policy states that you, as the Principal Investigator, are responsible for protecting the rights and welfare of your research subjects and conducting your research as described in your protocol.

Renewals: Exempt protocols do not need to be renewed. When the project is completed, please submit the **Human Subjects Study Completion Form** (access through IRBNet on the UHSRC website).

Modifications: You may make minor changes (e.g., study staff changes, sample size changes, contact information changes, etc.) without submitting for review. However, if you plan to make changes that alter study design or any study instruments, you must submit a **Human Subjects Approval Request Form** and obtain approval prior to implementation. The form is available through IRBNet on the UHSRC website.

Problems: All major deviations from the reviewed protocol, unanticipated problems, adverse events, subject complaints, or other problems that may increase the risk to human subjects or change the category of review must be reported to the UHSRC via an **Event Report** form, available through IRBNet on the UHSRC website

Follow-up: If your Exempt project is not completed and closed after **three years**, the UHSRC office will contact you regarding the status of the project.

Please use the UHSRC number listed above on any forms submitted that relate to this project, or on any correspondence with the UHSRC office.

Good luck in your research. If we can be of further assistance, please contact us at 734-487-3090 or via e-mail at human.subjects@emich.edu. Thank you for your cooperation.

Sincerely,

Paul T. Majeske
Chair
COT Human Subjects Review Committee

Appendix B

Letter Introducing Survey

Good Morning,

My name is Diane Guevara and I am an Interior design graduate student at Eastern Michigan University.

My Master's Degree thesis topic is uncovering the gaps in soft skills of new Interior design graduates (BS degree) as perceived by potential employers who require a BS degree in Interior design. Interior design students spend four years learning how to communicate graphically; however, is the sacrifice that their soft skills lack as a result?

Your feedback on this 3minute survey will be anonymous.

The Human Subjects Committee at Eastern Michigan University is reviewing my approval form and I anticipate approval by January 2016 or earlier.

I appreciate your time and hope that you will assist in my Master's Degree thesis research. Please feel free to contact me with questions.

Kind regards,
Diane Guevara, NCIDQ, LEED Green Associate

Appendix C

Informed Consent Form

The purpose of my Master's thesis topic is uncovering the gaps in soft skills of new Interior design graduates (BS degree) as perceived by potential employers which require a BS degree in Interior design. This research is unfunded. Participation in this study involves completing a 3 minute online survey. The primary risk of participation in this study is a potential loss of confidentiality. You do not have to answer any questions that you do not want to answer. You will not directly benefit from participating in this research. We will keep your information confidential by not collecting names, nor IP address. Your answers will be stored in a password-protected computer file. We may share your answers only with other researchers within Eastern Michigan University. The results of this research may be published. No compensation is given. Participation in this research study is your choice. You may refuse to participate at any time, with no penalty to which you are otherwise entitled. You may choose to leave the study at any time. If you leave the study, the survey response will be cancelled.

If you have any questions about the research, you can contact the Principal Investigator, Diane Guevara at dguevara@emich.edu or by phone at 617-320-9098. You can also contact Diane's adviser, Dr. Shinming Shyu, at shyu@emich.edu or College Director, Dr. Deb delaski-Smith, at ddelaski@emich.edu

For questions about your rights as a research subject, you can contact the Eastern Michigan University Office of Research Compliance at human.subjects@emich.edu or by phone at 734-487-3090.

Click “continue” to indicate consent to participate in this research study.

Appendix D

Sample Survey

* 1. Which census region are you located?

- Northeast
- Midwest
- South
- West

* 2. # of Designers employed in your firm? Include yourself if relevant.

* 3. What is your title?

↕

* 4. Rate if new Interior Design college graduates possess the skill:

	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Communicate design ideas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Work in a team environment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Verbal presentation skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communicate in writing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Problem solving.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organizational skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Work on multiple projects at same time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prioritize to meet deadlines.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provide high level service to clients.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Motivated self starter.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Willing to relocate (geographically).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 5. In your opinion, which 4 skills are the most important for new Interior Designers? (choose only 4)

- Communicate design ideas.
- Work in a team environment.
- Verbal presentation skills.
- Communicate in writing.
- Problem solving.
- Organizational skills.
- Ability to work on multiple projects.
- Prioritize to meet deadlines.
- Provide high level service to clients.
- Motivated self starter.
- Willing to relocate (geographically).

6. Comments?

Appendix E

Table 7

Table 7

Correlations for Survey Question 4 (skills possessed).

		Comm	Team	Ver	Write	Prob	Org	Mult	Prior	Prov	Moti	Will
Comm	Pears on Correlation Sig. (2-tailed)	1	.673*	.751*	.770*	.828*	.737*	.700*	.733*	.794*	.712*	.180
			.000	.000	.000	.000	.000	.000	.000	.000	.000	.064
	N	106	106	106	106	106	106	106	106	106	106	106
Team	Pears on Correlation Sig. (2-tailed)	.673**	1	.669*	.687*	.733*	.680*	.727*	.710*	.729*	.645*	.267**
		.000		.000	.000	.000	.000	.000	.000	.000	.000	.006
	N	106	106	106	106	106	106	106	106	106	106	106
Verbal	Pears on Correlation Sig. (2-tailed)	.751**	.669*	1	.696*	.766*	.691*	.644*	.712*	.799*	.668*	.235*
		.000	.000		.000	.000	.000	.000	.000	.000	.000	.015
	N	106	106	106	106	106	106	106	106	106	106	106
Write	Pears on Correlation Sig. (2-tailed)	.770**	.687*	.696*	1	.673*	.778*	.639*	.712*	.656*	.685*	.148
		.000	.000	.000		.000	.000	.000	.000	.000	.000	.130
	N	106	106	106	106	106	106	106	106	106	106	106
Prob	Pears on Correlation	.828**	.733*	.766*	.673*	1	.784*	.753*	.778*	.803*	.759*	.159

	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.104	
	N	106	106	106	106	106	106	106	106	106	106	
Org	Pears on Correlation	.737**	.680*	.691*	.778*	.784*	1	.750*	.820*	.748*	.714*	.105
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.284
	N	106	106	106	106	106	106	106	106	106	106	106
Mult	Pears on Correlation	.700**	.727*	.644*	.639*	.753*	.750*	1	.771*	.746*	.647*	.133
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.174
	N	106	106	106	106	106	106	106	106	106	106	106
Prior	Pears on Correlation	.733**	.710*	.712*	.712*	.778*	.820*	.771*	1	.775*	.735*	.152
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.120
	N	106	106	106	106	106	106	106	106	106	106	106
Prov	Pears on Correlation	.794**	.729*	.799*	.656*	.803*	.748*	.746*	.775*	1	.728*	.148
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.130
	N	106	106	106	106	106	106	106	106	106	106	106
Moti	Pears on Correlation	.712**	.645*	.668*	.685*	.759*	.714*	.647*	.735*	.728*	1	.183

	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.061
	N	106	106	106	106	106	106	106	106	106	106	106
Willing	Pears on Corre lation	.180	.267*	.235*	.148	.159	.105	.133	.152	.148	.183	1
	Sig. (2-tailed)	.064	.006	.015	.130	.104	.284	.174	.120	.130	.061	
	N	106	106	106	106	106	106	106	106	106	106	106

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Mult	Pearson											
	Correlation	-.283**	-.077	.241*	.102	-.170	.202*	1	.115	-.062	.208*	.b
	Sig. (2-tailed)	.003	.435	.013	.300	.082	.038		.241	.526	.032	.
	N	106	106	106	106	106	106	106	106	106	106	106
Prior	Pearson											
	Correlation	-.300**	.205*	-.181	-.087	.268*	-.036	.115	1	-.006	-.102	.b
	Sig. (2-tailed)	.002	.035	.063	.376	.005	.711	.241		.955	.297	.
	N	106	106	106	106	106	106	106	106	106	106	106
Provide	Pearson											
	Correlation	.045	-.090	-.151	-.047	-.104	.353*	-.062	-.006	1	.222*	.b
	Sig. (2-tailed)	.647	.360	.122	.632	.290	.000	.526	.955		.022	.
	N	106	106	106	106	106	106	106	106	106	106	106
Moti	Pearson											
	Correlation	-.287**	.128	.205*	-.147	-.170	.093	.208*	-.102	.222*	1	.b
	Sig. (2-tailed)	.003	.190	.035	.134	.081	.345	.032	.297	.022		.
	N	106	106	106	106	106	106	106	106	106	106	106
Willing	Pearson											
	Correlation	.b	.b	.b	.b	.b	.b	.b	.b	.b	.b	.b
	Sig. (2-tailed)	.	.	.	.	.	.	.	.	.	.	.
	N	106	106	106	106	106	106	106	106	106	106	106

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

b . Cannot be computed because at least one of the variables is constant.