WHAT EMPLOYERS WANT AND WHAT UNIVERSITIES TEACH:
A COMPARISON OF UPAEP BUSINESS PROGRAMS AND AUTO INDUSTRY
RECRUITING IN THE PUEBLA REGION

BY
SORAYA REYES GUERRERO

An applied dissertation submitted in partial fulfillment
of the requirements for the degree of
DOCTOR OF EDUCATION IN LEADERSHIP
CITY UNIVERSITY OF SEATTLE
2017

Approval Signatures:

Arron Grow, Ph.D., Committee Chair

Hampton Hopkins, Ed.D., Committee Member

Deanne Larson, Ph.D., Committee Member

Kelly Flores, Ed.D., Dean

Date 6-9-2017
6-9-2017
6-17-2017
06/17/2017
ABSTRACT

Mexico’s new business graduates are facing the problem of an extensive job-search, which impacts employability of new graduates because only 60% of them can obtain a job during the first year after graduation (Universia Mexico, 2013). This problem was studied from a case study perspective within the context of the automotive industry in Puebla, Mexico as a workplace for business graduates. The purpose was to identify automotive industry needs in terms of human talent and to contrast them with the current university curricula in business studies. Detecting a potential gap between industry needs and university education was the main research question. To answer the question, the data were collected through individual interviews conducted with automotive industry recruiters, combined with findings of business program curricula analysis of the UPAEP’s School of Business. Using purposive sampling, (Baker & Edwards, 2016), 11 of the 68 automotive firms were invited to participate in interviews. Additionally, curricula-related artifacts of the UPAEP School of Business programs were analyzed to determine which skills, knowledge, abilities, and behaviors (SKABs) are transmitted to the students during academic instruction and coded following Corbin and Strauss’ (2015) guidelines. After comparing both sets of data, it was found that not all of the SKABs demanded by recruiters are transmitted to students in the UPAEP’s School of Business. The detected gaps negatively impact the employability of new graduates. A major conclusion is that a praxis-based education is preferred to develop soft skills in graduates. Further research is suggested to change the current state of industry/university (I/U) relationships and graduates’ invested time to employment in Mexico.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSTRACT</td>
<td>iii</td>
</tr>
<tr>
<td>ACKNOWLEDGMENTS</td>
<td>viii</td>
</tr>
<tr>
<td>CHAPTER 1: INTRODUCTION TO THE STUDY</td>
<td>1</td>
</tr>
<tr>
<td>Foundation of the Study</td>
<td>2</td>
</tr>
<tr>
<td>Current State of the Field in Which the Problem Exists</td>
<td>6</td>
</tr>
<tr>
<td>Historical Background</td>
<td>11</td>
</tr>
<tr>
<td>Deficiencies in the Evidence</td>
<td>15</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>19</td>
</tr>
<tr>
<td>Audience</td>
<td>20</td>
</tr>
<tr>
<td>Specific Leadership Problem</td>
<td>20</td>
</tr>
<tr>
<td>Purpose of the Study</td>
<td>21</td>
</tr>
<tr>
<td>Methodology Overview</td>
<td>22</td>
</tr>
<tr>
<td>Research Questions</td>
<td>23</td>
</tr>
<tr>
<td>Study Limitations</td>
<td>24</td>
</tr>
<tr>
<td>Definitions of Key Terms</td>
<td>25</td>
</tr>
<tr>
<td>Summary</td>
<td>28</td>
</tr>
<tr>
<td>CHAPTER 2: LITERATURE REVIEW</td>
<td>29</td>
</tr>
<tr>
<td>Introduction</td>
<td>29</td>
</tr>
<tr>
<td>What Universities Teach Their Business Students</td>
<td>30</td>
</tr>
<tr>
<td>What Industry Recruiters Want</td>
<td>45</td>
</tr>
<tr>
<td>Investigation of University Outputs and Industry Needs</td>
<td>62</td>
</tr>
<tr>
<td>Summary</td>
<td>73</td>
</tr>
</tbody>
</table>
LIST OF TABLES

Table 1 Skills Mentioned by Recruiters ...........................................................................104
Table 2 Knowledge Mentioned by Recruiters ................................................................105
Table 3 Number of Recruiters Demanding a Specific Ability ............................................107
Table 4 Behaviors Mentioned by Recruiters ..................................................................109
Table 5 Identified Emerging Themes ..............................................................................112
Table 6 Learning Outcomes for General Studies Courses ...............................................114
Table 7 Learning Outcomes for Business Courses .........................................................116
Table 8 General Information of Core Disciplinary Courses per Business Program .........118
Table 9 SKABs Found at the UPAEP’s School of Business Programs .........................121
Table 10 Business Programs Composition .....................................................................122
Table 11 Comparison of SKABs Demanded by Recruiters and SKABs Found at the UPAEP’s School of Business programs .........................................................125
Table 12 Summary of Similarities and Differences Between Industry Needs and Academic Instruction at UPAEP ..................................................................................132
ACKNOWLEDGMENTS

This work is dedicated to my beloved family, Felipe, Chuy, and Esti, who supported me all the way. For four years I have devoted myself to this personal dream, and you understood and encouraged me to make it happen. I will always love you!

Two leaders played a central role in this achievement: my mother and my aunt Armantina. Thank you, Mom, for supporting me all of these years. Thank you, aunt Armantina for believing in me and always being by my side. I love you both very much. My Daddy was always a support in this journey. From your silence, Dad, I know you were always there, proud of me. Thank you.

Dr. Voigt, I have no words to thank you enough for all the help, the patience, and your advice. As always, you are a role model for me. You have guided my professional life from the very beginning, something I deeply appreciate. Thank you for always helping me and for not giving up during the long hours supervising my progress. Farah, Craig, and Sebastian, you are my family. You also were there, from a distance and across the border, cheering for me. You are also part of this dream. Thank you for being next to me.

To all of the UPAEP leaders who gave me the opportunity to become a doctor, Thank you for everything. To my students, thank you for inspiring me. To my team of colleagues, you were a great support during this journey. Thank you. And, to all my friends within the UPAEP’s family, I am grateful for your support, for your words of help, for your teachings, and for the patience in times when I had to be absent, and you understood.

viii
As for City U, there are no words to express my gratitude to Dr. Steven Olswang for listening to me, to Dr. Kurt Kirstein for having faith in me at all times and giving me the opportunity to be part of your faculty, to Dr. Kelly Flores for leading a great group of talented people who never got tired of assisting, supporting, and teaching me: Dr. Arron Grow, Dr. Presley Rankin, Dr. Pete Anthony, Dr. Deanne Larson, Dr. Hampton Hopkins, and Dr. Mary Dereshiwsky. My gratitude also goes to my friend Antonio (Toño) Esqueda, who was always by my side taking such good care of me and applauding my progress.

Thank you all!
CHAPTER 1: INTRODUCTION TO THE STUDY

Industry executives around the world are expressing their concern about the inadequate preparation of graduates to meet industry needs to fill professional positions (Baryniene & Krisciunas, 2013; Carnevale, Hanson, & Gulish, 2013; Centro de Investigación Para el Desarrollo, A.C. [CIDAC], 2014; Manpower Group, 2015; Mihaela & Raluca, 2015). The concern is not confined to a single industrial sector or a single country. Voices are expressing the same concern in Europe (Ciuhureanu, Gorski, & Baltes, 2011), the United States (Petrisko & Etchemendy, 2016), Canada (Walk & Wright, 2014), and several other countries around the world. Therefore, the study and understanding of industry needs is a task to be performed by university authorities with the intention of facilitating new graduates’ employability.

However, studying the situation of all the industrial sectors of a single country like Mexico is a challenging and wide-ranging task. With the intention to narrow the scope and to be relevant to the country’s situation, one industrial sector was selected for the purpose of the present research study: the automotive industry. This sector is the greatest GDP contributor for the country (Central Intelligence Agency [CIA], 2016) and also for the State of Puebla (Instituto Nacional de Estadística y Geografía [INEGI], 2014), the place in which the study was conducted.

The purpose of this research study was to find any potential gap existing between industry needs and university curricula in the area of business-related disciplines in the region of Puebla, Mexico to increase the level of alignment between them for purposes of
new graduates’ employability in a shorter period of time. The study was designed to investigate what is taught in the business-related disciplines at the Universidad Popular Autónoma del Estado de Puebla (UPAEP) and what auto industry recruiters expect from new graduates in the Puebla, Mexico region with the intention to reduce time to employment. New graduates’ employability in a shorter time after graduation was the central topic around which this research study evolved.

**Foundation of the Study**

Education is a key element in any society. Education is the main driver of a nation’s development, welfare, and competitiveness (Badea & Angheluta, 2015). An educated society is one that produces economic advancement, and one that better attracts the establishment of industrial facilities for job creation and further development (Global University Summit, 2013). Universities are the source of culture and the dissemination of knowledge.

Graduates are the product of an academic process at the university level. They represent the talent to be recruited to manage the operations of organizations (Bagherinia, Bagherinia, & Rahim Mosavi, 2015). University curricula or programs must meet labor market expectations to respond to the university’s educational goal of producing beneficial outcomes for society (Mihaela & Raluca, 2015). University and industry alignment is essential for a successful recruitment process (Azevedo, Apfelthaler, & Hurst, 2012; Elkins, Bell, Hartgrove, & Pardue, 2016; Zamora, Cano, & Zamora, 2011).

A useless curriculum, characterized by its lack of pertinence or relevance for labor market expectations, is a determinant in graduates’ employability (Bagherinia et al.,
Employability is the set of skills, knowledge, attitudes, and personality, which make an individual successful in gaining employment after a process of formal education or training is completed (Hofaidhllaoui, 2013) and maneuvering within diverse workplaces to improve the quality of life (Hamid, Islam, & Manaf, 2014). The set of skills that an individual acquires, develops, and refines through academic instruction produces employable graduates because these skills are highly valued in a recruitment process (Azevedo et al., 2012).

University graduates will be better equipped to meet professional demands if their academic preparation is aligned with industry needs. From a quantitative study performed in Malaysia to detect the needed skills demanded by recruiters from diverse industrial sectors and government agencies, Hamid et al. (2014) found that universities are producing unemployable graduates because they are not prepared to meet industry needs and labor market demands. Similarly, on behalf of the American Association of Colleges and Universities, Hart Research Associates (2015) conducted a survey with 400 employers and 630 college students. Hart Research Associates found that employers request universities to implement strategies to make graduates master generic and specific skills. By doing that, new graduates can be prepared for labor market demands. This is a situation that is not consistently being fulfilled nowadays.

Manpower Group (2015) stated that market demands establish the skills, knowledge, abilities, and behaviors (SKABs) that need to be included in an individual’s profile to fit a professional position. After interviewing 41,700 employers from 42 countries, Manpower Group reported that 38% of worldwide employers face difficulties
in finding the right talent among graduates. According to this study, Japan, Peru, Hong-Kong, Brazil, and Romania are the five countries in which talent scarcity is outstanding. Consequently, there are voices in diverse industrial sectors around the world complaining about the deficiency of university preparation and graduates’ capacity to fulfill labor market needs.

As stated in previous paragraphs, the studies conducted by Hamid et al. (2014), Hart Research Associates (2015), and Manpower Group (2015) in different locations in the world are just a few examples of the other sources that cite this deficiency. Different researchers identified causes that explain the existence of this phenomenon. Fulgence (2015) found that globalization is a force that is demanding the development of new skills among college graduates. Benamati, Ozdemir, and Smith (2010), and Mihaela and Raluca (2015) had found that universities have difficulty keeping up with the dynamic pace of the industry. Signs of this difficulty include curricula that are misaligned with and sometimes even obsolete concerning workplace needs. Among other authors, Milhauser and Rahschulte (2010) stated that universities place emphasis on teaching hard skills instead of promoting soft or transferable skills. Finally, the insufficient joint efforts between university and industry to increase human talent suitability for employment are also mentioned by authors like Mihaela and Raluca.

Consequently, the result is unemployment of new graduates or excessive time invested in finding a job. In two studies conducted in different national settings, the authors concluded that understanding the needs of industry and aligning them with university curricula is seen as a means to decrease the time to employment. Marin,
Horobet, and Belascu (2015) conducted a study, in the context of Romania, with 110 master’s degree students from two universities to find out if their academic preparation was useful to meet market needs. The authors’ conclusion was that students were not completely satisfied with the academic instruction they received in meeting labor market demands.

In India, Rao et al. (2014) performed a study among 42 companies recruiting MBA graduates with the objective of identifying what recruiters are looking for in the graduates’ profile. Their conclusions stated that employers are not satisfied with the quality of academic instruction received by graduates. Rao et al. found that there is a substantial difference between what industry leaders expect from them and what they offer as new professionals.

The analysis of the consequences of misaligned curricula, a lack of solid Industry/University (I/U) relationships, and an employability skills gap are valuable in promoting the purpose of decreasing time to employment in the automotive industry, a goal of new graduates and the problem addressed by this research study. For that reason, this qualitative case study was designed to be applied with recruiters in the automotive sector in Puebla, Mexico by interviewing them about the SKABs that are necessary for a business graduate. The content and the learning outcomes of the UPAEP’s School of Business undergraduate programs were analyzed to determine if there is a gap between industry needs and academic preparation. Based on the findings, the UPAEP’s leadership can be in the possibility of decreasing time to employment, enhancing the UPAEP
business students’ employability, and aligning the university curricula with industry needs.

**Current State of the Field in Which the Problem Exists**

The problems of graduates’ employability and the gap between industry needs and university curricula have been addressed from diverse perspectives. The majority of studies done on the topic are quantitative, as exemplified by the research conducted by the following authors: Ciuhureanu et al. (2011), Hart Research Associates (2015), Jurse and Tominc (2008), Marin et al. (2015), Meenai and Ahmed (2012), Selingo (2015), and Sloka et al. (2015). Less research has been conducted from a qualitative perspective, with the result of not having the possibility of listening in-depth to the participants’ opinions, perspectives, and comments.

Several qualitative research projects have addressed the topic of graduates’ employability (Benamati et al., 2010, Milhauser & Rahschulte, 2010; Rao et al., 2014; Walk & Wrigth, 2014). However, the prevalence of quantitative studies hinders the in-depth exploration of interests, causes, or needs of industry. Qualitative studies expand the dialogue (Creswell, 2013) and contribute to a full understanding of industry needs, which is the aim of the present research study to provide university leaders with the information needed to address the issue of graduates’ employability.

Participants are another topic of interest when conducting a research study. In studies conducted by Rajkumar, Padmanand, Ganesan, and Venugopal (2015) and Walk, Schinnenburg, and Handy (2013), students from undergraduate programs were selected as participants to share their opinions about the impact of the university preparation they
received on their employability. Similarly, students from graduate programs have also been subjected to research, as performed by Jurše and Tomine (2008) and Marin et al. (2015).

Several researchers have had discussions with industry authorities to develop what is referred to in the literature as graduate profiles. A candidate’s graduate profile is the archetype employers look for among college graduates. A graduate profile is built from elements, strategies, and learning outcomes deliberately included and interrelated in an academic program to create a particular set of competencies for the professional-to-be (Bertrán, Martínez, & Gutiérrez, 2014). Consequently, a university curriculum is the originator of a graduate profile. That is why Ahadiat and Martin (2015), Fulgence (2015), and Hamid et al. (2014) have conducted research on the topic. In these studies, CEOs, middle managers, and other employees were called to be participants to assess the graduate’s profile or skills desirable in a recruitment process.

The studies mentioned in the previous paragraph were conducted in diverse contexts and geographic backgrounds, a condition that is important to the understanding of the different degrees of advancement on the topic and the contributions made, and the similarities existing within diverse cultural conditions. Similar studies citing similar results have been conducted based on geographic location as well (Bagherinia et al., 2015; Chillas, Marks, & Galloway, 2015; Ciuhureanu et al., 2011; Gokuladas & Menon, 2014; Hamid et al., 2014; Marin et al., 2015; Meenai & Ahmed, 2012; Mishra, 2014; Owens-Jackson, Highsmith-Quick, & Robinson, 2013; Rajkumar et al., 2015; Rao et al.,
8

2014; Selingo, 2015; The Council for Aid to Education National Results [CAE], 2014; Walk et al., 2013).

These studies provided evidence that researchers in the United States, Europe, and in several Asian countries are making progress in understanding the factors interrelated with graduates’ employability. The absence of this type of research in Latin America demonstrates that research there is lagging. This lack of research exists in spite of the fact that the problem of time to employment is also a problem in Latin America. Despite the fact that research on the topic of graduates’ employability and curricula alignment with industry needs can be traced back to the twentieth century (Ahadiat & Smith, 1984), and topics as modern as on-line education are investigated as well (McPherson & Bacow, 2015), no substantial research is found within the Latin American context.

Among other factors, time to employment is a consequence of a misalignment between industry needs and a graduate’s profile. Unemployed graduates are a phenomenon identified by the acronym NEET (Not in Employment, Education, or Training). This phenomenon has a negative economic and social impact because individuals in that condition are not considered economically productive and complicate already existing social issues such as exclusion, poor behavior, unemployment, low motivation, drug abuse, and lassitude (Hazenberg, Seddon, & Denny, 2014).

In all of the cited authors’ studies, disciplines, such as Business, Information Technologies (IT), Engineering, Accounting, and Health Sciences, are salient as subjects of research. IT and engineering predominate as subjects of analysis in the various
research studies about employability around the world. This fact represents an opportunity to include other disciplines in the scope of employability-associated research.

CIDAC (2014) conducted an assessment of the Mexican situation as to the employment of graduates and recruiting practices. The study originated from the consensus that Mexico needs more young people with access to a university education, more academic preparation, and more synergies between universities and industries to assure academic quality and pertinence. The study revealed that in only seven of the 32 states of Mexico, a few industries had established a relationship with local universities for recruitment purposes, internships, or curricula design. This situation is a determinant in the statement made by Universia Mexico (2014) that approximately 975,000 young people, between the ages of 20 and 29 years, are unemployed because of the prevailing misalignment between industry and university.

More related data can be found in Universia Mexico (2012). According to this source, the amount of time invested by Mexican graduates in searching for a professional position is, on average, six to 12 months following graduation. The main cause for this problem, as referred to by Universia Mexico, is that graduates are not prepared accordingly to what industry recruiters need. In a later study, Universia Mexico (2013) found that only 60% of Mexican graduates obtain employment within the first year. This situation is still referred to by Universia Mexico as caused by a misalignment between academic preparation and industry needs. A year later Universia Mexico (2014) reported that the average university graduate unemployment rate is 8.44% and this rate increased to 14.10% in southern Mexican states such as Tabasco.
According to The World Bank (2017), the world average youth unemployment rate was 13.987% for the year 2014. Youth unemployment is considered in the age range of 15 to 24 years old (The World Bank, 2017). By using the same range of age, the Organization for Economic Co-operation and Development (OCDE, 2016) reported a rate of 17.817% among the 34 countries included in the report for the year 2016, a fact that represents an increase in comparison with what was reported in the year 2014 by The World Bank. In a similar way, Mexico has annually increased its youth unemployment rate since 2012, according to data provided by The World Bank.

For Latin American countries, the average youth unemployment rate was 14% in the year 2014 (The World Bank, 2017). Mexico, Chile, and Brazil are identified as emerging economies in Latin America (Salvatore, 2016). Dal Bianco, Amini, and Signorelli (2017) defined emerging economies as those with persistent growth rates, increasing trade rates, and capital openness. For these three Latin American countries, the youth unemployment rate was 13.83% in 2014 (The World Bank, 2017).

Within the parameters of being an emerging economy in which foreign capitals come to the country creating jobs (Salvatore, 2016), it is surprising that in Mexico it takes this high a percentage of new graduates this long to find work. Youth unemployment rates are increasing in Mexico (The World Bank, 2017). Foreign direct investment in Mexico is also increasing (Secretaría de Economía, 2016). Mexico received foreign direct investments of $10.32 billion in 2000, contrasted with $14.19 billion in 2014, which represents an increase of 37.5% (Secretaría de Economía, 2016). Of the amount reported for the year 2014, the incoming investment flows to the state of Puebla increased 55.8%
since $549.30 million were received in 2000, and $855.80 million were reported in 2014 (Secretaría de Economía, 2016). The increasing arrival of foreign direct investment has resulted in a growing demand for human talent, an odd phenomenon considering the long time invested by new graduates in finding a professional position.

**Historical Background**

Graduates’ employability and curricula alignment with industry needs have been topics discussed in depth by many authors under the concept of an industry/university (I/U) relationship. Many research studies have in common the reference to I/U relationships as a means to close the gap between I/U contexts, which is a determinant in graduates’ employability (Kantane et al., 2015; Owens-Jackson et al., 2013; Sloka et al., 2015). The first studies on graduates’ employability evolved around the idea that grades or academic performance along with preparation for the recruitment interviews were central factors in achieving successful results in a recruitment process (Ahadiat & Smith, 1984).

However, in a dynamic scenario such as the one prevailing in today’s world, Fulgence (2015) pointed to the impact of globalization, economic recessions, and technological change as determinant factors in changing expectations of recruiters. Trends of global or industrial sector scope are also factors impacting the graduates’ profile. Due to these factors, the scope of studies has changed, emphasizing attributes needed in a graduate’s profile which positively impact employability.

Employability has also become a central topic in public policies (Ciuhureanu et al., 2011). According to Ciuhureanu et al. (2011), the European Union has made
employability a strategic pillar for society’s growth and development. Similarly, the Business Council of Australia’s (BCA) and the Confederation of British Industry’s (CBI) leaders’ perspectives were referenced by Jackson and Chapman (2012), concluding that employability skills are an important component of any nation’s economic prosperity. Therefore, the authors of both studies separately concluded that, as a part of educational public policies, universities must redesign their curricula incorporating the right mix of skills to cope with 21st-century challenges.

Ciuhureanu et al. (2011) highlighted the importance of implementing strategies to overcome the low employability rate of new graduates in Europe. Strategies such as the Bologna Process and the Tuning Project have assisted in this respect. According to the European Commission (2016), The Bologna Process is an effort made by organizations such as universities, industries, academic accreditation agencies, and faculty members and students to align bachelor’s, master’s, and doctoral programs to improve academic quality assurance, and to facilitate the mutual recognition of qualifications among the European Union’s member countries. The Bologna Process’ objectives were designed to facilitate the purpose of applying for a job position within the European Union based on harmonized training and educational systems fostering comparable job skills to increase employability.

In addition to the Bologna Process, the Tuning Project was created in Europe in the year 2000 to assess, modernize, and align the degree programs (Tuning Educational Structure in Europe, 2016). The Tuning project was designed to provide uniformity to higher education in Europe and to achieve comparable learning outcomes and
professional profiles. The premise of the Tuning Project is that education impacts employability within the European Union (Tuning Educational Structure in Europe, 2016).

According to Ciuhureaneanu et al. (2011), the European Union’s objective for the year 2020 is a 75% employment rate achievable through strategies implemented at the education system level to convert students into a competent workforce. The expected 75% employment rate of young people (age range from 20 to 24 years old) is consistent with the information provided by OECD (2016), in which the current employment rate for the 28 member states of the European Union is 64.9%. In the context of the European Union, employability is a pillar for a country’s or a geographic area’s growth and is founded on proper education standards.

The Bologna Process and the Tuning Project mentioned by Benamati et al. (2010) are examples of the efforts made in Europe to increase graduates’ employability. These two projects were created to align university curricula, define learning outcomes by means of joint efforts between academia and employers (Kantane et al., 2015), and promote work-based learning in the classroom (Sloka et al., 2015). According to Owens-Jackson et al. (2013), these strategies also positively impact the university’s credibility because curriculum design matches industry needs. Iuliana, Dragos, and Mitran (2014) also referred to this formula for alignment; they stated that I/U alignment meets not only industry demands, but also social needs.

Walk et al. (2013) reported that 75% to 85% of graduates in India are not hirable, 90% in China are not suitable for workplace demands, and 70% of worldwide employees
face difficulties in finding a job in a short time. According to Walk et al., there is a mismatch between the supply produced by the academic system and the demand of the industrial sectors, which is negatively impacting employability because the new graduates’ preparation does not meet labor market requirements. While these data reflect the reality of employability seen from a macro-level perspective, the graduates’ perspective is also important.

The findings of Carnevale et al. (2013) and Walk et al. (2013) asserted that young people are taking a long time to launch their careers and be accepted for a job in the American context. Graduates around the world are investing more time to find employment. In Mexico, the rate of youth unemployment (ages from 15 to 24) has risen from 5.1% in 2003 according to Universia Mexico (2013) to 8.6% by 2015 as reported by OECD (2016). According to the Sistema de Información Empresarial Mexicano (SIEM, 2016), from 2004 to 2016 the number of industries in Mexico increased 14.12%. The hiring of college graduates, however, has not kept pace with this increase.

The literature in the field has revealed that employers are facing difficulties in finding the right talent (Scott, 2014), mainly because new graduates do not meet industry needs (Walk et al., 2013). Additionally, Serban and Aceleanu (2015) stated that the evolution of the demographic composition of the labor market also negatively impacts the availability of human talent. However, this trend is opposite to the Mexican reality, since in Mexico there is not yet a remarkably declining birth rate (INEGI, 2015), as is the case in other developed countries. A not-declining birth rate aggravates the job search problem addressed by the present research, making the understanding of industry needs to make
decisions within a university context to increase graduates’ success in finding a job position, more important or relevant.

**Deficiencies in the Evidence**

After reviewing previous research on the topic, several research gaps have been identified in both of the following areas: university curricula in alignment with industry needs and time to employment. University curricula aligned with industry needs is more frequently mentioned than time to employment. In many of the research studies, the need to increase the I/U relationship to enhance graduates’ suitability for employment is recommended.

I/U relationships and their outcomes have been studied by many authors. Among the more cited, Betts and Santoro (2011) encouraged actions to increase I/U relationships because both parties can gain: universities get access to practical problems, real-world based case studies, and additional funds for research, while industries have access to well-trained students and research projects, leading to intellectual property generating outcomes. In a similar fashion, Nkang (2013) stated that I/U relationships promote innovation, technological advancement, research, mutual assistance, development of a competitive workforce, and knowledge exchange. All of these issues are considered advantages for both parties involved, according to Nkang.

Much research is being conducted into the benefits of building a closer I/U relationship. There were only a few studies of the I/U relationships that focused on graduates’ employability. The authors performing these studies reached the conclusion that I/U relationships should permit industries to gain access to human talent. For
instance, Chandrasekaran, Littlefair, and Stojcevski (2015) stated that a vital pedagogical component of university instruction is the practical approach gained through a closer I/U relationship that produces a positive impact on graduates’ readiness for workplace performance. Malik and Wickramasinghe (2015), in agreement with Chandrasekaran et al.’s conclusions, proposed that developing countries should follow the example set by industrialized and developed economies in finding in the I/U relationship a formula for graduates’ competitiveness.

However, there is still a research gap about I/U relationships for enhancing the employability of recently graduated students and reducing the time to employment. As stated above, despite the fact that graduates’ employability is a topic of intense research, time to employment is only collaterally mentioned as a consequence of the I/U misalignment. Many authors focus their attention on the deficiency of academic preparation to make graduates employable, which increases the time to employment; but few authors make time to employment a central focus for research (Carnevale at al., 2013). This situation represents a research gap for which the present research study’s findings can be used to assist the leadership at the university to resolve.

The United States is notable in the number of research studies addressing the topic of graduates’ employability, followed by many countries in the European Union. But, no other regions or countries have dedicated equivalent amounts of effort into investigating the topic. This situation does not diminish the importance of the topic, but the currently prevailing conditions of new graduates’ unemployment alert nations and economies to
the consequences of not addressing this problem, commonly referred to as NEET (OECD, 2016).

Several authors are also contributing to an understanding of the state-of-the-art in Australia, Malaysia, Iran, and Canada, respectively (Bagherinia et al., 2015; Hamid et al., 2014; Messum, Wilkes, & Jackson, 2015; Rajkumar et al., 2015; Walk & Wright, 2014). All of these authors have researched employability skills that need to be present in the graduates’ profile to fulfill industry needs, a topic that will be further discussed and analyzed in the next chapter. However, there is no substantial research being conducted within the Latin American context. Specifically, in the Mexican context, the effort to study a related topic was made by CIDAC (2014), but it was neither focused on graduates’ employability nor in the alignment of industry needs with university curricula. Its research is centered on a side issue: the Mexican industrial composition and the university’s capacity to supply suitable graduates. This situation represents a research gap to be addressed by the present study.

Many academic disciplines have been analyzed in an intent to increase graduates’ employability. Kantane et al. (2015) researched Information Technology (IT) students’ employability, finding that employers look for generic skills more than professional skills when recruiting. As a consequence of their study, the authors’ conclusions referred to the need of having the right attitude and motivation to be employable at the IT field. However, generic skills are not only confined to IT graduate’s profile or demanded by recruiters of IT graduates. As stated in the following paragraphs, other areas are also demanding this type of skills.
In the area of health care, Messum et al. (2015) also investigated employability skills. After interviewing 40 managers in New South Wales, they concluded that job skills and industry knowledge were less important than communication skills, critical thinking, and self-management. In disciplines such as business, accounting, engineering, and education researchers like Gokuladas and Menon (2014) and Walk et al. (2013) have reached similar conclusions.

However, little research is being conducted to match the graduate’s profile with a specific industry. Meenai and Ahmed (2012) selected 30 multinational firms in industrial sectors as diverse as textile, leather, automotive, and pharmaceutical located in Pakistan to inquire about business graduates labor market accessibility. The authors concluded that business students in Pakistan are educated according to national industry needs. In Canada, Walk, and Wright (2014) interviewed 24 managers from international companies of diverse industrial sectors about the skills needed to perform in global settings. The authors concluded that graduates must be prepared with global skills to be successful in the labor market.

The studies referred to are broad in scope, which means that the researchers performing these studies did not focus on a single industrial sector. They tried to cover the needs or demands of all sorts of industries. In contrast, the present research study is focused on just one industrial sector: the automotive sector in Puebla, Mexico, because it is the main recruiter in the area. A narrowed scope to address the needs of a particular industrial sector in alignment with a professional discipline (business) has not been part of previous research. For that reason, any contribution made by the present research will
be the first step in advancing the state of the art, as will be evidenced in the review of the literature included in Chapter 2.

**Problem Statement**

According to figures provided by the Instituto Nacional de Estadística y Geografía (INEGI, 2015) and OECD (2015), in Mexico the average national unemployment rate is 4.4%. However, the rate of youth employment in the country is 8.6% (OECD, 2015). Only 60% of Mexican graduates obtain employment within the first year after graduation (Universia Mexico, 2013). The longer than the average length of time it takes recent graduates to obtain first-entry employment in their chosen profession is a problem because it is a determinant in the associated negative social and economic impacts or consequences of the NEET phenomenon such as economic unproductivity and lassitude. The problem of time to employment can be ameliorated if a graduate’s preparation and industry needs are aligned.

The problem addressed by the present research study was the longer than average length of time invested by new graduates to find employment. Focusing the case analysis on the automotive industry located in Puebla, Mexico and the academic programs of the UPAEP’s School of Business helped to address this problem. The UPAEP’s leadership can use the findings to enhance the business graduate’s profile, which will assist their job search process.

The automotive sector was selected due to its contribution to the country’s and state’s GDP. The Secretaría de Economía (2016) reported that the automotive sector is the fourth most important source of employment in Mexico and the first one in the State
of Puebla. Among the many professional disciplines demanded by the automotive sector, business was selected because automotive operations are international in scope, framed by international trade dynamics, logistics-based networks, and business administration strategies (Audi, 2016). In addition to engineering, business positions are in high demand in the automotive industry in Puebla.

**Audience**

Mexican universities can profit from this knowledge, as can university graduates. Enhancing the creation of I/U relationships, by aligning the two realities of industry needs with university preparation, will enhance graduate employability. If the university improves its graduates’ profile to meet industry needs, industry will also benefit from having access to well-qualified human talent.

**Specific Leadership Problem**

The specific leadership problem addressed by the present research study is the employability of university graduates. This study sought to apply research in a way that can improve time to hire. University leaders don’t always know how well their programs align with industry needs. When an alignment is not there, employability suffers. With a strong alignment, employability improves. This is a matter of envisioning a better future for a school and for students.

Since education is a human-intensive activity, providing the human talent with a focus is indispensable to be successful and meaningful to society. Envisioning the future is one of the main characteristics and a goal of leadership (Kouzes & Posner, 2012). The leadership task represented in the present research study is related to envisioning a better
future concerning graduate employability. The UPAEP’s leaders can use the information for decision-making concerning graduates’ employability. Curricula adjustments can be made as needed to enhance the new graduates’ suitability for the exercise of professional functions in a short period.

The shared vision of reducing the time invested in securing a job after graduation by aligning industry needs with university curricula represent an effort. The industry needs, aligned with university curricula, can enhance the communication between industry and university to build a suitable professional profile. The goal of improving the graduates’ professional profile is an inspiration, a driving force, or a common goal for the university’s stakeholders to make a difference regarding commitment to graduate employability.

Leadership is the act of guiding others through challenges (Kouzes & Posner, 2012). In the Mexican context, establishing an I/U relationship is a challenge that implies a shift in the current paradigm of I/U relationships. With this in mind, the present research study also contributes to a paradigm reinvention within the Mexican education landscape impacting diverse industrial sectors, universities, and areas or disciplines different from business. A transformational approach to leadership, understood as an environment open to inquiry, discovery, and new opportunities (Ernst & Chrobot-Mason, 2011), is also a leadership theory addressed by the present research study.

**Purpose of the Study**

The purpose of this research study was to identify the needs of Puebla’s automotive industry in terms of human talent and to contrast them with the current higher
education curricula in business studies. These two factors were subjected to a comparative analysis with the objective of assisting in the process of decision-making within the UPAEP’s School of Business for increasing graduate employability. The study was conducted as a research-based contribution to reducing time to employment since an alignment between industry needs and university curricula provides students with a suitable preparation for workplace readiness. Findings and conclusions can contribute to moving others to action regarding graduates’ employability, to build a closer I/U interaction, and to assist recruitment’s process of new graduates in the field of business within the automotive industry in Puebla, Mexico.

Methodology Overview

The problem addressed by this research study was to reduce time to the employment of new business graduates within the automotive industry in Puebla. The research study was accomplished through a qualitative approach to investigate the alignment between the automotive industry’s needs and the university curricula in business disciplines. Interviews were conducted with automotive industry recruiters in Puebla to identify the industry’s needs in terms of human talent. A document analysis was additionally made for the UPAEP’s assessment of its Business School.

The participants were recruiters selected from 11 of the 68 companies in the automotive sector in Puebla reported in the automotive cluster study performed in Puebla by Cordero et al. (2015). As suggested by Baker and Edwards (2016), selection of participants was made taking into consideration time and resources available, but special characteristics were also looked for in the participants’ profile according to the purposive
sampling technique (Guarte & Barrios, 2006). Their opinions were analyzed with the intent of reaching a full understanding of the desired SKABs that allow the selection of future employees. In-depth understanding of the participants’ insights or needs was the cause of selecting a qualitative methodology to conduct the present research study.

Additionally, the content of the UPAEP’s School of Business programs (university curricula) was also analyzed. These two sets of data were then compared to determine if the findings match the industry needs and to find similarities or differences that could assist in decision-making favorable to new graduate employability. All the variables interplaying in the methodology selected for this research study will be discussed in Chapter 3.

**Research Questions**

The main research question is aligned with the intention of uncovering a gap between industry needs and the university curriculum to address the problem of time to the employment of new business graduates. The main research question is:

1. What gaps exist between the skills, knowledge, abilities, and behaviors industry recruiters’ desire and the skills, knowledge, abilities, and behaviors business students learn through UPAEP’s curriculum?

To address the main research question, two additional questions were added, covering both sides of the research: interviews with automotive industry recruiters and document analysis of the UPAEP’s School of Business curricula. The questions are:
2. According to automotive industry recruiters, what are the skills, knowledge, abilities, and behaviors sought for when recruiting a potential candidate for employment?

3. What are the skills, knowledge, abilities, and behaviors business students learn based on UPAEP’s curriculum?

**Study Limitations**

The findings obtained by this case study were of local scope. This narrowed scope was one of the study’s delimitations (Simon & Goes, 2013). This delimitation means that the conclusions cannot be applied to other contexts. However, as stated by Stake (1995), the understanding of a particular context or settings is the uniqueness and richness of a case study. Consequently, it is natural to delimitate the scope of the study.

The study only focused on one industrial sector from the multiple sectors that can be benefited by the research conclusions. This approach is what Stake (1995) referred to as case study particularization. This concept was also used by Yin (2014) when asserting that case studies are not generalizable to populations, but to theoretical propositions. Therefore, a limitation is the fact that findings and conclusions may not apply to other contexts.

In terms of the research topic, another limitation existed such as time (a very rare asset in the participants’ agendas). Besides, Yin (2014) mentioned that case studies tend to last a long time, a situation that is a potential limitation for producing applicable proposals following the findings of the given research topic. Narrowing the scope of the case study was an action that helped minimize the impact of this potential limitation.
Finally, the language barrier was anticipated to be a potential limitation of the study. Spanish is the official and native language in Mexico. For this reason, language barriers were also considered as a potential limitation to the study. However, the interviews were conducted in English, the official language of the American institution supervising this research case study. Since the automotive industry in Puebla is of foreign origin, most of their personnel are fluent in English. All of the limitations of this research study, along with its implications, are discussed in Chapter 3.

**Definitions of Key Terms**

Throughout this study, many terms and concepts, such as employability, industry needs, and university curriculum, among others, will be used constantly. For that reason, it is important to provide definitions to arrive at a common understanding of their elements and implications. Following is a glossary of terms to provide a common understanding of concepts.

**Abilities.** Latent traits or talents acquired through a systemic performance of a task. Experience in performing a task is needed to acquire an ability, because abilities imply a sophisticated learning process (Asaph & Dharma Raja, 2016). For the purpose of the present study, abilities are understood as the capacities acquired after repeating or getting familiar with a task.

**Behavior.** Attitudes that result from the interaction between the individual and the environment to accomplish certain purposes (Lazzeri, 2014). For the present case study, these attitudes or responses to the environment are related to ethics, values, social norms,

**Employability.** The “ability to make the leap from formal education or training to a first job” (Hofaidhllaoui, 2013, p. 25).

**Graduate’s Profile.** The set of skills, knowledge, abilities, and attitudes found within a university graduate after university preparation, which is intended to make them employable (Riklan, 2014).

**Hard Skills.** Capacities of technical scope acquired through training (Laker & Powell, 2011).

**Human Talent.** The combination of ideas, skills, knowledge, abilities, and potentials that can be innate or developed in individuals to positively contribute to the company’s productivity and performance (Piansoongnern & Anurit, 2010).

**Industry Needs / University Curriculum Alignment.** The harmonization of industry requirements, in terms of human talent, with the SKABs transmitted to graduates through university preparation. Industry needs and curriculum alignment responded to the focus of the present research study: the Puebla automotive industry and the UPAEP’s School of Business.

**Industry Recruiters.** Individuals in charge of conducting hiring interviews and making decisions to select a candidate for a job position. The recruiter’s job knowledge, information of job needs, and job attributes impact the recruitment effectiveness within an industry (Hofaidhllaoui, 2013). For purposes of this study, industry recruiters were those in charge of hiring interviews for the automotive industry in the Puebla region.
**I/U Relationship.** The relationship between industry and university in which their objectives are reconciled or complemented, integrating their resources via different forms of collaborative work (Malik & Wickramasinghe, 2015). I/U relationships enhance the graduate’s profile for employability.

**Knowledge.** The information about a particular issue, which permits understanding of the topic (UNICEF, 2017).

**Recruitment.** The organizational process for finding and hiring suitable individuals for a job position, which contributes to job performance, competition, sustainability, productivity, and efficiency (Aravamudhan & Krishnaveni, 2015, Benamati et al., 2010).

**SKABs.** Acronym used to identified skills, knowledge, abilities, and behaviors in a graduate’s profile.

**Skills.** The talents or capacities to carry out a task (Laker & Powell, 2011), which allows individuals to navigate in the society and labor market (Care & Griffin, 2014).

**Soft Skills.** Capacities of intrapersonal and interpersonal focus that can be transferred among different contexts (Care & Griffin, 2014). Soft skills are divided into three categories: cognitive skills, social skills, and global skills (Care & Griffin, 2014).

**University Curriculum.** What is being taught at the university level, a central piece in the university’s efforts to achieve educational goals, to prepare an expert labor force, and to gain permanent personal development (Bagherinia et al., 2015).
Summary

In this research study, in-depth interviews were conducted with recruiters from the automotive industry of Puebla to identify the desirable characteristics of recently graduated business students. University-originated parameters such as SKABs to perform job tasks were analyzed with participants to define the needs of industries in Puebla’s automotive sector in terms of human talent. These findings were compared with the university curricula of the UPAEP’s School of Business to detect any potential gap in student preparation.

Mexican universities can profit from this knowledge, as can new university graduates by decreasing the time invested in finding a job position. The industry can benefit by securing qualified human talent. By means of aligning university curricula with industry needs, the graduates’ employability can improve while the current landscape of I/U relationships in Mexico shifts to a new paradigm in which joint efforts are made for the benefit of all participants. Research into the topic can also be raised to a level similar to that prevailing in the United States and Europe, but presently absent in the Latin American and Mexican contexts, as revealed by the literature review, which is described and analyzed in Chapter 2.
CHAPTER 2: LITERATURE REVIEW

Introduction

Carnevale et al. (2013) pointed out that new graduates are taking a long time to launch their careers and to be employed due to the shift from a product-based economy to an information- or knowledge-based economic model. Not having the right set of employability skills is a reason that contributes to this problem of a long job search or low compensation (Chiu & Chuang, 2016; Patache, 2016). The graduates’ preparation must meet the level of performance required by industry to contribute to a firm’s development and growth (Zamora et al., 2011). Pradhan (2016) asserted that faculty members, teaching-learning processes, examination systems, and the assessment of local conditions are determinants of the quality of education. The graduates’ suitability has to be demonstrated in the recruitment process, in which the graduates’ preparation must meet the level of performance required by industry.

The purpose of the present case study was to identify the needs of Puebla’s automotive industry in terms of human talent. The findings are a source for decision-making to reduce the time invested by recently graduated students from the UPAEP’s School of Business in finding their first professional job, through aligning university curricula with industry requirements. Envisioning a better future for graduates’ employability, a leadership-related concept, is an inspiration. A new paradigm of a closer I/U interaction in the Mexican context can positively impact the graduates’ employability.
Three central areas of knowledge were analyzed to achieve the purpose mentioned above, to answer the research questions, and to provide university leaders with this information so their new graduates’ profile can meet the industry needs. Those areas are: what universities teach their business students, what industry recruiters want, and university outputs and industry needs. The section devoted to what universities teach focused on defining the elements inherent in business education. This perspective is useful to understand the approaches employed in business education in terms of what SKABs are transmitted to students. The section of this chapter in which what industry recruiters want was analyzed to help in the understanding of what is demanded or desired in a graduate, according to research-produced findings. Finally, the investigation of university outputs and industry needs was performed to find possible solutions to reduce the potential misalignment between industry and university that is affecting graduates’ employability.

**What Universities Teach Their Business Students**

Research results indicate that education is the main driver of a nation’s development, welfare, and competitiveness (Badea & Angheluta, 2015; Lopez-Leyva & Rhoades, 2016). Researchers have also found that educated society is one that produces economic advancement (Badea & Angheluta, 2015), and attracts the establishment of industrial facilities for job creation and further development (Global University Summit, 2013). According to Nkang (2013), education is the central element in achieving national development. At the workplace, innovation is expressed by efficient management systems, which are conducted and implemented by human talent (Bugnar, Mester, &
Fora, 2016). For that reason, aligning university curricula with industry needs is an exercise of joint efforts, which are a prelude to competitiveness and employability. Looking first at the university side, education serves several purposes.

Research literature appears to list several purposes of a university education. Diaconu and Dutu (2016), along with Monds (2015), posited that university education represents opportunities to learn and to be an entrepreneur. Paez-Logreira, Zamora-Musa, and Velez-Zapata (2016) mentioned that the university is a source of knowledge and innovation. Zamora et al. (2011) stated that university education is the platform from which specialized talent, able to deal with challenges of the professional labor market, is prepared. According to Raiso and Lundström (2015), university education permits the understanding of the complexity of today’s reality. Dostaler and Tomberlin (2013) and Fildes (2017), indicated that research is a result of university preparation, while Akareem and Hossain (2012) and Nkang (2013), mentioned economic development as an outcome of university instruction. Finally, Iuliana et al. (2014) stated that university education fosters knowledge and development by including new labor market requirements and sociological components into curricula. Each of these research efforts can be seen as adding support for gaining a university education and for nations to support this. This may be particularly true for individuals who want to develop the SKABs sought after by business and industry.

From the university’s perspective, the goal of meeting industry requirements is pursued with the intention of preparing students with the SKABs to be employable. There are at least two studies, Azevedo et al., 2012 and Jeswani, 2016 that support this. Also,
According to Elkins et al. (2016) and Potestio (2014), employability is improved if the individuals receive the right education for their workplace performance. Employability is understood as the set of skills, knowledge, attitudes, and personality, which make an individual successful in gaining employment after completing a formal process of education or training (Hofaidhllaoui, 2013) and maneuvering within diverse workplaces to improve the quality of life (Hamid et al., 2014). Other sources also appear to support the connection between the possession of specific characteristics and student benefit.

The European Students’ Union (ESU, 2014), for example, mentioned that employability allows labor market mobility. Employability’s inferred elements are social and individual SKABs, incorporated into the professional’s profile. A graduate’s employability is directly dependent on the individual’s capacity to manage change (Olson & Shultz, 2013) and be suitable for workplace demands (Hamid et al., 2014). It is likely for these reasons that Olson and Shultz (2013) advised that emphasis must be placed not only on the graduate’s mastery of technical skills, but on the graduate’s ability to adapt, innovate, and search for continuous improvement.

For the purpose of this research study, only business-related academic programs were assessed against industry needs because business related positions are highly demanded in the automotive industry located in Puebla (Audi, 2016). The literature review revealed that business contents or programs are studied to understand the way in which this academic instruction is delivered. The literature on the topic provides a largely descriptive approach to what universities teach, permitting the identification of what SKABs universities offer to prepare graduates to occupy business-related positions.
For a historical perspective, Clinebell and Clinebell (2008) found that business schools have delivered academic instruction in two ways: using an academic approach to business as a discipline, and a practitioner approach to the same field of knowledge. Traditionally, the academic perspective has been emphasized, amalgamating teaching styles to those used in other disciplines such as sciences and economics (Tan, Satin, & Lubwama, 2013). However, the practitioner and blended models of education are implemented nowadays on a more frequent basis (Clinebell & Clinebell, 2008). Tan et al. (2013) and others appear to provide support for this change.

Tan et al. (2013) described the traditional approach to business education as a state of a passive listening attitude from students which is not optimal for student learning. Similarly, Kickul, Janssen-Selvadurai, and Griffiths (2012) stated that business models used to teach about organizations in descriptive terms and did not promote active participation from the student’s side. Tan et al. stated that this kind of traditional education requires students to solve the assigned tasks, reinforce lectures with reading materials, and summarize the main ideas in written reports. According to Tan et al., this traditional approach is useful for integrating knowledge about business with the technical skills needed for professional practice. The literature indicates, however, that the traditional approach has its critics.

For example, studies conducted by Clinebell and Clinebell (2008), Lastner, Rast, and Andzulis (2016), and Tan et al. (2013) all take issue with traditional approaches to business education. These, and others, find that the main challenge faced by a business school is the rapid pace of the modern world and the changing dynamics of a globalized
world (Carnevale & Smith, 2013) which are not incorporated into the curricula as fast as needed. Connected with this is technology and the impact it too has on the work world. Technology is a determinant in speeding the pace with which industries create, innovate, trade, and negotiate on a worldwide basis. As a consequence, business schools need to keep up with the pace of the technology used for industrial and educational purposes (Muenjohn, Pimpa, Montague, & Qin, 2016). If not, the traditional model of business education lacks relevance and application. There are a number of sources that posit adaptive curricula design as a way to overcome this misalignment.

Sloka et al. (2015), for example, discusses the incorporation of work experience and work-based projects into academic preparation is important. In addition, Dobratz, Singh, and Abbey (2015) and Sloka et al. (2015) suggested student work experience or practicum experiences while still in the academic program can supplement formal studies. But, these experiences represent a challenge for professional profile creation because universities and industries must be aligned for the new professionals’ preparation (Iuliana et al., 2014). In addition to soft skills, the understanding of industrial activities and the use of sophisticated technologies are part of the characteristics expected by industry leaders when hiring new employees (Azevedo et al., 2012).

Even before the work of Iuliana et al. (2014) and Azevedo et al. (2012), there were those who promoted and found evidence of this kind of innovative educational approach as essential to graduating employable students. As discussed earlier, Clinebell and Clinebell (2008) reported that business schools are switching to a more pragmatic way of teaching business-related disciplines. They referred to this more recent term as the
practitioner model. The practitioner model is increasingly used because it encourages the use of relevant knowledge. Clinebell and Clinebell suggested that faculty transmits knowledge with real experience in the field of business. A number of researchers appear to promote this type of transition.

Changing to what is more commonly now being referred to as a professional approach to education, Clinebell and Clinebell (2008) promoted the analysis of cases. The inclusion of cooperative learning to apply knowledge is spoken of by Tan et al. (2013). Sloka et al. (2015) discussed the use of experience-based scenarios such as internships to develop additional skills. The implementation of strategies in which educators and practitioners together address teaching processes is also put forth (Congleton, 2014). Faculty members can use these practical approaches to respond to the graduates’ needs of being professionally adaptive and innovative; factors demanded by today’s economy (Zamora et al., 2011), and important features of personal performance in the business environment. Like most things in life, however, a most beneficial direction is not likely to be had in one approach or the other but rather in an amalgam of both.

Kickul et al. (2012) supported this notion. They found that neither the traditional nor the professional approaches to business education by themselves suffice to create a most employable graduate. The traditional model, also called scientific model, preserves the quality of education. In the traditional model, educators advocate for academic rigor and conceptual foundations of the discipline (Clinebell & Clinebell, 2008). According to Kickul et al., this approach favors the creation of skills related to the identification of
business opportunities, finance, risk management, economic growth of organizations, and human resource management. But, it does not favor the ability to interconnect knowledge across disciplines, extrapolate scenarios, critical thinking, communication, presentation skills, and teamwork (Tan et al., 2013).

Therefore, experiential learning, as Lastner et al. (2016) call it, is needed to improve the suitability of business education. Business schools incorporate experiential learning to complement the traditional model and overcome the problem that universities are blamed for not preparing suitable graduates (Carnevale et al., 2013). Complementary, Runhaar, Ten Brinke, Kuijpers, Wesselink, and Mulder (2014) emphasized that a blend of traditional and real-world-based education is taking place in the discipline of business. Thus, this educational trend is causing the creation of a comprehensive business profile in which transdisciplinary teamwork, workplace-related experiences, and innovative teaching techniques are fostered (Runhaar et al., 2014).

Since education must be of quality and pertinence for employability (CIDAC, 2014), universities are obligated to identify and analyze industry demands and to incorporate them into the student’s preparation. Thereby, the university’s mission of forming future professionals who can fit and be competent in the diverse disciplines is achieved. For that reason, business schools are blending the traditional model with the practitioner model by increasingly and systematically using case studies, simulations, role-playing techniques, student-driven learning, and collaboration with industry (Lastner et al., 2016).
This new approach stimulates the creation of soft skills through the joint efforts of academia and industry (Lastner et al., 2016). Authors like Wright, Paraoutis, and Blettner (2013) expressed ideas consistent with Lastner et al.’s (2016) propositions. Wright et al. (2013) mentioned that the inclusion of work experience into the classroom forces students to think beyond rigid models, elaborate new ideas, deal with multiple and demanding factors at a time, and see interconnections of complex and diverse actors and elements to provide solutions.

In contrast, the traditional model of business education provides a theoretical frame to reality by teaching conceptual tools. Business associated concepts can be applied via a real world learning based strategy to real contexts (Wright et al., 2013). This is known as a blended model of business education, by which universities are trying to reduce the gap in employability skills about which industries complain.

The matching theory of educational processes explained by Mason, Williams, and Cranmer (2009) stated that graduates prepared with labor-market-needed skills are in a better position to enhance their employability. This phenomenon is referred to as the quality of the employer-graduate relationship. The matching theory’s principle proposes that employability rates increase with higher levels of education, which can potentially lead to higher-level positions. That is what top-tier universities (Jacobson, 2015) and internationally competitive educational institutions (Nkang, 2013) are doing to be assertive in preparing future professionals. In shaping business curricula then, it is advisable to determine if the university is intending to be a top-tier university with closer interactions with business and industry.
In addition to addressing the topic of a university’s alignment with labor market demands, there are other issues that business education is challenged to meet. Some of these issues are ethics, globalization, entrepreneurship, and internships in business education. The remainder of this section will address studies that explore these topics and discuss their application to the present study.

**Ethics in Business Education.** Business schools have been blamed for the recent financial crisis and are urged to revise how business ethics is being taught (Jorge & Peña, 2014). According to Tan et al. (2013), students are enrolled in business-related degrees to learn how to run a business and create profit maximization, which explains why courses in economics and free-market competition are central elements in business education. But social responsibility, corporate responsibility, and business ethics, in general, need to be emphasized in business schools’ curricula (Jorge & Peña, 2014).

Due to societal demands, some business schools are also incorporating ethics and social responsibility courses into the curricula, which so far are not included in two-thirds of business school programs in the United States (Floyd, Xu, Atkins, & Caldwell, 2013). This shift reflects the business schools’ responsibility of promoting a comprehensive and blended approach to business education. A blended approach is recommended for all types of graduate’s profiles because it fosters soft skills development as a determinant in employability (Mason et al., 2009). Soft skills, as will be discussed later in this chapter, are more demanded than hard skills in all industrial sectors.

Since the world is cross-functional, students have to learn that business decisions not only affect the business organization itself but also have implications in other areas.
Including ethics, accountability, and corporate governance courses are suggestions provided by authors like Jorge and Peña (2014), which have been echoed in business curricula design. By doing that, universities are also promoting the development of soft skills like leadership, alternative solutions, creativity, responsibility, and social engagement. Good moral habits influence the performance of future leaders (Floyd et al., 2013). Floyd et al. (2013) suggested to keep including ethics in business curricula as is happening today.

**Globalization of Business Education.** Besides dealing with the complaint about ethics courses not being present in the curricula, researchers also appeared to recognize a lack of and a need to infuse internationalization in business curricula. Global diversity and international concerns or trends impact business in today’s interconnected world, in which global leaders are needed (George, 2015). Walk et al. (2013) is another source that promoted the importance of including international issues and culture-related topics into business education to promote global competencies.

According to Jamison, (2013), globalization must be seen as a central learning outcome for those who will professionally manage business entities. The Association to Advance Collegiate Schools of Business (AACSB, 2016), a nonprofit organization of educational institutions and entities related to business and management education, also urged business schools to incorporate global business environments into curricula. Knowing the nature of global business today, logic alone would be support enough for this addition to business curriculum. One must not rely on logic alone to advice this update. The reason for this demand is not only based on the need to academically
understand the global environment, but also on the intent to develop the international dimension of skills in future employees (Hristova, Petrovska, & Dimitrova, 2013).

Despite the fact that a global perspective is still not systematically inserted in business education (Jamison, 2013), business schools are making efforts to introduce the concepts via some courses related to global studies, globalization, cross-cultural education, etc. (Hristova et al., 2013). Additionally, other strategies of a more experiential approach have been implemented. Business schools are increasingly promoting mobility, academic exchange, and international partnership or accreditations (AACSB, 2016; Hristova et al., 2013).

The findings of Jamison (2013) agreed with Hristova et al. (2013) in advocating for the internationalization of curricula by business schools. Both asserted that it is not only via courses or seminars that students gain global awareness. Both also suggested that other strategies be used to propel the development of critical thinking and problem-solving skills for international context issues. Yet these are not the only studies on this topic. More articles suggest the value of this topic in business studies today. Dollwet and Reichard (2014) and Stahl and Brannen (2013) both expressed the idea that international operations require the inclusion of global and cross-cultural skills in graduates, a fact that should be taken into consideration since Puebla’s automotive industry is international in origin and scope.

Courses like Introduction to Business, which tends to be one of the traditional knowledge transmitted to students, must be complemented with world history and culture seminars. Exposure to real cross-cultural scenarios is an experience to enhance the
student’s business education (Jamison, 2013). A global mindset is also a soft skill desired by employers (Akarreem & Hossain, 2012).

In addition to the ideas expressed by Hristova et al. (2013) and Jamison (2013), Egan and Bendick (2008) affirmed that faculty must be comfortable with not just teaching cultural differences; instead, an applied perspective of how culture impacts business must also be used to avoid multicultural miseducation. Egan and Bendick stated that universities are still not using this approach, a situation that can create disadvantages for students when entering the workplace. Cultural intelligence, as well as tolerance and acceptance are other soft skills promoted through this teaching approach. These too have practical business applications that employers desire (Li, Mobley, & Kelly, 2013).

A review of the research appears to indicate that knowledge related to globalization, cultural appreciation, and intercultural fluency are keys to success in the business world today. Business schools that incorporate studies of these topics into their work are likely to give their students a leg up in the hiring process. Schools that ignore this change are likely to put their students at a disadvantage.

In addition to ethics and topics related to business globalization, entrepreneurship is another topic area that is regularly mentioned in discussions having to do with updating business curriculum.

**Entrepreneurship in Business Education.** Studies that discuss entrepreneurship in business education seem to approach the topic from two different perspectives, one set has to do with support for adding this body of knowledge into business school curricula,
the other having to do with the status of entrepreneurship education today and what it should include.

With the intention to improve business education, which is dynamic and involves a proactive attitude to challenge assumptions and given settings to improve or innovate, Parker and Pearson (2013) promoted the inclusion of entrepreneurship in business education. According to Kickul et al. (2012), entrepreneurship education has been given little attention in business curricula since business schools emphasize management of existing organizations instead of creating new ones. However, because open positions can be filled by people coming from all corners of the world (Nkang, 2013), trained with transferable and hard skills (Zamora et al., 2011), self-employment is an avenue that can be pursued to overcome graduates’ unemployment.

Complementing this, some business schools implement the integration of entrepreneurship into business curricula with the intention to foster self-employment. Entrepreneurship education fosters the development of soft skills such as emotional intelligence and networking (Melkinova & Zascerinska, 2016). Collaterally, skills related to leadership, persuasion, negotiation, and opportunity identification are also improved (Dobratz et al., 2015) as an effect of entrepreneurship instruction.

As mentioned earlier, other researchers take an academic view of the subject – splitting the subject area up into smaller content pieces. One example of this is the work of Melkinova and Zascerinska (2016). According to Melkinova and Zascerinska, there are three sets of competencies generated through entrepreneurship education: strategic competency, conceptual competency, and organizing competency. In the three sets of
competencies, soft and hard skills are mixed, improving the future performance of graduates, as also suggested by Kickul et al. (2012). Dobratz et al. (2015) referred to the same set of skills as consequences of entrepreneurship instruction.

**Internships in Business Education.** As discussed earlier in this chapter, the practitioner model promotes experiential learning. But is this change a matter of chasing a fad, or a change worthy of the effort? Research appears to support the latter. According to Zamora et al. (2011), internship programs should become a central element of business education. Zamora et al. performed a curriculum analysis at the Technological University of San Juan del Río with the intention of identifying the skills that a university graduate must have in the area of IT. Zamora et al. arrived at the same conclusion: internship programs can enhance the graduate’s level of competence for a job position. This finding wasn’t made in business education alone.

Several authors who studied diverse industries from different sectors referred to internship programs as a means to transform I/U collaboration into employability tools. As an example, Owens-Jackson et al. (2013) suggested the use of internship programs to increase the university’s credibility. And, Rajkumar et al. (2015) conducted a survey with 697 students from IT programs at a university in India and six IT services companies, concluding that internship programs contribute to the enhancement of the recruitment processes. Though these studies demonstrate the versatility of internships in different academic programs, the narrative in this chapter will stay focused on internships in business programs.
Internship programs can be incorporated into any academic curriculum as an indispensable input for the graduate’s suitable profile. The university’s leaders will be achieving the goal of educating future graduates as expected by society by inserting this real-life project into curricula. Despite the fact that internships build a valuable bridge for job performance, Dobratz et al. (2015) pointed out that internships are not a mandatory requirement in all businesses schools. In fact, Dobratz et al. reported that only 6% of business schools in the United States had made internships a formal requisite for graduation. The AACSB (2016) indicated that the need for internships to connect the students with real-world scenarios is a way of getting university and industry into closer proximity for enhanced employability purposes.

According to Dobratz et al. (2015), internship programs are designed to promote the development of teamwork, information management, communication, and diversity adoption skills. An increased rate of job satisfaction and desirable recruitment sources for industries are products of internship programs. This last statement is consistent with what Benamati et al. (2010) mentioned in the context of having university curricula aligned to the needs of industry. Whether based in sound research or not, it seems clear that internship experiences are likely to remand an aspect of business education.

Whether it’s through the teaching ethics, globalization, entrepreneurship, or use of internships, I/U alignment helps to develop a desirable graduate profile, which is a positive indicator to recruiters. Universities’ leaders must work to keep up with industry demands to reduce the gap between academic instruction and industry needs. If the role
of the university fails to be implemented, the consequences will be felt in the unemployment rate and the underutilization of graduates’ skills.

In summary, lecturing from a traditional model scope enhances theoretical background acquisition. However, the course offering of business schools is adopting a praxis-based education model by incorporating global perspective, ethics, cultural intelligence, experiential learning, and entrepreneurship into curricula (AACSB, 2016; Floyd et al., 2013; Li et al., 2013; Lastner et al., 2016; Parker & Pearson, 2013). A blended model of education is the current trend in business education, which can assist the employability rate by aligning I/U realities.

Businesses schools are changing to a more practical approach (Clinebell & Clinebell, 2008), but it is burdened by the fact that there is still a gap between what is taught especially on topics such as global skills, entrepreneurship, and soft skills, and what a recruiter is expecting. So, the concern expressed by Universia Mexico (2012) about the I/U misalignment, highlights the importance of identifying industry needs and defining the strategies to support graduates’ employability. This concern is the reason why the present study was conducted: to supply university leaders with information for decision-making to enhance graduates’ employability and reduce time to employment.

**What Industry Recruiters Want**

One assumption that led to this research study, and a main element of the leadership problem that drove it is that there can be gaps between university business student preparations and industry needs. Among other studies, this assertion is supported by the findings of Ciuhureanu et al. (2011) and Sloka et al. (2015). These studies were
referenced earlier. Additional sources can be cited to support this and also the value of
including industry needs or demands in a professional profile. Studies that support this
have taken place in many places around the world.

In the United States, several authors have contributed with research findings on
the topic (Benamati et al., 2010; Hart Research Associates, 2015; Milhauser &
Raehschulte, 2010; Wikle and Fagin, 2015). In Europe, public policies have been created
and implemented to diminish the negative impact of the misalignment between industry
needs and education (Ciuhureanu et al., 2011; Jurse & Tominc, 2008).

Countries such as Iran, Pakistan, Canada, Australia, India, and Romania, among
others, have also made efforts to understand the phenomenon via research (Bagherinia et
al., 2015; Marin et al., 2015; Meenai & Ahmed, 2012; Messum et al., 2015; Mishra,
2014; Rajkumar et al., 2015; Walk & Wright, 2014). Authors of such studies
recommended increasing the I/U relationship to address the difficulties faced worldwide
by employers in hiring suitable new graduates (Walk et al., 2013). Since the long job-
search faced by newly graduated students is a problem, multiple elements need to be
assessed and analyzed in the quest for understanding industry needs and designing a
possible solution.

Carnevale et al. (2013) asserted that new graduates are facing a hard time in
launching their professional careers, a situation that is not bounded by national frontiers.
It is an international concern. Chillias et al. (2015) and Mishra (2014) are two examples of
authors who have conducted research to understand the phenomenon. By using
quantitative and qualitative approaches, employers, graduates, and students have been
interviewed to understand their perspectives. The common theme cited in almost all types of studies addressing this issue is that there is a gap between university preparation and industry needs. Carnevale et al. underlined this gap as the main factor negatively impacting graduates’ employability.

Within the context of the United States, Benamati et al. (2010) conducted telephone interviews with 32 participants from a similar number of US News & World Report cited schools. The interviews lasted 30 minutes on average and were focused on the situation of information systems (IS) graduates. Benamati et al. reported a gap between industry needs and graduates’ capabilities that is created by the outdated curricula of universities. According to these authors, one-third of the universities in the United States have not updated their programs according to labor market demands. Another finding by Benamati et al. was that technical understanding and project management should be included in the graduate’s profile to increase IS students’ employability. According to Benamati et al., that is to be achieved through experiential, business centered contexts, and industry perspectives, a different form of promoting I/U alliances to shape the graduate’s profile as needed. A study that explores exactly what content should be added to programs is that of Wikle and Fagen (2015).

Wikle and Fagen (2015) conducted a research study with 662 geographic information systems (GIS) educators and 662 employers in the United States with the intention to identify the importance of skills in preparing GIS professionals. An Internet-based survey was sent to each participant asking them to identify the importance of a set of skills in the employability of graduates. Results revealed that communication skills,
critical thinking, problem-solving, teamwork, time management, creativity, and adaptation to change are the salient soft skills needed in a graduate’s profile. In terms of hard skills, Wikle and Fagin found that the most mentioned skills were programming, database management, and model building.

Similar to other studies, Wikle and Faggin (2015) revealed the industry need for graduates who can master knowledge such as finance, project management, forecasting, business understanding, sales, law, and marketing. There is research, however, that claimed, soft skills are even more desired than hard skills or knowledge.

Walk and Wright (2014) is one such study. These researchers conducted semi-structured open-ended interviews with 24 managers of small and medium-sized companies in Toronto, Canada. The researchers wanted to identify the skills demanded in recruitment. The following soft skills were mentioned in all interviews: global mindset, cultural awareness, leadership, and cultural intelligence. With respect to the research that was conducted in this study, Walk and Wright’s most important finding was that all of these skills were missing in university curricula.

Finding soft skills missing from business education programs while at the same time finding value in having these skills suggests a need to explore how to adjust programs to improve graduate employability. Looking for ways to improve student employability through adjustments in academic programs is another key area to review.

With the idea of increasing graduate’s employability rates through programmatic adjustments, Milhauser and Rahschulte (2010) conducted a study in two phases. A survey was applied to nine global leaders of companies mentioned in Fortune Magazine,
followed by an exploratory open dialogue with these same leaders. The intention of the researchers was to find a new approach to university program development to prepare students for the professional labor market. A gap between global marketplace needs and student preparation was discovered, which could be bridged by the inclusion of IT skills, communication skills, teamwork, ethics, cultural difference management, presentation skills, writing skills, networking, and management across cultures in the graduate’s profile. According to Milhauser and Rahschulte, soft skills are of paramount importance, but MBA programs are not transmitting these skills to students making them less attractive for employment.

Milhauser and Rahschulte (2010) stated the importance of measuring learning outcomes and maintaining I/U relationships to cope with industry change. In contrast to that posture, Lindh, Sandqvist, and Liedberg (2012) inserted four courses related to employability within curricula in a university with the intention of assisting students, especially those of vulnerable populations due to gender, disability, or ethnicity issues, to increase employability. The result presented by the authors is limited to stating that the program was successful and could be implemented in other settings.

In another study based in the United States, Hart Research Associates (2015) conducted an on-line survey with 400 employers in the private sector, non-profit organizations, and 613 college students to determine the most needed learning outcomes for professional performance. Hart Research Associates concluded that the most necessary skills, which can be used in different industrial sectors, are: written and oral communication, teamwork, ethics, decision-making, critical thinking, applied knowledge,
intercultural skills, civic engagement, and problem-solving. An additional conclusion reached by Hart Research Associates, which is consistent with the conclusions expressed by other authors like Carnevale et al. (2013), is that graduates are not well prepared, so their efforts to obtain employment take longer.

CAE (2014) mentioned transferable or soft skills similar to those cited by Hart Research Associates (2015). CAE conducted a statistical analysis of the results of a survey of 31,652 students from 1,039 American schools with the intention of understanding the reasons behind the unemployment rate of recent college graduates. Of the many soft skills mentioned in the studies analyzed by CAE, three of them were notable in the conclusions: problem-solving, writing effectiveness and writing mechanics.

According to Jurse and Tominc’s (2008) findings, the most important SKABs are analysis, synthesis, capacity to learn, problem-solving, ability to apply knowledge, adaptation, concern for quality, information management skills, autonomous work, and teamwork. These conclusions were obtained from conducting empirical research through the use of 477 surveys applied to graduates of a Business School, 63 employers, and 65 faculty members of the University of Maribor in Slovenia during the years 2003, 2004, and 2005. This conclusion is similar to the findings of Ciuhureanu et al. (2011).

Seeking to analyze graduates’ employability in Europe, Ciuhureanu et al. (2011) tried to uncover the competencies needed to be eligible for a position in the labor market. For that, 106 participants (employers, students, teachers, etc.) from different European regions were asked to attend a workshop called “Competencies, abilities and qualifications for the graduates’ adaptation to the requirements of the labor market.” A
questionnaire was applied during the workshop. The data retrieved revealed that the essential SKABs for employability are the ability to communicate in a foreign language, the ability to learn, the computer skills, fairness, honesty, teamwork, punctuality, and change adaptation. In a later study, findings of Sloka et al. (2015) are found to support those of Ciuhureanu et al.

In Latvia, Sloka et al. (2015) conducted a web-based survey with 336 large and medium enterprises to understand the factors impacting the creation of a competitive labor force. Sloka et al. explicitly mentioned their interest in enhancing a graduate’s placement within the labor market. Sloka et al. found that the graduate’s credibility is based on the I/U relationship, which is mirrored by the alignment of industry needs and potential employee qualifications. Sloka et al. suggested the use of work-based learning, via I/U collaboration, to promote the acquisition of basic education skills: mathematics, communication, teamwork, leadership, and interpersonal skills. Initiative, creativity, solidity, motivation, and social skills were also mentioned as part of their conclusions, along with the recommendation of developing specific professional knowledge to help students prepare for the workforce.

Though the researchers did list specific skills needed in the graduate’s profile, Sloka et al. (2015) did not narrow their study’s scope to a single area or discipline. This was done with the intention of making their findings transferable to diverse settings. This aspect of the research design was similar to what Ciuhureanu et al. (2011) had used earlier.
Latvia was the center of study for other authors, but in this case, the research was limited to the IT graduates’ profile. Kantane et al. (2015) conducted a web survey, written survey, and phone survey of 340 employers from agricultural, forestry, fishing, construction, transportation, storage, retail, and manufacturing industries. Kantane et al. concluded that SKABs such as life-long learning, attitude, and motivation are desired to meet employers’ expectations. The SKABs mentioned can be refined by means of a joint I/U work. Kantane et al. and Sloka et al. (2015), suggested I/U coordinated efforts to improve the fitness of education.

From a different perspective than the one used by Kantane et al. (2015), Marin et al. (2015) applied questionnaires to 110 business and economics graduate students in two different universities in Romania. The authors’ intention was to determine if students were satisfied with the academic instruction received as a base to meet industry needs. They found that there is a poor alignment between the curricula and labor market needs, a problem that can increase if education practices are not aligned with industry needs or requirements.

Though the work of Marin et al. (2015) found poor alignment between what students were taught and what they felt was needed in their work situation, other than this, the authors provided no further details or recommendations. Still, the research serves to support the premise that gaps do exist between what businesses want, and what schools often provide.

An earlier study has sought to gain similar insights. By reconciling the voices of graduates and members of academia in a single research study, Jurse and Tominc (2008)
analyzed the dominant European projects to harmonize academic structures: The Bologna Process and the Tuning Project. These two projects were created to address the same concern: industry needs by creating academic program alignment with what the labor market requires. Based on the issue that there is a gap between competencies listed in the Tuning Project and the importance of those through the perspective of a student, Jurse and Tomine conducted three different surveys with a total number of 477 graduates from a local Business School in Slovenia and 65 members of academia from one single university. Data gathered revealed that soft skills like adaptation, problem-solving skills, creativity, decision-making, initiative, analysis, and change management, as well as abilities such as life-long learning, second language proficiency, and entrepreneurial spirit are important for an individual’s capability of being employed. In consonance with other authors cited above, Jurse and Tomine asserted that there is a need for a closer I/U collaboration in which faculty and external stakeholders can harmonize their respective realities.

Contributing to the topic of employability in Europe, Chillas et al. (2015), in the United Kingdom, conducted an online survey with 46 participants and 47 employers from government agencies, software, pharmaceutical, insurance, education, IT, and health care industries with the intention of preventing rising graduate unemployment. The results from this research were similar to what Jurse and Tomine (2008) revealed: soft skills and I/U collaboration in the form of internships are indispensable. However, Chillas et al. did not use the Bologna Process and the Tuning Project to frame the findings and
contextualize the need to unify objectives between industry and university, as did Jurse and Tominc.

Writing on the previous several pages addressed research performed in the US and in Europe. Aside from the research conducted in the United States and Europe, the Asia Pacific region has also contributed to an understanding of graduates’ employability by contrasting university education with industry needs. Findings of studies on this topic that have been performed in the Asia Pacific region appear to compliment the findings of studies done in the US and in Europe.

Walk et al. (2013) conducted surveys with 257 German students, 404 Chinese students, and 588 Indonesian students of accounting. The intention was to elucidate why recruiters were complaining about the problems in hiring highly educated talent suitable for workplace requirements. Walk et al. (2013) reported that recruiters are facing difficulties in finding talent. Walk et al. found that the main reason for this problem is that work expectations are not met by students’ education because there is a mismatch between supply and demand. There is no clear contribution as to the identification of what SKABs are needed to overcome the problem of low employability, but the authors stated that there is a need for the right attitude and proper education.

From a compatible perspective, in Pakistan, Meenai and Ahmed (2012) addressed the issue of quality of education through a quantitative approach, by administering a questionnaire to 30 industry leaders from the textile, pharmaceutical, leather, automotive, construction, and petroleum sectors. Through their questionnaire, researchers sought information on the market demand for business graduates. Meenai and Ahmed inquired
into the automotive sector, which is similar in scope to the research to be conducted in the Puebla automotive sector, but the authors did not report any conclusions specifically referring to the graduate’s profile. The main finding was that business students in Pakistan have good market acceptability.

The point being made here is that it does not seem to matter what part of the world the research has been conducted in. Regardless where the research was conducted, it looks as if there is a degree of consistency in the research findings when it comes to what industry and students claim to need to be best prepared for work after graduation. The variance in research findings are more in the degree to which colleges are implementing what research suggests and the degree that I/U alignment exists with different schools and in different regions.

In India, Rajkumar et al. (2015) conducted an exploratory factor analysis with data gathered from 697 IT students and 6 IT services companies. Their intention was to find the factors that could contribute to improving on-campus recruitment. No mention was made of what are the expectations recruiters have when selecting talent inside a university. However, Rajkumar et al.’s recommendations are similar to those stated by Kantane et al. (2015) and Sloka et al. (2015), from Latvia: I/U cooperation is fundamental in enhancing the student’s preparation for the workplace. In the case of Rajkumar et al., internship programs were found to reduce the time invested in the recruitment process. An additional contribution of this study is that time is addressed as a factor in the search for a job position. Mishra (2014), Rao et al. (2014), and Gokuladas and Menon (2014) are three other India-based studies worthy of discussion in this review.
Mishra (2014) conducted an intense review of the literature on the topic of the skills gap between recruiters’ needs and student’s preparation in the IT field. The main conclusion stated in the study by the author is that there is a lack of soft skills in IT graduates. Employers need communication, problem-solving, interpersonal skills, and teamwork. Hard skills are not emphasized, but they are still mentioned as being important. Despite the fact that the study is not field-research-based, it reveals the importance given to the topic of graduates’ employability in India as well. Not only field research-based studies, but also literature review-based studies, reinforce the importance and pertinence of addressing the problem in different regions of the world.

Also within the context of India, Rao et al. (2014) conducted research to identify the skills of an MBA graduate that are desired by recruiters. Rao et al. not only supported their work by conducting literature research as performed by Mishra (2014) but, additionally, the author disseminated questionnaires and conducted in-depth interviews in 42 companies. Rao et al. drew three conclusions. First, the main weaknesses of the business schools are the lack of global perspective, leadership skills, integration skills, creativity, critical thinking, understanding rules, and understanding limits. Second, analytical skills are of central importance for MBA graduates when performing at a professional level. Third, there is an imperative need to adjust MBA curricula to meet market expectations.

Not only in the business area, but also in the discipline of engineering, India has been a subject of research regarding graduates’ readiness for job performance. Gokuladas and Menon (2014) assessed a training program provided to 567 engineering students to
make them employable by software companies. The main conclusion was that soft skills are needed more than hard skills. According to Gokuladas and Menon, the academic performance of students is a predictor of successful job performance if skills such as problem-solving, critical thinking, teamwork, communication, and self-development are present in the graduate’s profile.

The multiple India-based studies reviewed in this chapter give the sense that there is uniformity in some areas of the research related to that which was done for this study. In particular, findings suggest that soft skills are desired by employers, and that students know there is a need for these as well. Also, universities are encouraged to assimilate these findings as they can, for the good of their programs, and for the students they serve.

In a different Asian context—Iran—Bagherinia et al. (2015) reported conclusions similar to those stated by Rao et al. (2014): there is a gap between the “ideal curriculum” (as called by the authors) and the current status quo. The unemployment of university graduates is due to outdated and obsolete curricula. Therefore, there is a need to shape the graduates’ profile with skills such as analysis, problem-solving, communication, negotiation, discussion, management, and mental readiness. Bagherinia et al. arrived at these conclusions by applying questionnaires to 340 students and then making quantitative analyses of the data collected. It is important to underscore that the participants, who were students, stated that the curriculum is outdated, a fact mentioned by other stakeholders such as employers and organizational leaders in different countries and realities.
In Australia, Messum et al. (2015) conducted a survey of 38 managers in the health care area with the intention of identifying employability skills. This research was done because, in the sector, employers are experiencing difficulties in sourcing appropriate candidates for a job position. Messum et al. found that the education system is failing in the preparation in soft skills: communication, interpersonal skills, critical reasoning, analysis, cultural alignment, emotional intelligence, teamwork, leadership, and flexibility. According to Messum et al., hard skills are needed, but not essential, for employability. In contrast to what has been stated by other authors, Messum et al. emphasized that soft skills are useful not only for employability but also for ongoing professional development, which is a facet of employability that comes after the graduates’ immersion in the professional marketplace.

Education does not satisfy important job requirements (Hamid et al., 2014). That is a conclusion also found by Hamid et al. (2014) in Malaysia after an analysis of data gathered from 223 questionnaires applied to employees of manufacturing companies and governmental agencies. Similar to what has been reported in other countries, Hamid et al. reported a gap between employers’ requirements and education that is marked by the absence of soft skills in the graduate’s profile. Communication, creativity, critical thinking, logical thinking, and analysis, as well as the ability of foreign language proficiency, were cited as part of the authors’ conclusions.

The list of skills provided by Hamid et al. (2014) can be complemented and reinforced by the findings of Fulgence (2015) in Tanzania. Fulgence studied the phenomenon through a qualitative approach by conducting 22 interviews with corporate
recruiters. Fulgence reported a skills gap for the labor market as the reason for the unemployment of graduates. However, instead of promoting the acquisition of soft skills, Fulgence recommended a mix or blend of soft and hard skills to become employable. According to Fulgence’s conclusions, in addition to basic technical and general knowledge of the discipline of the graduate’s expertise, the graduate’s profile must include flexibility, adaptation, ability to learn, communication, and attitude.

The topic of graduates’ employability has been subjected to research in numerous studies. Much research has been done and is ongoing because of the importance of the topic for a nation’s welfare and industrial competitiveness. High unemployment rates are harmful to a nation’s economy. Thus, employability skills are an important topic to be subjected to research if unemployment rates are to be decreased.

A review of the research literature suggests that recruiters prefer applicants who have soft skills. For this reason a curriculum assessment must place particular emphasis on determining the presence or absence of soft skills in courses and in learning outcomes. Authors researching this topic in most regions of the world tend to agree that soft skills are needed. Since universities are blamed for not preparing suitable graduates, it is advisable to advance the current state-of-the-art and reverse the trend of new graduates' unemployment. An additional concern impacting the issue of graduates’ employability is the fact that an economy based on knowledge or information, by definition, is not human-intensive (Carnevale et al., 2013); thus, graduates are facing a shortage of employment. With the need of increasing the new graduates’ employment rate and assisting in reducing their time to employment, new graduates have to be
educated with the right mix of SKABs demanded by employers. Making them employable will increase their opportunities to obtain a professional position in a short period and start the process of creating quality of life.

Research suggests that academic instruction should mirror industry needs; otherwise, graduates face longer job searches. Authors like Jurse and Tominc (2008) and Plaias, Pop Ciprian, Dabija, and Babut (2011) spoke of hard and soft skills. Both types of skills need to be present in the graduate’s profile, but soft skills are more demanded than hard skills. According to Jurse and Tominc, hard skills are subject- or discipline-related competences. Generic competencies such as instrumental skills (cognitive abilities and linguistic skills) and interpersonal competencies (such as self-critical abilities and social skills) are considered soft skills, which are common to all kinds of disciplines.

According to Zamora et al. (2011), skills are basic in employment. Hence, the identification of what recruiters are demanding is a task that the university’s leaders need to embrace. The importance of soft skills can be determined based on the frequency with which they are mentioned in the findings of the following authors: Bagherinia et al. (2015), Benamati et al. (2010), Ciuhureanu et al. (2011), Fulgence (2015), Hamid et al. (2014), Hart Research Associates (2015), Jurse and Tominc (2008), Messum et al. (2015), Milhauser and Rahschulte (2010), Mishra (2014), Rao et al. (2014), Sloka et al. (2015), Walk and Wright (2014), Wikle and Fagin (2015), and Zamora et al. (2011).

The soft skill in highest demand is communication (in oral and written forms), followed by problem-solving and teamwork. After these skills, researchers also recurrently cited analysis, leadership, critical thinking, decision-making, interpersonal
skills, adaptation, flexibility, cultural awareness, cultural intelligence, and creativity. In terms of abilities, the authors frequently mentioned foreign language proficiency and lifelong learning. The researchers mentioned, on a frequent basis, ethics and motivation as the two main behaviors. The following skills, abilities, and attitudes are mentioned with less frequency: initiative, negotiation skills, punctuality, social competence, ability to learn, ability to prioritize tasks, appearance, coaching, conflict resolution, entrepreneurial spirit, global mindset, logic, multitasking, networking, responsibility, self-development, and self-motivation.

Complementarily, the same authors made reference to desirable hard skills. According to the frequency in which these hard skills are mentioned in the researchers’ findings, the more frequently cited were professional involvement, knowledge, and project management. After these hard skills, business knowledge and programming knowledge are also mentioned. Finally, accounting, applied technical learning, budgeting, finance, forecasting, law, marketing, mergers and acquisitions, and risk management were other types of knowledge mentioned, but not on a constant basis.

As reported by Messum et al. (2015), it is evident that graduates’ employability is mainly based on the presence of soft skills rather than mastering technical or hard skills. The right mix of soft and hard skills is dependent on the industrial sector, the type of job to be performed, and the global interactions expected in the workplace (Hart Research Associates, 2015). Arriving at a similar conclusion, Mishra (2014) stated that “people get hired for their professional skills, but get fired for their lack of soft skills” (p. 53). Therefore, for employability, graduates depend on the industry’s needs to accommodate
their professional profile to suit those industries’ purposes and expectations. Recruiters are expecting professional knowledge and soft skills (Jurše & Tominc, 2008) that need to be fostered through academic preparation.

Summarizing these findings, the professional development of students, which is the goal of any university, should be supported by: complex cognitive skills (reflective thought, critical thinking, quantitative reasoning, intellectual flexibility), knowledge acquisition (subject matter mastery, knowledge application), intrapersonal development (autonomy, values, identity, self-esteem, maturity), interpersonal development (understanding human differences, relating to others) practical competence (managing one’s life), and civic responsibility (commitment to volunteerism). The synthesis of research findings and researchers’ contributions is the first step in understanding industry needs. As expressed by authors like Plaias et al. (2011), it is also necessary to include such findings into curricula design to improve graduates’ employability. This idea was the purpose stated for the present study, through which university leaders are provided with first-hand information to assess the efficacy of university curricula in the field of business.

**Investigation of University Outputs and Industry Needs**

Shaping the right graduates’ profile is an additional reason to promote a closer working relationship between academia and industry since the university’s faculty is responsible for graduates’ employability. I/U alignment is challenging in a context in which I/U collaborations are not commonly found or promoted such as in Latin America generally and Mexico specifically. The mismatch between job seekers and employers
results in a weak professional profile, which reflects a poor I/U relationship, obstructing the graduate’s immediate incorporation into the labor market (Zamora et al., 2011). That is why getting to know the employers’ perspective and acquiring knowledge of their needs are two important issues in solving the problem of a long job search in the context of the present research study.

The issue of employability of new graduates is framed by the constant presence of two main actors: the university and the labor market. Hence, the understanding of how these two actors interplay is central to design strategies to reduce the gap between their two contexts that is affecting time to employment. Education-to-work and employability are two words used in the same context: work readiness (Mason et al., 2009), which depends on the interplay of skills, knowledge, attitudes, and commercial understanding of the professional field within the graduate’s profile. That means that university outputs reflected in the graduate’s profile have a meaning when industry needs are met and served.

The university’s community plays a central role in producing employability if the education provided can be put to productive use in the workplace and is not just based on acquiring knowledge per se. Therefore, university outputs are a reflection of the embedded features in the curricular and extra-curricular activities that shape the graduate’s profile and need to be built in alignment with industry needs (Azevedo et al., 2012). In today’s economy, versatility in job performance, and the capacity to be adaptive to change and innovation are prerequisites for performing in a globalized business
environment, in which the elimination of permanent jobs is increasingly witnessed as a challenge (Zamora et al., 2011).

Acareem and Hossain (2012) found that job mobility, intense competition, and visionary skills are stressing employees to respond to the trends of a knowledge-based society. Akareem and Hossain’s study was conducted with 400 students of a private university in Bangladesh, who were asked to respond to a survey related to the quality of education. The two researchers revealed that quality of education, as perceived by students, relates to the mix of a university’s features, administrative approach, and faculty profile (Acareem & Hossain, 2012). All those concepts shape the graduate’s ability to adapt to the demands of a changing and globalized knowledge-based economy.

How the university’s faculty prepares students in hard and soft skills is a matter of organizational learning and teaching style. However, forming a partnership with industry is recommended if industry needs are to be met by university instruction. The quality of an employer-graduate relationship is the cornerstone of I/U relationships (Mason et al., 2009). The main benefit of I/U collaboration is the preparation of suitable professionals. As a consequence, the credibility of a university’s educational quality is improved (Owens-Jackson et al., 2013).

After conducting an Internet-based survey with 831 business associations, business schools attendees, and MBA alumni, Brooks and Calkins (2016) made reference to the concept of a business school’s reputation. A business school’s reputation is based on the university’s capacity to match degree program offers with employers’ needs. Similarly, from a research-based approach, Sloka et al. (2015) added that by closing the
gap between education and industry needs, through design and implementation of I/U efforts, graduates would be a competitive labor force with increased possibilities of being hired.

From two different perspectives, pure literature review and research-produced findings, Sloka et al. (2015) and Brooks and Calkins (2016) expressed a similar idea: a university’s good reputation as an education provider gives that university’s graduates an opportunity to improve their employability rate. In that, university outputs and industry needs are combined and complemented. Henceforth, their respective missions can be accomplished.

Despite the fact that the concept of employability associated with the identification of skills needed by recruiters is constantly researched, there is not yet an ideal curriculum nor a university that can claim to have a 100% employability rate of graduates. However, authors like Iuliana et al. (2014) anticipated that the identification of skills is the determinant of a university’s success in terms of graduates’ employability. Universities and industries have reconciled and complemented their objectives for many decades in developed countries (Malik & Wickramasinghe, 2015). In the first I/U alliances, the relationship was mainly sponsorship-based since industrial firms allocated resources to build infrastructure inside the university campus to conduct research (Santoro & Betts, 2002). According to Santoro and Betts (2002), nowadays the model is based on value-generating partnerships, in which both parties exchange knowledge and expertise to generate tangible outcomes such as those related to human talent development.
In terms of graduates’ employability, Mihaela and Raluca (2015) recommended a stronger I/U relationship to permit industries to gain access to employable graduates. Highly educated students can fit the requirements of industry and promote competitiveness. Abdul, Murray and Roberts (2014) affirmed that innovation and knowledge exchange or generation are other possibilities for competitiveness created via I/U joint efforts or closer I/U relationships.

Sama (2013) reported that industries, the automotive sector included, are creating universities to face the shortage of talent. These centers of education are called corporate universities. A corporate university is a strategy implemented by the industry side to overcome the lack of well-prepared talent. However, a corporate university represents a highly specialized non-core activity for the industry; therefore, Sama highlighted that a corporate university is expensive and has no recognition beyond the walls of the industry which created it. I/U efforts to design tailor-made academic programs to meet industry needs are an example of how the resources, requirements, expertise, and core-activity of each one of the parties: industry and university can be combined to produce a beneficial outcome for both without increasing expenditures (Hadidi, 2014).

The literature reflects no in-depth research about graduates’ contributions in benefit of an industry. Graduates’ employability is a concept inherent in I/U relationships since the graduate’s profile is expected to align with industry needs (CIDAC, 2014). Human talent scarcity is frequently reported when referring to the gap between university preparation and workplace necessities (CIDAC, 2014; Manpower Group, 2015). Recruiters from many industrial sectors complain about the difficulty of finding the right
talent among new university graduates from different disciplines (Baryniene &
Krisciunas, 2013; Walk et al., 2013). However, business as an academic discipline is
frequently related to training, curricula design, and alignment with labor market
requirements in the literature pertaining to I/U relationships (Baryniene & Krisciunas,
2013; Dostaler & Tomberlin, 2013; Plaias et al., 2011) because of its importance for a
firm’s growth and market presence. This approach is a first step for building a suitable
graduate’s profile from the industry’s perspective, as expected for this research study’s
purpose and decision-making processes regarding graduates’ employability.

According to Baryniene and Krisciunas (2013), the quality and pertinence of
university studies are strategic for graduates’ employability. However, Baryniene and
Krisciunas affirmed that presently there is a gap between university preparation and
industry needs because the graduates’ competence is under question. According to
Tomina and Sorana (2012), universities must devote resources to assure the students’
acquisition of knowledge, skills, and engagement abilities that prepare them for the labor
market. After conducting an analysis with 21 focus groups of 12 students each, the results
of Tomina and Sorana’s study suggested that school-to-work transition is facilitated
through the acquisition of values and specialized training.

However, universities are accused of producing graduates who do not have the
skills to participate and/or innovate in a workplace (Carnevale et al., 2013). According to
Baryniene and Krisciunas (2013), a professional profile built based on industry needs
anticipates employability. Nevertheless, several authors have reported that industrial
sectors in many countries are facing skills shortages in graduates, according to opinions
expressed by employers. In the literature on the topic, I/U relationships and joint efforts are constantly mentioned as part of the solution for reducing the gap between university preparation and labor market demands.

The leaders of government, private agencies, and international organizations are concerned about the gap between university education and industry needs (Walk et al., 2013). Consequently, research is being conducted on behalf of those entities to identify the needed components within the graduate’s profile to close existing gaps and to offer a better possibility to fit a job position. In Europe, Mihaela and Raluca (2015) presented their findings after conducting research on the official descriptions of occupational standards, a survey of BA and MA students, and a survey with employers. The findings established that there is a weak I/U relationship impacting graduates’ employability.

A report by the Global University Summit (2013) stated that graduates’ employability is the pillar for any nation’s economic growth. Therefore, students must be endowed with adequate skills through university education to fit into open job positions. Also, from an international perspective, the OECD (2015) stated that 25% of the 16- to 29-year-old population around the world is neither employed nor in education (a phenomenon called NEET). To overcome such a trend, OECD recommended promoting greater interaction between the public and private sectors and education programs to include cognitive skills, socio-emotional skills, and occupation-specific skills in university curricula.

Carnevale et al. (2013) expressed similar concerns in the United States’ context because the prevailing conditions of the labor market are different and keep changing due
to the increasing dominance of information technology. Current university education is not meeting the expectations of human talent preparation, which is the conclusion arrived at by Carnevale at al. The authors considered I/U alignment a requisite for work readiness and employability.

Substantially, all societies around the world are home to industries and centers of education, but not all societies have the same degree of I/U collaboration to improve employability. Abdul et al. (2014) emphasized that I/U collaborations permit innovation by means of knowledge generation and exchange of knowledge, which is not only a matter of competitiveness but of a marketing outcome for both participants. Despite the fact that I/U alliances are widely researched, no distinguishable research was found in the Mexican context specifically. From the perspective of the Latin American context, Balán (2012) studied the challenges of research and academic activities faced by Latin American universities. Balán’s findings were drawn from a historical review of the evolution of the major universities in Latin America. Balán affirmed that the Latin American universities struggle to create research-oriented faculties, to be financially assisted by the governments, to perform under premises of continuous improvement due to statistics-based results from assessing student learning outcomes, and to create sound relationships with external stakeholders.

Numerous research gaps have been identified throughout the literature review process. There is no substantial research on the I/U concept in the Mexican and the Latin American contexts. For that reason, any contribution made by the present research is the first step in advancing the state-of-the-art. CIDAC (2014) is the only entity engaged in
research on the topic in the Mexican environment. The study conducted by CIDAC was nationwide in scope, providing current insight into graduates’ work readiness. In the CIDAC’s work the recruiting practices used by industries in each one of the 32 states of Mexico were identified, but no direct emphasis was placed on a specific industrial sector as was the researcher’s intention for the present research study. The information found in the CIDAC’s study is useful in terms of making the Mexican recruiting practices available to public scrutiny.

An additional contribution by the CIDAC’s (2014) researchers is the identification of the hard and soft skills regarded as most important by recruiters, contrasted with the skills found in the graduate’s profile in each of the states of Mexico. The gap between the desired skills and the missing skills in the graduates’ profiles was the focus of the study conducted by CIDAC’s researchers with 481 enterprises across Mexico. However, the interviews to obtain the information were conducted only with human resources (HR) managers, without taking into consideration the leaders who will be in charge of the newly hired. This omission can create a gap in scope that the present study was committed to filling to advance the current state of the art.

In the CIDAC’s (2014) study there is a set of 136 competencies from which the participants could select their answer. However, no open dialogue was promoted to respond to open-ended questions, which might lead to obtaining more valuable information. The researchers also missed an opportunity to direct the research to a specific industrial sector or an academic discipline. Hence, it is so broad as to include all types of activities. This study design opened a window of opportunity to narrow the
scope to fit the need of each Mexican state in terms of its industrial composition, which will provide information to universities in the process of implementing their educational models to refine the new graduates’ profiles and employability.

The present research study was conducted to advance the current state of knowledge in Mexico by identifying a specific industrial sector’s needs concerning human talent: the automotive industry located in Puebla. The automotive sector is Puebla’s main GDP contributor (INEGI, 2014). Therefore, the graduate’s employability can be benefited as will Puebla’s productivity, by the intent to reconcile university outputs with industry needs. In addition, the interviews were conducted with the direct “users” of the new human talent hired to provide a broader and more accurate understanding of the needs of this industrial sector and workplace performance.

Balán (2012) and CIDAC’s (2014) researchers contributed to elucidating the situation of Latin American universities and the I/U relationship’s status impacting curricula design. “The essence of university education is to create a well-defined professional horizon, with the aim of creating the necessary conditions for the integration on the labor market and social inclusion of young specialists” (Palade & Constantin, 2013, p. 66). This sentence can be the starting point for Latin American efforts to increase new graduates’ employability via stronger I/U relationships.

Based on this literature review, I/U relationships are a salient topic when addressing the issue of a skills gap impacting graduates’ employability. But, generally, there is a research gap about I/U relationships for enhancing the employability of newly graduated students. In the Mexican context, it is important to incorporate the findings
regarding the current status quo of the I/U relationship to increase the employability of university new graduates.

I/U alignment should be promoted to fill the gap between academic professional preparation and job suitability shaped by industry needs. The understanding of the industry’s context facilitates the transition into the labor market of recently graduated students. Since education and employment are connected, university preparation is important in speeding employability and enhancing the university’s legitimacy of reputation through an education-based performance of graduates (Dostaler & Tomberlin, 2013). The industry context needs to be analyzed to provide companies with the candidates who suit their needs (Terrel & Rosenbusch, 2013) and to achieve I/U alignment.

The present research study, from its case study approach, was conducted to understand the needs of Puebla’s automotive industry in terms of human resources. The objective was to assist in reducing the time invested in job search by the graduates from the UPAEP School of Business. Leaders taking the actions to assist graduates’ employability can improve decision-making related to university curricula. The Mexican academic community, therefore, can be benefited from the findings of this research. Competitiveness regarding human talent preparation and suitability for professional performance could be enhanced based on this study’s findings, and the alignment of I/U efforts by which both actors can gain from such an alliance.
Summary

Several research gaps have been identified throughout the literature review process. First, research on the topic of graduates’ employability is currently being conducted in many places of the world and from many perspectives, but not in the Mexican context. Research studies conducted by CIDAC (2014) and ESU (2014) have a similar conclusion: University instruction is the pillar for ensuring graduates’ employability. However, Carnevale et al. (2013), among other researchers, accentuated the fact that graduates are investing a long time in launching their careers since universities are not accomplishing the goal of assuring graduates’ employability.

Tan et al. (2013) stated that traditionally business schools have a passive learning method in which students do not acquire the right mix of competencies expected by employers. Among other authors, Lastner et al. (2016) criticized this method and insisted on the need to change to work-based preparation. Complementarily, Dobratz et al. (2015) recommended the inclusion of internships in academic curricula, so students enhance their employability skills.

Second, the studies are mainly conducted from a quantitative approach, missing the opportunity of fully listening to what recruiters have to say. However, it can be concluded that recruiters are looking for soft skills more than hard skills. Kantane et al. (2015), Kickul et al. (2012), Walk and Wright (2014), and Wikle and Fagin (2015) recommended a mix between soft and hard skills to overcome low rates of employability, while Dollwet and Reichard (2014), Jamison (2013), and Stahl and Brannen (2013)
suggested students should be prepared with a global mindset to face the challenges of a globalized labor market.

Third, it was evident that a research culture is not present either in Latin America or Mexico with regard to this issue. Despite the fact that the problem of low employability is very much present in these geographic areas, only two studies were found addressing the topic. Balán (2012) conducted one of the studies, and the other study was conducted by CIDAC (2014) in Mexico. There is no substantial research on the I/U concept in the Mexican and the Latin American contexts. I/U collaboration ameliorates the extended time spent in job search by new graduates caused by a misalignment between industry needs and university education (Ciuhureanu et al., 2011).

Hence, any contribution made by the present research is the first step toward understanding the industry’s context. According to Owens-Jackson et al. (2013), educational quality is improved by means of I/U partnerships, which facilitate the transition into the labor market for recently graduated students.

As these are prevailing conditions, Mexican university leaders are expected to understand industry needs to increase graduates’ employability and reduce the length of the job search. Therefore, the research questions, drivers of this study, needed to be addressed by having an open dialogue with recruiters instead of conducting a quantitative-based research study, as is explained in the next chapter. The objective was to identify automotive industry needs to assist the decision-making process at the university level in favor of an enhanced and shared vision of the business new graduates’ employability.
CHAPTER 3: METHODOLOGY

Introduction

The present research was conducted to understand what the current training is for business students and the needs of the Puebla’s automotive industry in terms of human talent for business-related professional positions. Since the automotive industry is the main contributor to the State’s GDP (CIA, 2016) and the fourth largest employer in Mexico, it is important to address its needs in the second largest area of employment created by this industrial sector: business. The objective was to align the two to reduce the time invested in a job search by the new graduates from the UPAEP’s School of Business. Leaders can improve decision-making related to universities’ curricula by taking steps needed to envision an enhanced level of graduate employability.

The following research questions were addressed in the study:

1. What gaps exist between the skills, knowledge, abilities and behaviors industry recruiters’ desire and the skills, knowledge, abilities, and behaviors business students learn through UPAEP’s curriculum?

2. According to automotive industry recruiters, what are the skills, knowledge, abilities, and behaviors sought for when recruiting a potential candidate for employment?

3. What are the skills, knowledge, abilities, and behaviors business students learn based on UPAEP’s curriculum?

This research is a qualitative case study. According to Creswell (2013), a case study’s objective is to investigate a real-life context, process, or event bounded by time
and place by means of in-depth data collection. Yin (2014) mentioned that an exploratory line of inquiry is better addressed by direct observation of events and interviews conducted and focused on the direct individual taking the central part of the action via a case study methodology. Furthermore, Yin stated that a research design fulfilling these conditions is the recommended way to make decisions based on the research findings. Therefore, the research method selected to address the topic of graduates’ employability was qualitative and was designed from a case study perspective.

This chapter includes a discussion of the research method used in this study. The chapter has six main subsections. The first section is a review of the research method and the rationale for using the qualitative approach. The second section explains the research design used in the study. The third section includes a discussion of the instrument used in the research; the types of interviews conducted and the strategies used for studying the documents that were part of this study. The fourth section provides an overview of the process used to identify and recruit participants. The fifth section contains an explanation of the analysis and organization of the data. The chapter ends with a section about the study’s limitations.

**Research Method**

The study design was based on a qualitative methodology because it was the objective of this study to understand reality without the boundaries posed by controlled conditions and a rigid attitude of the researcher. According to Maxwell (2013), this is the current scenario of quantitative studies. More specifically, the present study was conducted from a case study approach, suitable to understand complex social phenomena.
and to incorporate real voices into the research process (Yin, 2014). The complexity embedded in educational processes, the current trend of low employability and the interplay of curricula and industry needs called for the use of a qualitative approach to research with the intention to listen in-depth to the participants’ contributions. The elements of a case study used in this study are explained in the following sections.

**Research Design**

Creswell (2013) identified five qualitative research approaches: narrative (stories of individuals facing an event, expressed in a chronological order), phenomenology (common meaning of an event as lived or experienced by participants), grounded theory (proposals of new theoretical contributions for a process or action), ethnography (common features shared within a cultural group), and case study (detailed description of real-life contexts or situations). From those approaches, the case study research approach was selected to conduct the inquiry objective of this study. Narrative, phenomenology, and ethnography do not meet the research design’s requirements.

Narrative research is the storytelling of a set of chronological events (Creswell, 2013) from which identities of individuals or life experiences can be analyzed. This method is not aligned with this research study’s objective. From a different but connected approach, phenomenological research is described by Creswell as the revelation of the common meaning or the essence of a lived experience shared by a group of individuals. Phenomenology is suitable for situations related to health conditions or social events in which a philosophical discussion is promoted. Finally, ethnography fits research in which patterns or behaviors embedded in a commonly shared culture are to be analyzed. Values,
beliefs, and other cultural elements are the main focus of an ethnographic study (Creswell, 2013), but that was not the emphasis of the present research study.

These qualitative approaches are similar in describing meanings and interpretations of shared events and cultural features. However, case study and grounded theory are better options for the purpose of analyzing a process because these two methods go beyond descriptions to find root causes, in-depth explanations of given situations (Creswell, 2013), or a theoretical antecedent for the research topic (Yin, 2014). However, since it is not the aim to create a theory to enhance a current process or situation as in grounded theory research, a case study is the approach that better suits the study’s requirements.

According to Creswell (2013) and Yin (2014), a case study is made to understand a particular situation, being a process, an activity, or an event. A case study is limited by time and scope, which permits the researcher to be focused on detailed information about a unique situation in which real world viewpoints are incorporated to understand the settings (Yin, 2014). A case study research design permits an explanatory perspective, built on the perception of the direct participants in a given setting. Based on this type of research approach, causes, variables, consequences, needs, among other factors, can be completely appreciated. Accordingly, this case study consisted of two parts to be explained next.

The first part of this case study consisted of interviews conducted with automotive industry recruiters. As will be described later in this chapter, the interviews were conducted in a face-to-face format using an interview protocol prepared for this case
study to fully listen to the participants’ needs and determine what they are expecting to
find in the new graduates’ profile to make them suitable for a position. The participants’
contributions will address the second research question.

The second part of this study was the analysis of the UPAEP’s curricula in the
field of business. The UPAEP’s business programs were analyzed to determine if their
academic offer fits the traditional, practitioner, or blended model of business education
and to establish what skills, knowledge, abilities, and behaviors (SKABs) are addressed
or not addressed by the UPAEP’s business programs. As a conclusion, the two sets of
findings were compared to detect any potential gap or alignment existing between
industry needs and university curricula. This comparison will address the third research
question.

The comparison of what was learned from the auto industry recruiters and what
was discovered from the curriculum analysis addresses the third research question.
Comparing these two data sets will provide information to answer the question about
gaps between what local auto industry recruiters want, and what students learn through
UPAEPs curriculum. The conclusions can contribute to decision-making concerning
graduates’ employability.

**Instrument**

An interview instrument was created to assist in answering the second research
question. The questions that served as the foundation of the instrument were determined
from a review of the research literature on the topic of this study. No pre-prepared
interview protocols that fit the present research study’s characteristics were found. As
revealed in the literature review, the large body of research made into the topic of graduates’ employability is mainly of a quantitative approach. And, for those research studies conducted from a qualitative methodology, the interviews were specially designed for those specific research studies. Different from the present research case study, other studies were conducted to explore the reality of many industries and professional fields, not for a specific industrial sector. Thus, the instruments used for those research studies cannot be extrapolated to the present case study, which was conducted in Puebla’s automotive industry.

Based on the above explanation, an instrument was created specifically for the purpose of the present research case study. A panel of experts was selected to validate the instrument. According to Escurra (1988) and Urrutia, Barrios, Gutiérrez, and Mayorga (2014), validity through judgment by a panel of experts is the most frequently employed technique applied to validate not only content but also the pertinence of the questions in answering the questions of the research study.

The panel of experts was selected among those in the Puebla area who had expertise in the following areas: human talent and recruitment, qualitative research, and curricula design. The two experts on human talent and recruitment were selected based on their experience in recruiting candidates for positions in different industries. Two more experts were chosen based on their qualitative research production in national and international indexed journals. And, the other two judges are of recognized prestige in the Secretaría de Educación Pública (SEP, The Mexican Ministry of Education) on the topic of curricula design.
The judges or experts were asked to determine if the questionnaire items were in alignment with the research purpose and questions. The degree of acceptance by the judges of each item validated the instrument and the presence of the items to guarantee the pertinence of the instrument in retrieving the information for which it was prepared. There is a consensus that the number of judges used to validate an instrument should be between two and 20 (Escobar-Perez & Cuervo-Martínez, 2008; Escurra, 1988). However, Escurra suggested five as a valid number of experts participating in the process.

Escobar-Perez and Cuervo-Martínez (2008) proposed the phases to validate an instrument for qualitative research. Items should be designed in alignment with the dimensions of the research purpose. It is important to take the instrument’s objective and the participant’s profile into consideration. The pertinence and relevance of the items in consonance with the research’s purpose is a determinant factor to follow when designing the instrument.

Once the instrument is designed, Escobar-Perez and Cuervo-Martínez (2008) and Del Carmen (2015), suggested that judges are selected based on their experience, credibility, motivation to participate, time availability, willingness to participate, and their objectivity. Usually, the judges are asked, via a validation instrument, to evaluate the instrument and provide opinions. If at least 80% of the judges accept an item, the item is included in the instrument (Escobar-Perez & Cuervo-Martínez, 2008). In addition to the explanation of the methodology, Escobar-Perez and Cuervo-Martínez provided a template for the preparation of a validation instrument. Based on this template, the
Instrument Validation Matrix for this case study (see Appendix C) was designed and used for the experts’ validation.

In alignment with the purpose of finding any potential gap existing between industry needs and university curricula in the area of business-related disciplines, three main topics were included in the matrix prepared for the expert panel’s revision. The three topics are the graduate’s profile, industry needs, and the level of I/U collaboration. According to the methodology already used by Ramírez-Dorantes, Canto, Bueno-Álvarez, and Echazarreta-Moreno (2013), these main topics were divided into subtopics that correspond to each one of the questions included in the interview protocol. Topics and subtopics were coincident with the findings retrieved from the literature review and the theoretical approach found as well in the process of reviewing literature on the topic of graduates’ employability.

The experts were asked to check the interview protocol, to then confirm the instrument’s validity and pertinence with the research purpose also explained in the matrix. The matrix, included in Appendix C under the label Instrument Validation Matrix, relates topics and subtopics with the questions in the interview protocol. These research topics are the dimensions of research included in the research purpose: the graduate’s profile, industry needs, and I/U collaboration.

Each of the six experts used the Instrument Validation Matrix to evaluate the instrument. According to the judges’ opinion, all items were pertinent and well-structured; so the items were included in the instrument. This procedure followed Del Carmen’s (2015) experience when applying the same methodology for validating a
research instrument. All of the six judges agreed on the general validity of the instrument with minor suggestions made for the instrument in terms of format to make it more understandable. The instrument was validated by all of the judges, and its final version can be found in Appendix C.

The objective of using open-ended questions was to encourage a rich, extended, and meaningful answer. The scope of non-inductive responses facilitates the flow of information. The researcher’s flexibility was important to adapt to unfolding circumstances and make adjustments to settings to obtain the ultimate benefit from the data gathering process. A well-defined research process was important, but the researcher’s adaptability skill was also fundamental in providing the participants with the right conditions to express their reality and needs (Ostovar-Namaghi, 2011).

The information about interviews and the validated instrument enriched the data collection process of the study. The interview design permitted the collection of the participants’ demographic data since it was important also to validate the accurate selection of the participants. The researcher appropriately maintained the evidence of the Instrument Validation Matrix.

A document analysis process was performed to answer the third research question. The documents that were analyzed all came from UPAEP School of Business’ undergraduate programs and curriculum artifacts of these programs. More specifically, only those items that were from courses that all business students take and artifacts from core business program courses were studied. A checklist of documents and a focus areas
instrument was created to facilitate this analysis. The following items were contained in this instrument:

1. Topics identified in course syllabi
2. Stated learning outcomes
3. Learning activities
4. Textbooks and other materials used in core business courses
5. Graduate profiles of each undergraduate program

Reviewing these items within each program helped to determine what type of skills, knowledge areas, abilities, and behaviors the university promoted based on course materials the curriculum contents. The findings derived from this analysis shed light on whether the UPAEP’s faculty is using a traditional, a practitioner, or a blended model for business academic instruction to develop certain SKABs in business students. Contrasting these findings with the SKABs desired by recruiters permitted a final panoramic view of the degree of alignment between the automotive industry needs in Puebla and the UPAEP’s academic instruction. Decision-making, in terms of curricula design, to align with industry needs is the final step to be performed by UPAEP’s leadership after getting to know this case study’s findings and conclusions.

Participants

The case study consisted of two parts, interviews of industry experts and a survey of program documents and related materials. Only the first section of this case study involved participants. No participants were required for the second part of this case study.
because the document analysis constituted a review of the UPAEP’s curricula and related material; information that was accessible without the assistance of external individuals.

For the first part of the case study, industry recruiters were selected from 11 of the 68 international automotive firms indexed in the Puebla’s automotive cluster. Cordero et al. (2015) was used as the source for identifying these organizations. Automotive industry recruiters were selected for the interviews based on their participation in the hiring of employees for the business-related positions in the automotive industry. Participants were selected by a method known as purposive sampling (Ritchie, Lewis, McNaughton, & Ormston, 2013).

Purposive sampling consists of the intentional selection of participants based on a specific profile or on the presence of certain characteristics that are of interest for the research study (Ritchie et al., 2013). Consistent with the research purpose, it was essential that the participants occupy a leading position of responsibility for hiring for their organizations. The participants needed to be familiar with the recruitment process and the industry’s needs in terms of human talent prepared for the business-related areas. These characteristics were necessary to positively contribute to the process of identifying the SKABs required in the new graduate’s professional profile. Thirteen participants from 11 companies included in the automotive industry of Puebla were interviewed. All of the participants had the qualities required for this purposive sampling.

Eleven organizations were selected from the automotive sector. The approach to the participants was made using the snowball sampling process described by Ellis and Chen (2013). The snowball sampling process, which is intended to increase the number
of participants by beginning with a small sample of already known participants, was applied in two phases. Following this approach, personal contacts were the first participants identified for this study. The second set of participants was identified through interactions with the first group of participants. After all of the interviews were completed, participants received the transcription of their interviews along with the narrative of general findings for review, as suggested by Ellis and Chen (2013). This last step was also beneficial for validity purposes (Creswell & Miller, 2000).

From the 68 companies of the automotive industry, no fewer than 10 firms were considered to be a representative sample of the Puebla’s automotive industry. Typically, qualitative studies require a smaller sample size than quantitative studies. Quantitative studies have fixed formulas to calculate the sample size. However, in terms of qualitative studies, the sample size is determined by the availability of resources and the study’s objective (Malhotra, 2016). Moreover, according to Mason (2010) and Francis et al. (2010), the guiding principle of a qualitative sample is saturation or redundancy, which is achieved when more new participants no longer mean more new information.

However, Baker and Edwards (2016) stated that the concept of saturation is not the only guide to decide the sample size despite the fact that it is the most accepted method to determine a sample size for qualitative studies (Francis et al., 2010). Nevertheless, a numerical benchmark is suggested. Regarding case studies, Baker and Edwards suggested a minimum sample of 12 participants. However, the number of participants is subject to availability, difficulty to access participants, and the researcher’s resources (Baker & Edwards, 2016).
In agreement with Baker and Edward’s (2016) statements, Mason (2010) also mentioned that a large sample size is time-consuming and labor intensive in qualitative studies. Therefore, the researcher can determine the sample size based on resources available, participants’ accessibility, and time. On average, Malhotra (2016) stated that 10 participants are the minimum needed for a qualitative research study. For this research study, 13 representatives from Puebla’s automotive industry were selected. At least 12 members of the 10 organizations were to be interviewed, as a minimum, to acquire the most data possible for accuracy and reliability purposes.

During the inquiry process, ethics were properly addressed, and ethical considerations were maintained. Privacy, confidentiality, and consent to preserve its fidelity and accuracy are examples of ethics related issues (Ellis & Chen, 2013; Wiles, 2013). Due to this study’s scope, in which international companies’ representatives could be interviewed, cultural differences were also an ethical topic that was taken into consideration to prevent problems or cultural clashes (Davis, Bernardi, & Bosco, 2013).

Removing tensions and respecting the participants’ agenda, as well as company secrecy, were also professional ethical considerations (Wiles, 2013). Therefore, before conducting any interviews, consent letters were signed by the participants to obtain their authorization and to have an ethical base for this activity. Appendix B provides a sample of a consent letter used to authorize the interviews. By following Wiles’ (2013) recommendations, the format addressed the anxiety caused by inquiries, potential harm to the participant or researcher, and to comply with legal requirements. The identity of participants was protected since no reference to their names or companies is included in
the analysis of findings included in the next chapter. Furthermore, their personal data were confidentially kept and access is only through passwords known only by the researcher.

The interviews were scheduled for a duration of 45 minutes because of the need of gaining an in-depth understanding of the recruiters’ needs. On average, the interviews lasted 47 minutes. Limitation of time in the recruiters’ agenda was a topic of a great impact because some interviews had to be rescheduled on several occasions.

Saturation was also a factor to be addressed. If 13 interviews did not get to a saturation point, then the researcher’s obligation was to keep conducting interviews until more participants no longer meant generating new information (Francis et al., 2010). However, saturation was achieved at eight interviews because participants began to repeat similar concepts, suggestions, and identical SKABs. Nevertheless, the 13 interviews were conducted, incorporating the opinions and associated concepts to ratify what was obtained at the saturation point.

The researcher’s biases were anticipated to minimize an adverse impact on the outcomes. Bracketing was the mechanism used to prevent personal bias in the interview and its part in the research study. According to Maritz and Jooste (2011), bracketing the researcher’s preconceptions, ideas, and personal beliefs avoids doubts as to the validity of the research. To that end, awareness of the researcher’s professional experience in the field of education, in the lecture hall, with mentored students and guidance processes, as well as professional experience in the manufacturing industry, was assessed in advance. Three main personal conceptions were found: (a) educators contribute to the students’
preparation by means of the professor’s practical experience rather than the professor’s mastery of theory; (b) education must be comprehensive, which means that not only technical SKABs are needed for professional preparation; and (c) I/U joint efforts contribute to the creation of a better graduate.

Bracketing and well-structured interviews helped in gathering meaningful rather than skewed data from the participants. A clearly established interview process was the first step to optimizing the time granted by the participants. During the interview, additional topics emerged, but they were bounded by the topic under scrutiny. The selection of the participants and the interview settings were accurate, maintaining an atmosphere of respect and rapport. The conversations could easily flow, resulting in an increased benefit toward the process of data gathering. Finally, participants received transcripts of their interviews along with the narrative of general findings for review. This last fact is positively related to validity purposes (Creswell & Miller, 2000).

**Data Analysis Methods**

After transcribing each interview using voice recognition software, the industry needs were recovered through a line-by-line coding. For accuracy purposes, transcriptions were reviewed and compared to the original recorded interview. Double checking transcriptions avoided software mistranscriptions. Interview transcripts were reviewed and analyzed many times to identify the frequently mentioned concepts to detect connections or similarities. Frequently mentioned concepts represented the industry needs, which are the reason why the interviews were conducted. The outcomes
from the interviewing process were focused on the identification of desired SKABs of a new business graduate to improve employability.

The main themes were the particular analysis of each SKAB. According to Corbin and Strauss (2015), the SKABs are the higher-level themes or categories. They naturally emerged from the interview protocol design. The SKABs, as main categories, were the natural way of conceptualizing the participants’ contributions (Corbin & Strauss, 2015). Participants referred to the same idea or concept but used different nouns; therefore, the SKABs were also used as umbrella terms to manage the data analysis. The most common terms used by authors referring to employability skills analyzed in the literature review and defined in Chapter 1 were used to name a SKAB when analyzing the participants’ conversations.

This kind of coding system provides a common meaning to the information or concepts used by the participants, as suggested by Corbin and Strauss (2015). Complying with Corbin and Strauss’ guidelines, the steps followed to code the data are outlined below. Later, the findings from the interviews will be fully analyzed in Chapter 4:

1. The transcriptions of interviews and field notes were the sources of data.
2. The SKABs retrieved from the questions three to six of the interview protocol were the natural main themes for categorizing the data.
3. Four main categories were created to group the concepts: skills, knowledge, abilities, and behaviors.
4. The terms or concepts referred to by the recruiters were classified by using the definitions of each SKAB.
5. Frequency was the factor used to classify the recurrent SKABS within each category.

6. Repeated concepts or ideas not naturally associated to a SKAB or main category were considered new emerging themes.

7. New emerging themes or lower level topics were created based on the repetition of the same idea by the recruiters.

During the interviews, other topics besides the SKABs were mentioned. These topics that were not previously anticipated through the literature review but came up regularly during the interviews were also noted. Topics that fit into this category are referred to in the next chapter as emerging themes (Corbin & Strauss, 2015) and represent an additional opportunity for understanding the industry needs in the automotive sector of Puebla.

The university curricula of the School of Business were analyzed to identify the SKABs being transmitted to the students through academic preparation for the second part of the study. The university’s documentation (business related program curriculum, course syllabi, program learning outcomes, learning activities, course materials, and graduates’ profiles) was the primary source from which data were gathered. Additionally, the curriculum design served to make a course classification with the intention to identify what kinds of SKABs are transmitted to students.

The repeated SKABs were identified to define and to separate the generic from the specific SKABs imparted in each discipline. The analysis was done by separating the courses that are common for all business students from the courses that are specific to
each academic undergraduate program in the business area. This analysis uncovered the common courses taken by all business students. Those courses create the general and basic SKABs for business graduates. The identification of the business and the disciplinary core courses revealed the specific or technical SKABs inculcated in the business students. Each business undergraduate program was compared to and contrasted with the other business programs of the UPAEP’s School of Business to establish the separation between core disciplinary courses and commonly taken courses, known as general studies.

After that, the course learning outcomes permitted the identification of the type of SKABs transmitted to students that did or did not contribute to the recruiters expected graduate profile. The program curricula are in the public domain, so it was easy to gain access to them in digital or printed versions, while each course’s contents and learning outcomes are not. Hence, the course syllabi were requested from the director of each program and later submitted to analysis by the researcher. Syllabi contain the guidelines created by faculty in charge of the course’s design and teaching method. The learning outcomes, textbooks, assignments, and learning activities were the source to identify the SKABs expected to be present in a future graduate's profile.

Faculty members contribute to the development of SKABs via a traditional or practitioner-oriented way of instruction by defining learning activities and materials used for each course. Practitioners emphasize the experience-based educational model, while some others faculty members use a traditional approach to education. Each of these educational models favors the creation of hard or soft skills that recruiters may find
desirable in a graduate’s profile (Clinebell & Clinebell, 2008). The information is contained within the syllabus of each course. That is why the findings from the courses’ document review were the SKABs transmitted to students during their academic life. The degree of alignment with the recruiters’ expectations is reported in Chapter 4.

The following steps summarize the analytical process explained in the previous paragraphs:

1. The documents released by the Mexican Ministry of Education were used to have the formal reference of what undergraduate programs are requested to accomplish in terms of credits.

2. University produced documents were prioritized as follows to look for consistency in the analysis and alignment of vision, mission, strategic goals, and graduate’s profile:
   a. UPAEP’s philosophy
   b. UPAEP’s mission statement
   c. UPAEP’s strategic goals
   d. Centro de Investigación y Asesoría Curricular’s (CIAC) guidelines
   e. School of Business’s undergraduate programs
   f. Course syllabus
   g. Course materials

3. The undergraduate programs’ courses were classified in general studies, business courses, and core disciplinary courses.
4. Additional learning activities were identified: internships, exchange programs, among others.

5. SKABs promoted in each group of courses were identified and assessed.

6. The undergraduate programs were analyzed to define their approach to education.

Finally, a comparison of both sets of data (recruiters’ interviews and document analysis) was useful to identify the resultant similarities or differences. An analysis of this information was performed to compare and contrasts the industry needs with the SKABs formed through academic preparation to find the level of alignment between the two realities. Recruiters and documents were the sources of the data obtained, addressing the research questions. A narrative of findings and partial transcriptions of dialogues with participants, assisted by tables, allowed the display of results. The comparison made between the two sets of information assisted in responding to the first research question; what gaps exist between the knowledge, skills, abilities, and behaviors industry recruiters’ desire and the knowledge, skills, abilities, and behaviors business students learn through the UPAEP’s curriculum?

**Limitations**

Lincoln and Guba (1985) referred to reliability or trustworthiness as ever-present components of research. According to Lincoln and Guba, reliability and trustworthiness are concepts related to credibility (the veracity of findings), transferability (the possibility of applying the knowledge to other contexts), dependability (consistency and
repeatability of findings), and confirmability (not-biased findings). All of these are essential when conducting and reporting results from a qualitative research study (Lincoln & Guba, 1985).

From a general point of view, Creswell (2013) asserted that qualitative research faces two main limitations: transferability and trustworthiness. Since case studies are limited or bounded by the specific settings of the case, transferability is not easily achieved because all cases have differences. However, the conceptual structure of the research and the research findings can be compared to other case scenarios to determine if they are equal or different as a way to try to transfer or extrapolate knowledge from one setting to another, a concept referred to by Yin (2014) as an analytic generalization.

Analytic generalization (Yin, 2014) or transferability (Creswell, 2013; Lincoln & Guba, 1985) can be achieved if a full or detailed description of the case study is made. Situations, from different contexts or settings, can then be compared to determine if results or conclusions can be transferred from one context to another. Achieved transferability would represent a benefit for Mexican universities with business programs. Also, the automotive sector located in two main places in Mexico: the Northern region and the Central region (Lauridsen, Lerdo de Tejada, Petersen, Puyana, & Rosales, 2013) could be better served by suitable graduates.

From these two geographic areas of Mexico, Lauridsen et al. (2013) mentioned that the most important is the one located in the Central region of the country, specifically the states of Puebla, Hidalgo, and Mexico State. The Central region is known by the level of sophistication of the activities performed there, in contrast to maquila (assembly-plant)
activities performed in the Northern region’s automotive cluster. In the Central region, Puebla is a point of reference for the outstanding level of GDP impact of the automotive sector (Lauridsen et al., 2013). However, other states with similar conditions like Hidalgo and Mexico state, and more recently Querétaro, San Luis Potosí, and Guanajuato (INEGI, 2015), present characteristics similar to the case of Puebla, which can permit extending the benefits of the present research case study to other contexts. Consequently, transferability can potentially be achieved.

In terms of trustworthiness, there are a number of techniques available to prove the quality, pertinence, and substantial contribution to the research study (Creswell, 2013). Trustworthiness is based on establishing credibility, dependability, and confirmability; all of these concepts are related to validity (Carter, Bryant-Lukosius, DiCenso, Blythe, & Neville, 2014). The research study’s trustworthiness depends on the description of the reality expressed by the respondents, which must be credible, accurate, well documented, and assertively derived from the data collected.

For purposes of the present study, participant selection (of a purposive approach) provided credibility for the sources because of the participants’ direct familiarity with the recruitment process. As suggested by Creswell and Miller (2000) and Lincoln and Guba (1985), participants were asked to review transcriptions of their individual interviews and the accuracy of the narrative to enhance the credibility of the data analysis made through the research findings. This technique is called member checking (Creswell & Miller, 2000). This technique was used for this research study’s credibility. The member checking process for participants consisted of sending them the transcription of the
interviews and the final narrative of findings. They provided responses according to their opinion of the narrative reflecting their main ideas and contributions. All responses are kept confidential.

From a narrower perspective, in which the focus is the problem addressed by the present research study, the study’s limitations were the inclusion of one single industrial sector, time scarcity, and the language factor. The industrial composition in Mexico is made up of different and diverse industrial sectors as reported by the Sistema de Información Empresarial Mexicano (SIEM, 2016), which is the database created by the Mexican government to register all industries located within the country. Among all of the industries based in Mexico, the automotive industrial sector is one of the biggest contributors to the region’s and the country’s GDP (CIA, 2016; INEGI, 2015). For this reason, the sector was selected for the present research. However, the selection of the automotive sector represents a delimitation for this case study (Simon & Goes, 2013) since other industrial sectors are not taken into consideration, narrowing the study’s scope at the same time.

Another limitation was the time available in the automotive recruiters’ agendas. Time was a determinant factor in collecting data since the researcher depended on the availability of the participants to contribute in terms of scheduling time for the interviews and data verification, as needed. In many instances, the interviews were re-scheduled, but when finally conducted, the participants did not insist on limiting their time to share personal insights. Two interviews lasted more than an hour, and only one of them lasted 33 minutes.
Since the research was conducted in Mexico, the language barrier to performing the interviews in English or translating the interviews into English from Spanish, which is the native Mexican language, was considered a limitation. The intention was to conduct the interviews directly in English to avoid translation-associated problems or time consumed by translating and possibly losing vital meanings or insights in translation. Fortunately, all of the interviews were conducted in English. Since the automotive industry composition is international in origin, the language barrier, potentially determinant in the interviewing process, was not a problem. The participants’ proficiency in the English language allowed the data collection process to be performed in English.

Summary

This chapter provided an outline of the methods, tools, and analysis strategies used to perform this research study. A qualitative, case study approach was a decisive factor in achieving the goals of this study—to compare what automotive industry recruiters in the Puebla region want against what business programs of a major university in the area, UPAEP, offers. Key elements of the research method included research design, instruments of the study, study participants, how the data will be analyzed, and what are the limitations of the research design. In Chapter 4, findings of this study will be discussed. Analysis, discussion, and insights of the research findings will be presented in Chapter 5.
CHAPTER 4: FINDINGS

Introduction

The employability of new university graduates is a topic researched worldwide as proven by the work of diverse authors in Iran, the United States, Europe, Australia, India, and Canada, among others (Bagherinia et al., 2015; Benamati et al., 2010; Ciuhurenau et al., 2011; Messum et al., 2015; Mishra, 2014; Walk and Wright, 2014). The topic of new graduates’ employability is important due to its impact on an organization’s competitiveness based on the acquisition of human talent. However, the topic also has an impact on the universities’ suitability for preparing for workplace readiness and on the graduates’ professional development as well. Time spent in finding a job position after graduation is also a determinant factor impacting societies in the form of a phenomenon called NEET, as expressed by Hazenberg et al. (2014).

Mexico is home to two main automotive clusters (Lauridsen et al., 2013). One is located in the central region of the nation; the other one is in the northern region of the country. Of these two clusters, the one located in the central region is the more important, and Puebla is outstanding among the rest of the central Mexican states due to the level of sophistication of its automotive sector.

In Puebla, there are two dominant automakers and a large number of suppliers and related business partners. The suppliers’ chain not only serves the two leading automakers in Puebla, but also other automakers in the rest of the country. The automotive sector located in Puebla was selected to conduct the present research case study.
The focus was placed on business graduates with the intention of narrowing the case study’s scope. This decision was made due to the importance of the business graduates for the industry’s management of local and international operations. Puebla is second largest in the country regarding the number of universities located in the state (Damián, 2017). Two public and several private universities are established in Puebla, making the state a prolific producer of graduates. That is an important setting for this case study because in no other state in Mexico co-exist such a large base of automotive firms in proximity to a similarly large base of educational institutions. How one university’s curriculum aligns with what automotive industry recruiters want for their new hires is the focus of this research study.

This research study was designed from a case study methodology in which the following research questions were asked:

1. What gaps exist between the skills, knowledge, abilities, and behaviors industry recruiters’ desire and the skills, knowledge, abilities, and behaviors business students learn through UPAEP’s curriculum?
2. According to automotive industry recruiters, what are the skills, knowledge, abilities, and behaviors sought for when recruiting a potential candidate for employment?
3. What are the skills, knowledge, abilities, and behaviors business students learn based on UPAEP’s curriculum?

This case study and this chapter are divided into two parts. The first part is based on findings discovered from in-depth interviews conducted with recruiters of Puebla’s
automotive industry. The interview protocol was created to explore the recruiters’ needs in terms of SKABs desired in a business graduate. The second part was a document analysis of the UPAEP’s School of Business curricula to identify the major themes the university intentionally or unintentionally teaches its students. With both sets of data, a comparison of the results was made to determine if recruiters’ needs are met by the university preparation provided to students enrolled in undergraduate business programs. The intention was to determine if industry needs and university instruction are aligned, a factor that can explain graduates’ suitability for workplace requirements. The alignment between them can help reduce the time required to find a new job— the problem to be solved.

What Are the SKABs Auto Industry Recruiters Look for in a Candidate

According to Cordero et al. (2015), 68 industries constitute Puebla’s automotive cluster. From these 68 industries, 11 were selected to interview their recruiters for the present research study. In all, 13 members of these 11 firms participated in the interviews providing their insights. Twenty-two invitations to 16 companies were sent to achieve a response of at least 12 participants from 10 firms. The expectations in terms of participation were exceeded.

In the course of each interview, all of the SKABs needed for professional performance within the automotive industry were explored in depth. On average, interviews were 47 minutes in length. During interviews, participants contributed their insights concerning a suitable professional profile for work readiness in the field of business. The findings were categorized according to the SKABs mentioned in each of
the associated questions in the interview protocol. Additional themes also emerged during these conversations. The SKABs will be first displayed to respond to the research question, but later the emerging themes will also be commented for a full appreciation of the automotive industry context in Puebla.

**Skills**

In general, the participants or recruiters preferred and mentioned more frequently soft skills over hard skills. The definition of these two categories was addressed in Chapter 2 and the key terms section. Hard skills are tools used for working, while soft skills are capacities of intrapersonal and interpersonal focus that can be transferred among different contexts (Care & Griffin, 2014).

One statement made that supports this first research finding is “Everybody is evaluated against soft skills. That is the basic profile.” A similar statement made by a second research participant was: “Technical skills are easy to find on the market, but soft skills are more important to me.” A third recruiter had this to say on the topic: “Hard skills, I think, are not important skills in the company because most of the time… we need to deal with real-life. So, we need soft skills for that.” Statements such as these were common during the interviews. More than half of the study participants emphasized the importance of soft skills, over hard or technical skills.

Cognitive skills, such as analytical thinking, problem-solving, and logical thinking, were also frequently mentioned by the participants. Analysis and synthesis, determinant skills of critical thinking, were also mentioned to the point that some statements about cognitive skills like analysis are important to the new graduate’s
employment process. An example is this comment made by one of the recruiters: “I always say that there are two basic skills that I am looking for in a person. One is being able to synthesize… sorry, first of all, to analyze and then to synthesize.” Additionally, a similar comment was made by another participant: “If you are not able to analyze, you are really not providing more value to the group.” And still another repeats this theme: “You bring me a person who is able to make a logical analysis of any problem… and you are done because you can train that person to do a lot of things.”

Speaking of hiring a person, one of the participants expressed, “If I want the best in class, I need them to solve problems, to be analytical.” Furthermore, another participant stated, “We like people that think. We look for analytical thinkers. We are not looking for hard skills.” It is clear that cognitive skills like critical thinking and analytical thinking are appreciated among the soft skills.

Other soft skills, of less substantial impact in recruitment decisions, can be cited because they were also referred to by the participants: leadership, planning, organizing, adaptation to change, fast reaction to changes, work under pressure, getting along with others, scenario assessment, and diversity appreciation. These skills were not mentioned as often as the other soft skills, so they are not comparable in demand to the soft skills mentioned above. Still, they have a place in the findings, and for this reason, they will be discussed later in this chapter.

As a conclusion, Table 1 summarizes the main skills mentioned by the recruiters. All of them are soft skills. Soft skills are presented in terms of demand. In each column, the first skills stated are the more frequently mentioned by the recruiters. This
information will be used to compare skills demanded by recruiters with the skills transmitted to students during academic preparation.

Table 1

*Skills Mentioned by Recruiters*

<table>
<thead>
<tr>
<th>Skills in High Demand</th>
<th>Skills in Less Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global skills:</td>
<td>Soft skills:</td>
</tr>
<tr>
<td>Cultural intelligence, cultural sensitivity, and multicultural skills</td>
<td>Leadership, planning, organizing, adaptation to change, fast reaction to changes, work under pressure, getting along with others, scenario assessment, and diversity appreciation</td>
</tr>
<tr>
<td>Social skills: teamwork, negotiation, and communication</td>
<td></td>
</tr>
<tr>
<td>Cognitive skills: analytical thinking, problem-solving, and logical thinking</td>
<td></td>
</tr>
</tbody>
</table>

Knowledge

Knowledge is defined as the information about a particular issue, which allows understanding of the topic (UNICEF, 2017). It can be general knowledge conforming the foundation of a discipline as broad as business. But, knowledge can also be information about a more specific scope such as the one related to a particular discipline like marketing or accounting. The general understanding during the interviews was that knowledge is discipline-related; therefore, knowledge has a technical approach.

One statement supporting the findings in the topic of knowledge is, “Companies are moving around the world because of nations’ legal benefits, free trade agreements, logistics situations… which represent cost reduction.” Other participants made similar statements as well.

Table 2 synthesizes the knowledge referred to by the recruiters. The knowledge is listed in three columns arranged by the frequency in which the topic was mentioned by
the recruiters. This information will later be contrasted with the findings produced during the document analysis to determine if students are being prepared according to the recruiters’ needs.

Table 2

Knowledge Mentioned by Recruiters

<table>
<thead>
<tr>
<th>High Frequency</th>
<th>Medium Frequency</th>
<th>Low Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Free trade agreements</td>
<td>Geography</td>
<td>Finance</td>
</tr>
<tr>
<td>International trade</td>
<td></td>
<td>Accounting</td>
</tr>
<tr>
<td>Logistics</td>
<td></td>
<td>National law</td>
</tr>
<tr>
<td>Customs</td>
<td></td>
<td>Business operations</td>
</tr>
<tr>
<td>Foreign law</td>
<td></td>
<td>Managerial systems</td>
</tr>
<tr>
<td>International business</td>
<td></td>
<td>Business plans</td>
</tr>
<tr>
<td>International Commerce Terms</td>
<td></td>
<td>Project management</td>
</tr>
<tr>
<td>(INCOTERMS)</td>
<td></td>
<td>Quality</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Purchasing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Economics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Statistics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Business intelligence</td>
</tr>
</tbody>
</table>

Abilities

Abilities are the features or traits gained after becoming familiar with or after mastering a task through constant practice. Making a complex task simple is one indicator of an acquired ability (Asaph & Dharma Raja, 2016). Language learning is a common ability expected in a globalized world (He & Chen, 2017). And, in this case, with no exception, language proficiency in English was mentioned by all of the participants as the ability that must be present in the business graduate’s profile. Comments like, “English still is a must,” “The English language is a must,” and, “The most common language in business is English” were a commonly made in the interviews.
In addition to English, German was a suggested language. Over half of the participants mentioned German as a language to be expected in the business graduate’s abilities repertoire. Other languages like Korean, Japanese, Portuguese, Chinese, and French were referred to because of the incoming foreign investments coming into the country; however, having or not having fluency in these languages did not appear to be as important to the recruiters.

Another ability recruiters seek is the ability to use computer software. All recruiters spoke of the importance of knowing Microsoft Office software and of having an understanding of information technology. Additionally, in terms of software literacy, enterprise resource planning (ERP) software is also needed. However, the participants referred to ERPs as desired knowledge, but not as mandatory for all positions.

In terms of software literacy, systems, applications, and products (SAP) was the ERP or specialized software more frequently cited by 60% of the participants. SAP is considered an ability because it takes time or practice to get familiar with this software. Other ERPs, similar to SAP, were mentioned, but SAP were the one in high demand.

“SAP, yes, yes, definitely is an ability that companies request. I have worked for several industries and all of them use it,” and “In the automotive industry, most companies are using SAP. It is basic. SAP ability makes the difference between curriculums.” One of the participants clarified this notion stating, “Recruiters go directly to a person who knows SAP, it represents a high percentage that you are going to be interviewed directly to be hired for the position.” Additionally, the same participant stated, “If you know SAP, you can expect to have a better work condition or an increased salary.”
There were two more abilities expected of the business graduates as commented by six of the participants: life-long learning and the capacity of seeing the big picture. According to the recruiters, life-long learning is expected because change is a constant factor in the business world and the students must cope with change. One participant stated, “It is a fact that we teach and learn every day.” An additional comment provided by another participant’s perspective was, “You need to learn always a little bit of all of the positions because we help each other or support others with their projects in the plant.” In addition, another participant stated, “Business is changing a lot, so we need people… more focused on people and learning from real-life.”

Table 3 was prepared to provide information on how many participants or recruiters made reference to the abilities. In all, 13 recruiters were interviewed, but not all of them placed emphasis on the same abilities. This information is useful to determine if recruiters’ expectations in terms of abilities are met by the university preparation. Therefore, the information displayed in Table 3 will be used to compare against the findings from the document review of the UPAEP’s School of Business.

Table 3

<table>
<thead>
<tr>
<th>Specific Ability</th>
<th>Cited by How Many Recruiters</th>
</tr>
</thead>
<tbody>
<tr>
<td>English language</td>
<td>13</td>
</tr>
<tr>
<td>SAP</td>
<td>8</td>
</tr>
<tr>
<td>German language</td>
<td>7</td>
</tr>
<tr>
<td>Ability to see the big picture</td>
<td>6</td>
</tr>
</tbody>
</table>
Behaviors

Behaviors are defined as the attitudes resulting from the interaction between the individual and the environment to accomplish certain purposes (Lazzeri, 2014). In this category, one of the themes that came through most clearly during interviews with recruiters was the importance they placed on having new hires who were innovative and creative. Statements that support this finding include, “When something changes, it is important that you react,” and “Propose what is the best way to do it and that is different from an established procedure.” A third recruiter said:

Leadership and creativity are very important in the automotive sector. People can have a good new idea, but never develop it; so we need somebody who says yes, let’s go, let’s do it, when do I start?

Besides creative thinking, ethics (specifically honesty, integrity, and responsibility) were demanded by all of the recruiters. Participants’ salient comments about ethics were, “We need values, we are looking for them,” and “Honesty and integrity are really important because we have a lot of lies in the interviews; people tell lies to get the job.” One recruiter gave an example of ethical practice when saying, “You do not have the money, but you handle the money of the company, so I think honesty is important.” In summary, ethical behavior as displayed through honesty, integrity, responsibility, reliability, loyalty, humility, and professionalism is a clear expectation of recruiters in the automotive sector.

Proactivity was another commonly cited behavior expected of business graduates. Most of the automotive industry recruiters interviewed discussed being proactive as a workplace expectation. Proactivity was mentioned in terms of meeting organizational
goals, customers’ needs, and addressing urgent demands that presented challenging business scenarios. Along with proactivity, stated phrases that connect to this notion included self-empowerment, motivation, and responsibility.

Table 4 provides a list of the themes that came out of this part of the discussions. Behaviors are arranged in terms of demand. Table 4 was created with the intention of not only summarizing but also emphasizing the needs of the recruiters in regards to attitudes or behaviors. The more cited behaviors will be later contrasted to the UPAEP’s emphasis in developing certain behaviors in students.

Table 4

<table>
<thead>
<tr>
<th>High Frequency</th>
<th>Medium Frequency</th>
<th>Low Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovative</td>
<td>Commitment</td>
<td>Work-engagement</td>
</tr>
<tr>
<td>Creative thinking</td>
<td>Goal-oriented</td>
<td>Respect for others</td>
</tr>
<tr>
<td>Ethics (honesty and</td>
<td>Punctuality</td>
<td>Service attitude</td>
</tr>
<tr>
<td>integrity)</td>
<td></td>
<td>Positive attitude</td>
</tr>
<tr>
<td>Proactivity</td>
<td></td>
<td>Self-confidence</td>
</tr>
</tbody>
</table>

Emerging Themes

During the interviews regular reference was made to topics, issues, and facts that caused additional themes to emerge. Four emerging themes were identified through the discussions: getting things done, global awareness, people focused on people, and generational differences.

Getting things done. This topic was an emerging theme of that had a high priority among the recruiters who were interviewed. Here are two quotes made by seasoned recruiters that typify what many expressed:
First, it is important to get things done. It is common that people do not get things done, so my industry is willing to find people who get things done, leadership needs to be taken to get things done.

I need a person to influence others to make things happen. We have goals. So, we all have to get them completed. If we do not support each other, we will not reach the goal.

**Global awareness.** Global awareness implies the presence of soft global skills, which were mentioned continually by all of the participants. But, global awareness also reflects the natural context of the modern world, which is interconnected at all times. According to one participant, “Business awareness is imperative because it is multidimensional and requires global knowledge.” In a separate interview, another recruiter’s comment complements this perspective. “If you have the ability or tools to manage all of this technology and connectivity, you will have a big opportunity to understand the entire new world of business.” A third quote that represents the voice of many who spoke of this topic is, “All the areas have to have a vision of the future.” How this emerging theme connects with other aspects of the study will be discussed later in this chapter and again in Chapter 5.

**People focused on people.** An additional theme predominant in the interviews was the issue of *people focused on people*. In different ways and moments during the interviews, the participants made reference to the importance of being connected with others and willing to be team players. Teamwork was found to be an important skill, but the emerging theme is that everything depends on people. Participants expressed many similar ideas on this emerging theme. One participant said, “We need to be close to people.” Another claimed, “I need people willing to do or to be more open to people,
more emphatic. If you can put yourself in the position of others, you can help them easier.” Another had this to say. “Right now everything is about the team. People have to work as a team.” And finally, “We are a people company, and we work with people, so the level of interaction is high, that is why teamwork is really important.”

**Generational differences.** The fourth theme to emerge from conversations with recruiters had to do with being aware of, and being able to work with generational differences. Over half of the participants referred to the topic that there is an evident difference between the attitudes of current, more senior employees versus the attitude of the newer and younger employees. Specifically, the recruiters mentioned issues of punctuality and adhering to work schedules. Members of the Millennial generation are blamed for demanding flexible schedules and work arrangements that recruiters in some cases agree to modify if deadlines are met, and projects are satisfactorily accomplished. One participant stated, “They (Millennials) do not desire to work long hours, or they do not have the desire to stay in the office and do something.” Others claimed, “They get bored very easily,” and “They are not happy enough, nothing is sufficient.” These are a few of the comments that indicate concern about their capacity to cope with frustration.

All of these themes are connected with the automotive industry’s general needs and trends as expressed by the recruiters, but they are also determinants in evidencing the need of developing a certain SKAB in graduates. Table 5 displays these in the contexts in which they arose. How these emerging themes connect to findings from the second part of this case study (the curriculum review) will be discussed later in this chapter. The implications of these additional findings will be addressed in Chapter 5.
Table 5

Identified Emerging Themes

<table>
<thead>
<tr>
<th>Emerging Theme</th>
<th>Automotive Industry Need or Trend</th>
<th>SKAB Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Getting things done</td>
<td>Remain competitive in a global and demanding environment</td>
<td>All the three types of soft skills</td>
</tr>
<tr>
<td>Global awareness</td>
<td>Remaining competitive in a global and demanding environment</td>
<td>Global soft skills</td>
</tr>
<tr>
<td></td>
<td>Cost reduction</td>
<td>Knowledge about logistics and transportation, geography, and international trade</td>
</tr>
<tr>
<td></td>
<td>Connectivity and mobility</td>
<td>Technical awareness</td>
</tr>
<tr>
<td></td>
<td>Technical advancement</td>
<td>Practical experience</td>
</tr>
<tr>
<td></td>
<td></td>
<td>International experience</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Behaviors like proactivity and self-motivation</td>
</tr>
<tr>
<td>People focused on</td>
<td>Improvement, innovation, and creativity</td>
<td>Soft skills like teamwork and networking</td>
</tr>
<tr>
<td>people</td>
<td>Customized products</td>
<td>The ability to see the big picture</td>
</tr>
<tr>
<td></td>
<td>Networking</td>
<td>Behaviors like a service attitude and empathy</td>
</tr>
<tr>
<td></td>
<td>Cost reduction</td>
<td></td>
</tr>
<tr>
<td>Generational differences</td>
<td>Remain competitive in a global and demanding environment</td>
<td>Behaviors related to punctuality, self-motivation</td>
</tr>
<tr>
<td></td>
<td>Connectivity and mobility</td>
<td>dealing with frustration, change management, and responsibility</td>
</tr>
<tr>
<td></td>
<td>Technical advancement</td>
<td>Ability to be aware of IT trends</td>
</tr>
</tbody>
</table>

What Are the SKABs Taught through UPAEP’s Business Curriculum

In Mexico, the undergraduate program curricula at the university level are fixed. A fixed curriculum means that students are not able to choose among an array of courses to assemble a program of study. Instead, undergraduate programs are designed to be specific in the number and order of classes to be taken. The intention is to acquire, create, or refine the expected graduate’s professional profile, that is, the skills, knowledge, abilities, and behaviors they will have when they graduate.
The UPAEP’s School of Business has nine undergraduate programs; business logistics, international trade, business administration, business intelligence, accounting, marketing, finance, hospitality, and gastronomy. Of these, seven were selected for the present case study. A study of courses in the hospitality and gastronomy were not considered since their graduates are not sought after by the automotive sector in Puebla.

In accordance with national standards provided by the Mexican Ministry of Education (SEP, for its acronym in Spanish) and included in the document named Acuerdo 279 (SEP, 2000), the UPAEP’s business programs have a length of four years or eight semesters. The undergraduate programs are divided into three interconnected academic areas: general studies, business courses, and core disciplinary courses. For this reason, general studies, business courses, and core disciplinary courses were the areas analyzed separately, even though there are several courses in each of these sections.

**Findings from a Review of the General Studies Course Artifacts**

According to what is stated in the documents of the Centro de Investigación y Asesoría Curricular (CIAC, 2016), which is the UPAEP’s department in charge of curriculum design, general education courses are designed to provide students with a general approach to basic concepts expected to be present in a university graduate’s profile. General studies are offered during the first four semesters of a student’s program and include topics such as foreign languages, ethics and social responsibility, information technology, critical thinking, academic writing, mathematics, and statistics.
Table 6 summarizes the learning outcomes and activities in the general studies courses. Mechanisms proposed by members of the faculty to guarantee knowledge acquisition such as textbooks, assignments, and exams were also included in Table 6.

Table 6

*Learning Outcomes for General Studies Courses*

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Learning Outcomes</th>
<th>Learning Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreign language (four consecutive semesters)</td>
<td>1. Communication, analysis, and data gathering in a foreign language (English proficiency evidenced by a TOEFL score) 2. Other languages: Chinese, German, or French</td>
<td>Assigned textbooks</td>
</tr>
<tr>
<td>Information technology</td>
<td>1. Problem-solving via the use of information technology 2. Collaborative work through the use of digital tools 3. Research capacity / information literacy</td>
<td>Creation of a digital portfolio Certification on Microsoft Office</td>
</tr>
<tr>
<td>Critical thinking</td>
<td>1. Logical structure of thinking 2. Analysis of topics and critically supported personal position 3. Personal communication skills</td>
<td>General evaluation of competencies Specific readings and essays</td>
</tr>
<tr>
<td>Academic writing</td>
<td>1. Critical thinking tools 2. Logical and clear expression of ideas</td>
<td>Evaluation rubrics for essays</td>
</tr>
<tr>
<td>Statistics</td>
<td>1. Analysis of numerical data 2. Team and collaborative work to determine statistical probabilities</td>
<td>Assigned textbook Statistics software</td>
</tr>
<tr>
<td>World economic geography</td>
<td>1. Analysis of the global environment 2. Acquisition of a global perspective 3. Identification of global opportunities</td>
<td>General comprehensive exam prepared by faculty</td>
</tr>
</tbody>
</table>
On analyzing the general studies courses, it can be seen that they are tending to the promotion of soft skills. Communication skills and analytical skills are the soft skills most repeated in the learning outcomes of general studies courses. After this, global perspective, enhanced by the inclusion of foreign language, intercultural skills, diversity appreciation, and geography are also frequently referred to in the learning outcomes. In contrast, geography-related knowledge in the form of regional studies and world economic geography is only found in the courses of the business logistics and international trade programs. Global perspective is followed by teamwork and critical thinking, which are also mentioned more than once. Ethics, problem-solving, information technology, decision-making, and logical thinking are also cited, but with less frequency. These findings will be discussed further in Chapter 5.

Findings from a Review of Business Course Artifacts

According to the document analysis made of the UPAEP’s business program curricula, the UPAEP’s general studies courses establish the primary platform from which business students can refine or create soft skills for professional performance. Skills like teamwork and communication, as well as behaviors like ethics, are included in the general studies courses’ learning outcomes. After general studies, business courses are taken by all business students regardless of the program in which they are enrolled. Business courses are marketing, finance, microeconomics, macroeconomics, introduction to administration, market research, entrepreneurship, and strategic planning.

Soft skills and technical knowledge are being primarily promoted through faculty
interaction in the business courses. The business courses’ learning outcomes and learning activities connected with soft skills and technical knowledge are displayed in Table 7.

**Table 7**

*Learning Outcomes for Business Courses*

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Learning Outcomes</th>
<th>Faculty Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marketing</td>
<td>1. The importance of marketing</td>
<td>Conceptual maps</td>
</tr>
<tr>
<td></td>
<td>2. Decision-making for the marketing mix</td>
<td>Decision-making and</td>
</tr>
<tr>
<td></td>
<td>3. Marketing plan for goods and services</td>
<td>team-made projects</td>
</tr>
<tr>
<td></td>
<td>4. Socially responsible planning</td>
<td>General comp exams</td>
</tr>
<tr>
<td>Finance (four consecutive</td>
<td>1. Qualitative / quantitative argumentation</td>
<td>Exercises</td>
</tr>
<tr>
<td>courses)</td>
<td>2. Analysis of financial statements for decision-making purposes</td>
<td>Case analysis</td>
</tr>
<tr>
<td></td>
<td>3. Analysis of the financial behavior</td>
<td>Working papers</td>
</tr>
<tr>
<td>Microeconomics</td>
<td>1. Critical analysis of Economics</td>
<td>Assigned textbook</td>
</tr>
<tr>
<td></td>
<td>2. Economic models to solve problems</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Mathematical tools</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. Interpretation of economic information</td>
<td></td>
</tr>
<tr>
<td>Macroeconomics</td>
<td>1. Identification of problems</td>
<td>Analysis and problem-solving via discussions</td>
</tr>
<tr>
<td></td>
<td>2. Mathematical methods for solving economic problems</td>
<td>Use of databases</td>
</tr>
<tr>
<td></td>
<td>3. Solutions for real economic problems</td>
<td>Comprehensive exam</td>
</tr>
<tr>
<td>Introduction to administration</td>
<td>1. Strategic thinking</td>
<td>Case-based learning</td>
</tr>
<tr>
<td></td>
<td>2. Understanding of the leadership concept</td>
<td>Teamwork</td>
</tr>
<tr>
<td></td>
<td>3. Innovation of administrative processes</td>
<td>Assigned textbook</td>
</tr>
<tr>
<td>Market research</td>
<td>1. Market research method</td>
<td>Comprehensive exam</td>
</tr>
<tr>
<td></td>
<td>2. Design of market research tools</td>
<td>Teamwork</td>
</tr>
<tr>
<td></td>
<td>3. Use of information gathering tools</td>
<td>Market research</td>
</tr>
<tr>
<td></td>
<td>4. Market information analysis</td>
<td>Specialized software</td>
</tr>
<tr>
<td>Entrepreneurship</td>
<td>1. Creation of a business plan</td>
<td>Assigned textbook</td>
</tr>
<tr>
<td></td>
<td>2. Analysis of economic viability</td>
<td>Conferences with</td>
</tr>
<tr>
<td></td>
<td>3. Intrapreneurship</td>
<td>entrepreneurs</td>
</tr>
<tr>
<td>Strategic planning</td>
<td>1. Strategic and tactical thinking</td>
<td>Teamwork</td>
</tr>
<tr>
<td></td>
<td>2. Decision-making process for organizational strategy creation</td>
<td>Visits to companies</td>
</tr>
<tr>
<td></td>
<td>3. Innovation of administrative processes</td>
<td>Oral presentations</td>
</tr>
</tbody>
</table>


Findings from a Review of Core Disciplinary Course Artifacts

The core disciplinary courses represent the focus of a program. Core disciplinary courses provide profession-related knowledge. For that reason, these courses are different for each undergraduate program and have a specific and determinant weight in the professional profile of each program’s graduates. All of these courses have a technical approach; however, soft skills can be promoted via the learning activities designed by the faculty and implemented by the course’s professor.

There are introductory level core disciplinary courses, taken by students starting from the first semester. The intention is to immerse students in the disciplinary field so the graduate’s profile can be built from day one at the university. But, there are also more advanced courses, which are scheduled closer to the end of the academic program. For that reason, they provide a practical scope to the discipline. In these upper-level courses students are expected to apply the acquired knowledge and exercise the acquired skills during their academic life. In both levels, introductory and practical, the core disciplinary courses tend to promote the acquisition of specialized knowledge.

The general areas of technical knowledge content in each of the business programs of the UPAEP’s School of Business are displayed in Table 8. It was not the intention to make a detailed analysis of each of the courses’ learning outcomes. But it was important to identify the type of skills, knowledge, abilities, and behaviors transmitted to students in these courses by using the courses’ contents or learning activities.
### Table 8

**General Information of Core Disciplinary Courses per Business Program**

<table>
<thead>
<tr>
<th>Program</th>
<th>Disciplinary Knowledge</th>
<th>Learning Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Business logistics</strong></td>
<td>1. Supply chain management</td>
<td>Teamwork</td>
</tr>
<tr>
<td></td>
<td>2. Logistics and transportation</td>
<td>Presentations</td>
</tr>
<tr>
<td></td>
<td>3. International trade</td>
<td>Guided visits to companies</td>
</tr>
<tr>
<td></td>
<td>4. Operations management</td>
<td>Case-based learning</td>
</tr>
<tr>
<td></td>
<td>5. Quality systems</td>
<td>Integrative/Comprehensive seminars or projects</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Specialized software</td>
</tr>
<tr>
<td><strong>International trade</strong></td>
<td>1. International geographic studies</td>
<td>Teamwork</td>
</tr>
<tr>
<td></td>
<td>2. International logistics</td>
<td>Presentations</td>
</tr>
<tr>
<td></td>
<td>3. Customs law and management</td>
<td>Analysis of the international context</td>
</tr>
<tr>
<td></td>
<td>4. Free trade agreements</td>
<td>Guided visits to companies</td>
</tr>
<tr>
<td></td>
<td>5. International law and contracts</td>
<td>Case-based learning</td>
</tr>
<tr>
<td></td>
<td>6. International business and negotiation strategies</td>
<td>Specialized software</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Comprehensive seminars or projects</td>
</tr>
<tr>
<td><strong>Business administration</strong></td>
<td>1. Organizational climate and structure</td>
<td>Teamwork</td>
</tr>
<tr>
<td></td>
<td>2. Labor law</td>
<td>Presentations</td>
</tr>
<tr>
<td></td>
<td>3. Strategic management</td>
<td>Guided visits to companies</td>
</tr>
<tr>
<td></td>
<td>4. Leadership</td>
<td>Case-based learning</td>
</tr>
<tr>
<td></td>
<td>5. Human Resources Management</td>
<td>Business simulations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Interviews</td>
</tr>
<tr>
<td><strong>Business intelligence</strong></td>
<td>1. Data mining and data analysis</td>
<td>Comprehensive seminars or projects</td>
</tr>
<tr>
<td></td>
<td>2. Business processes</td>
<td>Teamwork</td>
</tr>
<tr>
<td></td>
<td>3. Business intelligence technology</td>
<td>Presentations</td>
</tr>
<tr>
<td></td>
<td>4. Information systems</td>
<td>Specialized software</td>
</tr>
<tr>
<td><strong>Accounting</strong></td>
<td>1. Financial accounting</td>
<td>Comprehensive seminars or projects</td>
</tr>
<tr>
<td></td>
<td>2. Accounting information</td>
<td>Teamwork</td>
</tr>
<tr>
<td></td>
<td>3. Accounting standards</td>
<td>Presentations</td>
</tr>
<tr>
<td></td>
<td>4. Costs</td>
<td>Specialized software</td>
</tr>
<tr>
<td></td>
<td>5. Tax law</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6. Audits</td>
<td></td>
</tr>
</tbody>
</table>
Table 8 Continued

<table>
<thead>
<tr>
<th>Program</th>
<th>Disciplinary Knowledge</th>
<th>Learning Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marketing</td>
<td>1. Consumer behavior</td>
<td>Comprehensive seminars or projects</td>
</tr>
<tr>
<td></td>
<td>2. Marketing tools</td>
<td>Teamwork</td>
</tr>
<tr>
<td></td>
<td>3. Innovation</td>
<td>Presentations</td>
</tr>
<tr>
<td></td>
<td>4. Sales administration</td>
<td>Guided visits to companies</td>
</tr>
<tr>
<td></td>
<td>5. Promotion</td>
<td>Case-based learning</td>
</tr>
<tr>
<td></td>
<td>Specialized marketing</td>
<td>Specialized software</td>
</tr>
<tr>
<td>Finance</td>
<td>1. Financial system</td>
<td>Comprehensive seminars or projects</td>
</tr>
<tr>
<td></td>
<td>2. Stock market</td>
<td>Teamwork</td>
</tr>
<tr>
<td></td>
<td>3. Corporate finance</td>
<td>Presentations</td>
</tr>
<tr>
<td></td>
<td>4. Sustainability</td>
<td>Specialized software</td>
</tr>
<tr>
<td></td>
<td>6. International finance</td>
<td></td>
</tr>
</tbody>
</table>

It is customary that the undergraduate programs at the UPAEP include from four to six elective or optional courses from which students are free to select an emphasis in their studies. These sets of courses are called *specialization areas* within the UPAEP. The specialization areas are designed with the intention of providing more technical knowledge to students, respecting their area of interest within the framework of a specific disciplinary field of expertise.

**Summary of the Curriculum Analysis of UPAEP’s School of Business**

Responding to the research question addressing what SKABs are learned by students based on the UPAEP’s curriculum, it can be stated that the document analysis of the UPAEP’s business programs revealed that soft and hard skills are both promoted within the curricula. Knowledge of technical scope is provided by the courses related to the world of business in general or within the framework of each one of the disciplines. Abilities are also promoted not only from a high technical perspective, such as the
familiarity gained with specialized software but also via basic business competencies such as cost analysis.

Students are required to obtain a certain Test of English as a Foreign Language (TOEFL) score before they enter the program. This requirement is in place to monitor student ability to communicate in English. This requirement aligns with the development of a global perspective skill, which is highly appreciated in the professional environment. English is the language in highest demand in the professional context, and it is the language favored by the UPAEP’s educational model, as revealed in the document analysis. Attitudes related to leadership such as motivation are also promoted via the UPAEP’s educational model, the foundation on which the educational practices rest.

With the presence of internships and other practical learning activities, the educational objectives are achieved from a blended education model perspective. General studies courses are mainly taught from a traditional model of education, while business and core disciplinary courses include practical experiences enabling the students to acquire, develop, or refine the expected SKABs. It was found that the blended approach to education is increasingly used at the School of Business.

Table 9 was prepared with the intention to better understand the development of employability skills at the UPAEP’s School of Business. Furthermore, Table 9 was created to present what SKABs (employability skills) were developed in each of the three curricula’s areas: general studies, business, and core disciplinary. The soft and hard skills along with the abilities, knowledge, and behaviors are listed in order of importance, in
which the first issue mentioned in the list is the more frequently cited in the UPAEP course documents.

**Table 9**  
*SKABs Found at the UPAEP's School of Business Programs*

<table>
<thead>
<tr>
<th>General Studies</th>
<th>Business</th>
<th>Core Disciplinary</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Soft skills</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Communication</td>
<td>1. Analysis</td>
<td>1. Teamwork</td>
</tr>
<tr>
<td>2. Analysis</td>
<td>2. Teamwork</td>
<td>2. Communication</td>
</tr>
<tr>
<td>4. Critical thinking</td>
<td>4. Problem-solving</td>
<td></td>
</tr>
<tr>
<td>6. Problem-solving, decision-making</td>
<td>6. Strategic thinking</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7. Critical thinking</td>
<td></td>
</tr>
<tr>
<td><strong>Hard skills</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Information literacy</td>
<td>1. Applied</td>
<td>1. Hard skills applied</td>
</tr>
<tr>
<td>2. Mathematics</td>
<td>mathematics, statistics, and information literacy</td>
<td>to the discipline</td>
</tr>
<tr>
<td>3. Statistics</td>
<td>also information literacy</td>
<td></td>
</tr>
<tr>
<td><strong>Knowledge</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Geography</td>
<td>1. Strategic planning</td>
<td>1. Business or administrative processes</td>
</tr>
<tr>
<td>2. Organizational management</td>
<td>2. Law and audits</td>
<td></td>
</tr>
<tr>
<td>3. Business or administrative processes</td>
<td>3. Strategic planning</td>
<td></td>
</tr>
<tr>
<td>4. Risk management</td>
<td>4. Finance</td>
<td></td>
</tr>
<tr>
<td>5. Economics</td>
<td>5. Logistics</td>
<td></td>
</tr>
<tr>
<td><strong>Abilities</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Software literacy</td>
<td>2. Foreign language</td>
<td>2. Cost analysis (for some courses)</td>
</tr>
<tr>
<td></td>
<td>(for some courses)</td>
<td>3. Foreign language</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. SAP</td>
</tr>
<tr>
<td><strong>Behaviors</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Ethics</td>
<td>1. Innovation</td>
<td></td>
</tr>
<tr>
<td>2. Leadership-related attitudes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
It was found that all of the UPAEP’s business programs are designed to favor the acquisition of technical knowledge. On average, 50.4% of each program’s curriculum is dedicated to core disciplinary courses, which are of a technical scope. In addition, 24.2% of the curriculum’s composition represents the business courses. Both percentages together are the 74.6% of the curriculum; therefore, the majority of each program’s courses are devoted to disciplinary or technical knowledge. Though some soft skills are addressed in the curriculum, the findings are that soft skills are not a central element in the UPAEP’s business education.

Table 10 was prepared to portray how each of the program’s curricula is divided, in terms of percentage, according to the number of courses belonging to each of the three areas of the curriculum. It is clear that all programs have more classes or courses in the business and core disciplinary areas, which implies that technical knowledge is emphasized above the soft skills. A potential blend between knowledge and soft skills favors the mix of SKABs in UPAEP’s business programs.

Table 10

<table>
<thead>
<tr>
<th>Programs</th>
<th>General Studies</th>
<th>Business</th>
<th>Core Disciplinary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business logistics</td>
<td>30%</td>
<td>25%</td>
<td>45%</td>
</tr>
<tr>
<td>International trade</td>
<td>28%</td>
<td>26%</td>
<td>46%</td>
</tr>
<tr>
<td>Business administration</td>
<td>19%</td>
<td>21%</td>
<td>60%</td>
</tr>
<tr>
<td>Business intelligence</td>
<td>25%</td>
<td>36%</td>
<td>39%</td>
</tr>
<tr>
<td>Accounting</td>
<td>23%</td>
<td>19%</td>
<td>58%</td>
</tr>
<tr>
<td>Marketing</td>
<td>25%</td>
<td>22%</td>
<td>53%</td>
</tr>
<tr>
<td>Finance</td>
<td>27%</td>
<td>21%</td>
<td>52%</td>
</tr>
</tbody>
</table>
Among all of the programs listed in Table 10, business administration, followed by accounting, marketing, and finance, are of a more technical approach than business logistics and international trade. It means that these four programs have more business and core disciplinary courses than the remaining three, a fact that reflects a more practical and technical approach to the discipline’s instruction. The soft skills were not as salient as technical knowledge, except for these soft skills already mentioned in the business and core disciplinary courses’ syllabi or learning outcomes. Business logistics and international trade were the two programs with more courses of general studies in which soft skills are more frequently promoted than the five other programs. Still, these two programs were not balanced in the mix of soft skills and technical knowledge.

Business intelligence was found to be the least technical program in scope due to the number of courses in the core disciplinary area. But, this program has 75% of business and core disciplinary courses in total. The 75% of the business and core disciplinary courses contained in the business intelligence program’s curriculum is not too different from other program curricula composition. Business Logistics in total has 70% of the business and core disciplinary courses, while International Trade has 72%, Business Administration 81%, Accounting 77%, Marketing 75%, and Finance 73%. Thus, almost three-quarters of each program’s composition were attributable to a technical approach to professional instruction.
What Gaps Exist between the SKABs Auto Industry Recruiters Desire and the SKABs Taught through UPAEP’s Business Curriculum?

What gaps exist between the skills, knowledge, abilities, and behaviors industry recruiters’ desire and the skills, knowledge, abilities, and behaviors business students learned through UPAEP’s curriculum? This question was the driver of this research study. A comparison of the findings from both parts of the study was made to determine the answer to this question.

A comparison of both sets of findings reveals several gaps in terms of SKABs or employability skills, which are bridged in some areas by some alignments. However, a general gap can be highlighted because, from a general approach, industry leaders are expecting transferable or soft skills while the university is placing emphasis on technical knowledge. There are some similarities in terms of skills between recruiters’ needs and UPAEP’s business education, but the lack of consistency in developing the soft skills in the UPAEP’s business programs impacts the proper acquisition of soft skills.

Table 11 was prepared to synthesize what industry recruiters are demanding, and what was found in the UPAEP’s documents. SKABs are separated to compare both dimensions of the study. SKABs are stated in terms of frequency. This means that the first listed were more often cited among recruiters or in the documents.
Table 11

Comparison of SKABs Demanded by Recruiters and SKABs Found at the UPAEP’s School of Business Programs

<table>
<thead>
<tr>
<th>SKABs</th>
<th>Recruiters’ Needs</th>
<th>UPAEP’s Academic Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soft skills</td>
<td>Cultural intelligence</td>
<td>Communication</td>
</tr>
<tr>
<td></td>
<td>Cultural sensitivity</td>
<td>Analysis</td>
</tr>
<tr>
<td></td>
<td>Multicultural skills</td>
<td>Critical thinking</td>
</tr>
<tr>
<td></td>
<td>Global perspective</td>
<td>Teamwork</td>
</tr>
<tr>
<td></td>
<td>Teamwork</td>
<td>Global perspective</td>
</tr>
<tr>
<td></td>
<td>Negotiation</td>
<td>Problem-solving</td>
</tr>
<tr>
<td></td>
<td>Communication</td>
<td>Decision-making</td>
</tr>
<tr>
<td></td>
<td>Analytical thinking</td>
<td>Logical thinking</td>
</tr>
<tr>
<td></td>
<td>Problem-solving</td>
<td>Strategic thinking</td>
</tr>
<tr>
<td></td>
<td>Logical thinking</td>
<td>Synthesis</td>
</tr>
<tr>
<td>Hard skills</td>
<td>None in specific</td>
<td>Information literacy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mathematics and statistics</td>
</tr>
<tr>
<td>Knowledge</td>
<td>Free trade agreements</td>
<td>Strategic planning</td>
</tr>
<tr>
<td></td>
<td>International trade</td>
<td>Business or administrative processes</td>
</tr>
<tr>
<td></td>
<td>Logistics</td>
<td>Finance</td>
</tr>
<tr>
<td></td>
<td>Customs</td>
<td>Marketing</td>
</tr>
<tr>
<td></td>
<td>Foreign law</td>
<td>Organizational management</td>
</tr>
<tr>
<td></td>
<td>International business</td>
<td>Risk management</td>
</tr>
<tr>
<td></td>
<td>INCOTERMS</td>
<td>Economics</td>
</tr>
<tr>
<td></td>
<td>Finance</td>
<td>Business plan</td>
</tr>
<tr>
<td></td>
<td>Accounting</td>
<td>Law</td>
</tr>
<tr>
<td></td>
<td>National law</td>
<td>Audits</td>
</tr>
<tr>
<td></td>
<td>Geography</td>
<td>Logistics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>International trade</td>
</tr>
<tr>
<td>Abilities</td>
<td>English language</td>
<td>English language</td>
</tr>
<tr>
<td></td>
<td>SAP</td>
<td>Software literacy</td>
</tr>
<tr>
<td></td>
<td>Microsoft Office (Excel)</td>
<td>Cost-analysis</td>
</tr>
<tr>
<td></td>
<td>Life-long learning</td>
<td>SAP</td>
</tr>
<tr>
<td></td>
<td>See the big picture</td>
<td>Leadership-related attitudes</td>
</tr>
<tr>
<td></td>
<td>Emotional intelligence</td>
<td>Ethics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Innovation</td>
</tr>
<tr>
<td>Behaviors</td>
<td>Innovation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Creative thinking</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ethics</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Proactivity</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Commitment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Work engagement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Respect for others</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Service attitude</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Positive attitude</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Self-confidence</td>
<td></td>
</tr>
</tbody>
</table>
Regarding skills, the industry recruiters are looking for global skills like cultural intelligence, cultural sensitivity, multicultural skills, and global perspective. Teamwork, negotiation, communication, analytical thinking, problem-solving, and logical thinking are also frequently mentioned by the industry recruiters. These were the salient skills looked for during the recruitment process. No notable mention was made in terms of hard skills. The university is preparing students in some of the cited soft skills like teamwork, communication, problem-solving, logical thinking, and analysis. Reference to the promotion of these skills was found throughout all of the entire curricula of each undergraduate program in the UPAEP’s School of Business, but not in a consistent and sound fashion.

Global perspective was another frequently cited skill in the UPAEP’s document analysis. In this, there is an alignment between what the industry recruiters need and what is transmitted to students at the university. However, the promotion of a global perspective as a skill is not consistent in all of the UPAEP’s business programs and is only connected with the ability to master English as a foreign language. A global perspective, as referred to by the recruiters, includes topics related to multiculturalism, cultural intelligence, cultural sensitivity, and understanding of other cultures to be able to deal with them in the business environment. The UPAEP’s business students are not instructed in a global perspective—a characteristic that recruiters seek. Course designs, learning activities, and course contents do not show indicators for faculty to consistently expose students to the possibility to achieve a global perspective.
World economic geography, taught in only two of the UPAEP’s business programs, can be considered a foundation for global perspective skills. However, it does not fulfill the requirements of the industry recruiters. Additionally, in only two of the UPAEP’s business programs, international trade and business logistics, do students take a course related to international negotiation strategies, in which topics related to cross-cultural understanding and interaction are included.

Based on what is stated in the previous paragraph, not all of the UPAEP’s business students are adequately prepared to acquire or refine a global perspective skill. Some additional activities or programs offered by the university, like exchange programs, visiting professors, or international experiences, can assist in partially developing global skills, but not all students have the opportunity to participate in these experiences. Thus, global skills, as expected by the recruiters, are not adequately transmitted to students.

In the UPAEP’s documents, there is also reference to logical and critical thinking as skills promoted to students through academic instruction. The use of some learning activities permits strengthening these skills in the student. However, critical thinking and logical thinking, as revealed during the document analysis, are not consistently promoted by the curricula. Recruiters complain about this situation because analytical thinking is a desired skill in their search for talent, as revealed during the interviews.

In terms of knowledge, the recruiters mentioned that it depended on the position to be occupied by the graduate. It is consistent with what each of the different UPAEP programs was designed for by the members of the faculty. Each of the programs places emphasis on the knowledge that will serve the future graduate to occupy program
associated positions. That knowledge is technical knowledge. However, the recruiters mentioned that, besides the specific knowledge needed for the specific position, all business graduates are expected to have notions of free trade agreements, international trade, logistics, foreign and national laws, customs, finance, accounting, and geography.

Matching what knowledge recruiters need and what knowledge is taught in the UPAEP’s lecture halls, it was found that all of the UPAEP’s students are prepared in finance and accounting. Business administration is also a knowledge transmitted to them, in which concepts associated with national law are included. However, only the international trade and business logistics programs include the rest of the knowledge expected by the recruiters: free trade agreements, international trade, logistics, foreign and national laws, international business, International Commerce Terms (INCOTERMS), and customs. Some of the other five business undergraduate programs at the UPAEP take courses associated with international trade and logistics topics as part of some of their specialization areas.

As explained in previous paragraphs, the specialization areas are not mandatory in nature. It means that students select among the areas of preference. So, not all of the students will be exposed, during their academic life, to concepts related to international trade and logistics, not even from a basic understanding of the concepts, as expected by the automotive industry recruiters. The same happens with geography: recruiters are expecting the business students to have basic notions of world geography due to the international composition of the industry and its relationships with different continents and countries around the world. But, the UPAEP’s students only learn such knowledge if
they are enrolled in international trade and business logistics programs. So, the recruiters’
expectations are not fully met.

The gap in terms of knowledge stated above contrasted with the similarity found
in terms of the ability related to software. The recruiters are expecting that graduates are
familiar with software included in Microsoft Office. All of the UPAEP’s students are
obligated to take a course or to provide evidence (like Microsoft certifications) of their
knowledge on the topic. So, in this area, the needs of industry are met by the UPAEP’s
academic instruction. Software literacy coincides in both realities: university and
industry.

Regarding abilities, the industry recruiters were emphatic in demanding English
proficiency, a fact that is included, and it is equally urged by the UPAEP’s program
directors in the School of Business. All of the students must take English courses to assist
them in developing the language proficiency skill and are requested to present a TOEFL
score at the end of their academic career to certify the acquisition of the ability. The
UPAEP’s Department of Language offers additional languages like French, German, and
Chinese, so students can become proficient in an additional language, as desired by the
recruiters.

SAP was the specialized software or ERP requested by the recruiters on several
occasions during the interviews. Despite the fact that six of seven of the UPAEP’s
business programs use specialized software in their classes, not all of them make students
familiar with SAP. SAP is part of the course contents for only two programs at UPAEP:
business logistics and international trade. So, not all of the students can be able to meet the recruiters’ expectation in this regard.

Recruiters are also expecting two more abilities in the graduate’s profile: life-long learning and the ability to see the big picture. Being able to see the big picture is not mentioned in any of the documents analyzed. So, there is no possibility of confirming that students are prepared to meet this expectation from the recruiters. Life-long learning is an ability related to continual education, an expected outcome of I/U relationships. However, I/U relationships are not well developed in the Mexican context, as affirmed by the recruiters.

Finally, it is not possible to match attitudes since no assessment was made for that with the UPAEP’s students. Attitudes can only be measured when observed, but not through a document review. Therefore, the attitudes of innovation, creative thinking, and proactivity that recruiters highly demand, can only be tied to what the course contents, the learning activities, and the learning outcomes state.

Innovation is fostered in the marketing program’s learning outcomes. But, it is not clearly stated in any other of the seven business programs. Proactivity is expected from all of the business students in UPAEP when they are given assignments or simulations in which decision-making and team presentations are promoted. Creative thinking is expected from students taking entrepreneurship courses. In that matter, all of the UPAEP’s business students take at least one course of entrepreneurship and are in the position of selecting more courses on the topic through their specialization areas. Thus, creative thinking can be enhanced, but only for those students who chose
entrepreneurship as a specialization area.

Finally, ethics is a central commitment stated in the following UPAEP’s documents: philosophy, mission statement, and other foundational documents, but a course of business ethics is not present in any curricula. Nevertheless, in alignment with the organizational mission, curricular and extracurricular activities tend to include reflections on ethics to promote values such as integrity, honesty, responsibility, and service attitude. It can be expected that students exposed to the many ethics-related activities organized within the UPAEP develop an ethical behavior. However, attitudes can only be measured when observed, so the UPAEP’s community addresses the recruiters’ expectation of ethical behavior, but the graduates’ behavior in the workplace environment will be the only evidence of the UPAEP’s achievement of this institutional goal. In the workplace, graduates will also be able to demonstrate if they are committed, work engaged, respectful, and self-confident, as demanded by the recruiters.

The research question on the potential gap between industry needs and academic instruction provided by a university was addressed since gaps were found. Table 12 was prepared to synthesize the alignments and the gaps between industry needs and university preparation that were already explained and analyzed in previous paragraphs. This summary will be helpful in providing the university’s leaders with information useful for curricula design for the benefit of the graduates’ employability.
Table 12

Summary of Similarities and Differences Between Industry Needs and Academic Instruction at UPAEP

<table>
<thead>
<tr>
<th>SKABs</th>
<th>Similarities</th>
<th>Gaps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skills</td>
<td>Teamwork</td>
<td>Global perspective</td>
</tr>
<tr>
<td></td>
<td>Communication</td>
<td>Cultural intelligence</td>
</tr>
<tr>
<td></td>
<td>Analysis</td>
<td>Cultural sensitivity</td>
</tr>
<tr>
<td></td>
<td>Problem-solving</td>
<td>Multicultural skills</td>
</tr>
<tr>
<td></td>
<td>Logical thinking</td>
<td>Negotiation</td>
</tr>
<tr>
<td>Knowledge</td>
<td>Finance</td>
<td>International Trade</td>
</tr>
<tr>
<td></td>
<td>Accounting</td>
<td>Logistics</td>
</tr>
<tr>
<td></td>
<td>National Law</td>
<td>Free trade agreements</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Customs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Foreign law</td>
</tr>
<tr>
<td></td>
<td></td>
<td>International business</td>
</tr>
<tr>
<td></td>
<td></td>
<td>INCOTERMS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Geography</td>
</tr>
<tr>
<td>Abilities</td>
<td>English language</td>
<td>SAP</td>
</tr>
<tr>
<td></td>
<td>Software literacy</td>
<td>Lifelong learning</td>
</tr>
<tr>
<td></td>
<td></td>
<td>See the big picture</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Emotional intelligence</td>
</tr>
<tr>
<td>Behaviors</td>
<td>Ethics</td>
<td>Not assessed</td>
</tr>
</tbody>
</table>

There is a misalignment between industry needs and university instruction. The industry recruiters are centered on finding soft skills when recruiting, while the university’s faculty is focused on promoting the acquisition of technical and highly specialized knowledge. Internship programs, suggested by recruiters, are already in place and are mandatory for all of the programs. So, the use of technical knowledge will be enhanced by this practical experience. However, social skills, needed for performance at the workplace, can also be refined to meet an aspect of the recruiters’ needs.

Some similarities were found when comparing and contrasting both realities. Similarities are software literacy, basic notions of business knowledge like finance and
accounting, and some coincident soft skills like communication, teamwork, and analytical thinking. Having these skills present in the graduate’s profile is an advantage when facing recruiting processes. However, the gap between academic instruction and industry needs is still significant and impacts the new graduates’ employability.

The industry recruiters preferred a practitioner or blended model of education due to their needs for specific traits in the graduate’s profile. But, the university is generally using a traditional model of education, with certain trends towards the practitioner model at the end of the student’s career when internship programs are inserted, and practitioners come to the classrooms to share knowledge and practical experience with the students. Thus, a blended model of education is being increasingly used at the UPAEP’s School of Business, but still, more effort is needed to make students employable in terms of soft skills.

If the time to employment is to be reduced, the gap must be reduced. The participants stated that the current I/U relationships status quo in Mexico is deficient. It means that there is not a sound relationship or collaboration between industry and university in the automotive sector in particular and in Mexico in general. These are participants’ comments that contribute to understanding the current I/U status quo: “Companies tend to forget the value of investing time in getting together with a university,” “I/U happens eventually, it is not a priority,” “The industry is too busy to get in a closer relationship with a university,” and “So far, it is a wish, it will be great for Mexico, for the industry, for the universities, for new generations, but we do not have it.”
Universities should be a source of human talent, but as expressed by one of the participants: “Right now I have three vacancies, since six months ago, and they cannot find someone suitable.” According to the participants, I/U closer collaboration means “A backup to certify that graduates are prepared and ready to meet market demands” and “If closer I/U interaction, I will be certain that the graduates are prepared with the needed qualifications.” A closer level of interaction between universities and industries will mean work readiness of students, so time to employment could be decreased because all of the participants’ voices tend to express the same opinion: “Reprograming the curricula after real-world or practical experiences is necessary.”

Some rare examples were given about joint I/U work, mainly in the area of internships. But nothing outstanding that could bridge the current gap between the two realities. So, participants unanimously stated that I/U collaboration must be promoted and fostered by means of the following activities: visits, diploma studies, practitioners teaching at the university, multicultural experiences, continuing education, training centers, industrial best practices seminars, summer stays within a company, and the more frequently mentioned fact that industry recruiters are willing to be involved in the design and redesign of the academic programs.

**Summary**

All of the research questions were addressed through the interviews with recruiters, the UPAEP document analysis, and the comparison between the two set of findings. A gap or a misalignment between the industry’s needs and academic instruction at the university was found. This gap impacts the recruitment process and the time to
employment because while industry recruiters are looking for soft skills in the graduate’s profile, the university’s faculty is fostering the acquisition of technical knowledge. The recruiters are searching for global perspective, analytical thinking, problem-solving, and logical thinking skills. Knowledge associated with free trade agreements and international trade is important. Software literacy, English as a second language and SAP competence are also expected, combined with attitudes related to innovation, creative thinking, and ethics.

From the university’s side, the programs of the UPAEP’s School of Business were designed to promote soft and hard skills. The main soft skills are analysis, global perspective, and teamwork. But, they are not consistently or continually promoted across the curricula of each of the seven business programs. The programs were mainly designed to favor the acquisition of disciplinary knowledge, a fact that is supported by collateral activities inserted in the curricula like internships.

Software literacy was one area where recruiter desires aligned with university curriculum. Another area of alignment was English proficiency. This as an ability that all business graduates need to have and that all recruiters want. Recruiters are expecting the new graduates to speak English and another foreign language if possible. Similarly, program directors require a certain TOEFL score as evidence of their proficiency in English.

Finally, some emerging topics were detected during the analysis of the data provided by the recruiters. They made reference to the concept of getting things done as a quality of an employable graduate. In addition, a suitable graduate must be globally
aware. Global awareness was another emerging topic of importance due to the composition and interactions with the rest of the world of the automotive industry located in Puebla. People being focused on people was another emerging theme that impacts the promotion or acquisition of multiple soft skills. And, the strategy needed to incorporate Millennials into the workforce was also referred to by the participants. So, the generational difference was the last of the emerging themes in the conversations.

Many conclusions can be drawn from the findings. These conclusions will be the main topic of Chapter 5. The findings contribute to and impact the leadership problem identified for this research study and will be addressed in the next chapter. After analyzing the findings, recommendations for the UPAEP’s leadership will be expressed; the overarching goal is to reduce the time it takes to find employment after graduation.
CHAPTER 5: CONCLUSIONS AND DISCUSSION

Introduction

The problem with the employability of new graduates has been subjected to worldwide research. This problem is now being assessed through a case study approach, framed by the settings of the automotive sector located in Puebla, Mexico and the curricula design of the business school undergraduate programs of a Mexican university: the UPAEP, which is also located in the city of Puebla. The selection of the automotive sector from among several others was made because the automotive sector is the main GDP contributor in the region and the country (CIA, 2016; INEGI, 2015). Between the two main automotive clusters in Mexico, the one located in the central region of the country is more important (Lauridsen et al., 2013). Puebla is located in this central region of Mexico; thus, Puebla’s automotive sector was selected in conducting the present research study.

The case study consisted of two parts. The first one was built upon the interviews conducted with 13 participants, which represented 11 of the 68 companies included in the automotive sector (Cordero et al., 2015). After conducting one-on-one in-depth interviews, the findings were categorized into main and emerging themes. Categorizing these themes made it easier to track them. It was found that the most important employability skills are soft skills, as affirmed by the majority of the participants or recruiters. Additional themes, designated as emerging themes, were identified and will be discussed in this chapter for a full understanding of the industry needs, as was expressed by the participants.
The second part of the case study consisted of a document analysis of the UPAEP’s business program curricula with the intention to identify the SKABs transmitted to the business students through the academic instruction provided by the UPAEP’s School of Business. Learning outcomes, learning activities, course materials, and graduate profiles were the main elements used to analyze and assess the academic business instruction. After performing the document analysis, it was found that, in general, the business instruction at the UPAEP follows a technical approach, meaning that the majority of the courses have a technical scope and do not consistently promote soft skills. This aspect is going to be discussed in great depth in this chapter.

When the two sets of data were compared, several gaps were identified. This situation suggests that there is a misalignment between the academic instruction that the UPAEP and local auto industry needs. As stated in much of the literature reviewed for this research study and by many participants in this study, this misalignment negatively impacts the employability of the graduates. Since the desired employability skills are not consistently present in the graduate’s profile, the time spent to find a job position increases. The case study problem can now be addressed from a research-based perspective to make recommendations and promote a leadership action to resolve the current misalignment.

In this chapter, a discussion of the findings will be presented first. This discussion will follow the same order presented in Chapter 4, a discussion of the findings from interviews with auto industry recruiters followed by a discussion of findings from a review of the UPAEP’s business curriculum followed by a discussion of the findings
from a comparison of these areas. After this, a discussion of the application of findings to the problem statement and leadership, in general, will be addressed. The chapter will conclude with recommendations for action; how the findings and conclusions can be used to implement changes to address the problem and recommendations for further research.

**Discussion of Findings and Conclusions**

**What Are the SKABs Auto Industry Recruiters Look for in a Candidate?**

The interviews were conducted with the automotive industry recruiters to address this question. In all, 13 participants were interviewed. These participants represented 11 of the 68 companies in the automotive sector in Puebla. Different opinions were listened to because participants worked in different companies, were of different nationalities, worked for different car companies, or different suppliers, and represented different areas within their organizations.

**Skills.** As reported in Chapter 4, the skills-related themes that emerged from interviews with auto industry recruiters were global skills of cultural intelligence, cultural sensitivity, and multicultural skills. Social skills included teamwork, negotiation, and communication. Cognitive skills identified most commonly were analytical thinking, problem-solving, and logical thinking.

According to Laker and Powell (2011), skills are considered talents necessary to carry out a task. For the labor market environment, Care and Griffin (2014) identified two types of skills: soft skills and hard skills. Soft skills are capacities of intrapersonal and interpersonal focus that can be transferred among different contexts. Care and Griffin mentioned that soft skills are classified into three groups: cognitive skills, social skills,
and global skills. Cognitive skills are related to ways of thinking or mental processes needed to face situations. Among the cognitive skills, Care and Griffin included critical thinking, problem-solving, decision-making, and metacognition. According to the same authors, social skills are related to the way of working or getting along with others. For that reason, communication, collaboration, cooperation, teamwork, and conflict resolution are included in the group of social skills. Finally, global skills are identified as the talents used to live in a diverse world (Care & Griffin, 2014). Citizenship, global life, social responsibility, cultural awareness, cultural competence, flexibility, adaptability, initiative, self-direction, cross-cultural skills, civic competencies, and leadership are included in this group of soft skills. In coincidence with Care and Griffin’s statements, Laker and Powell considered that leadership is a global skill along with emotional intelligence.

Hard skills are tools used for working (Care & Griffin, 2014). Laker and Powell (2011) asserted that hard skills are of a technical scope and are acquired after training. Hard skills are narrower in range, meaning that they are not transferable among contexts in the way soft skills are, but still, hard skills are talents that permit individuals to perform in the global society successfully. Among the main hard skills, Care and Griffin (2014) mentioned information literacy, use of symbols, media literacy, digital competence, and mathematical science.

The definitions previously stated as to skills were used to frame the dialogues with the participants. To avoid misconceptions or to avoid using abilities and skills as synonyms, skills were considered as intrapersonal or interpersonal traits, as expressed by
Laker and Powell (2011), while abilities were considered traits gained after constant practice. This explanation was given in the case of doubts to facilitate a common ground.

From a perspective similar to what Hart Research Associates (2015) stated, recruiters desire a mix of soft and hard skills in the business environment. Despite the fact that the majority of the recruiters preferred soft skills, 18.5% of them emphasized the need of finding a mix of soft and hard skills in graduates. The remaining 18.5% of the participants mentioned they exclusively look for hard skills in the graduate’s profile.

Among the soft skills mentioned, the ones related to a global perspective appeared to be most important. Those skills are cultural intelligence, cultural sensitivity, and multicultural skills. Global perspective associated skills can also be included in the cluster of relational or social skills (Robles, 2012). Under the category of social skills, participants labeled teamwork, negotiation, and communication (in written and oral formats) as essentials. During the interviews, it was revealed that among soft skills, recruiters preferred social skills. One of the recruiters stated, “The soft skills are preferred, they are part of someone’s personality.” Another recruiter mentioned, “People with soft skills easily learn. It is a way to be.” An additional participant posited, “From my viewpoint, skills are something you have in yourself, you develop it, you do not necessarily learn it at a school.” These quotes make it evident that, while both hard and soft skills are important, it appears that soft skills are more valued among recruiters. This fact is consistent with comments made by other researchers in other contexts, such as Mishra (2014) who mentioned that people are fired because of the lack of soft skills.
Knowledge. Interviews with auto-industry recruiters revealed that free trade agreements and international trade, along with concepts related to logistics, customs, foreign law, international business, and INCOTERMS, were the most commonly identified areas of knowledge desired for business graduates looking to obtain employment in the auto industry.

Besides engineering positions, business related jobs are positions in highest demand in the automotive sector in Puebla due to the need for managing international operations (Audi, 2016). Therefore, it is understandable that the recruiters make constant reference to this type of knowledge. As stated by one participant, “Companies are moving around the world because of nations’ legal benefits, free trade agreements, logistics situations… which represent cost reduction.” Another recruiter echoed this idea when he said, “We expect them (graduates) to be able to see the international perspective.” A third individual had this to say, “International business world understanding is a must to determine distances between countries because we are planning routes to move materials to other countries.”

These findings are consistent with the findings of prior research. Hadidi (2014), for example, found that the level of knowledge sufficient to meet the global needs of business and industry professionals was not what it should be for those entering the marketplace. Hadidi followed up this research with recommendations for curriculum updates among universities. Similarly, Kantane et al. (2015) also found that expectations by employers regarding their knowledge of matters related to business, particularly global
business, was not what it should be, despite the fact that industry leaders are looking for this among those they hire.

**Abilities.** The ability to see the big picture is related not only to change but to strategy and leadership since organizational logic and operational effectiveness are achieved through an integral perspective of the company (Park, 2016). The ability to see the big picture is also needed for assessing the impact of one’s actions in the entire organization and its network of business associates. Study participants stated, “I need to visualize how my action is going to affect other areas.” Also stated was, “They (graduates) need to have a panoramic view of what is going on,” and “Global landscape is helpful to understand the impact of the job or the operation.” Perhaps what is most pointed in this finding is the next quote:

> The ability to see the big picture is a yes, but it is very difficult to get it from a new graduate. They must learn how decisions impact all the departments, the suppliers, and the customers. All activities affect others, but it is very difficult to find someone who knows this from the beginning.”

The majority of these abilities is technical in scope and is not consistently desired by recruiters. This fact is similar to what was found among recruiters with respect to hard and soft skills. Recruiters have a desire for both, but it is those abilities that may not be so easily taught that they seem to want more of. Recruiters appear to recognize this, and for this reason these abilities appear to not have big impact in the recruitment decisions, according to the participants’ opinions.

This finding is similar to that of Ciuhureanu et al. (2011). Though their study was in the European marketplace, they too found that some competencies and abilities would
be nice to have, but businesses’ recruiters are willing to accept students as they are and assist them in this knowledge after they are brought into the organization. Still, it must be considered as an area of need to be filled by graduates. For this reason, this will be discussed again later in this chapter.

**Behaviors.** Behaviors are defined as the attitudes resulting from the interaction between the individual and the environment to accomplish certain purposes (Lazzeri, 2014). In this category, one of the themes that came through most clearly during interviews with recruiters was the importance they placed on having new hires who were innovative and creative. In this area, several participants made statements similar to the following:

> Responsibility is essential because if you want self-empowered people, they need to be responsible… we need people that are willing to do. I want somebody who can make decisions, somebody who says what else I can do?

Thus, being innovative and creative are determinants in the recruitment process. One participant connected these attributes to that of proactivity and self-empowerment when stating, “Self-empowered people are not expecting others to say you have to do this. Make a decision, do it, get things done. It is important to make a decision.”

Once recruited, the automotive industry recruiters are expecting additional attitudes in graduates. Sixty percent of the participants referred to commitment as an indispensable behavior. Related to this, just over half of the participants surveyed expected graduates to be goal or result-oriented.

Another behavior that was commonly cited as expected was punctuality from the new hires. “The punctuality is a yes, it is not an option. You have to be punctual” is one
of the pointed comments in regard to this matter. Nearly half of the participants surveyed mentioned this behavior.

Though not discussed in the findings, it is worth noting in this discussion section that although exhibiting a behavior by the graduate that considers time important, recruiters are aware that the new generation of employees is more relaxed with respect to time and their organizations are adjusting for this. This comment was made by one of the participants: “We are becoming more flexible. In the past, it was unthinkable to have someone working at home one day, a month or even a week. Now, we have no problem.” Thus, new work arrangements, work schedules, and project administration activities are being evaluated or implemented to reconcile this flexible attitude towards punctuality with deadlines.

**Emerging themes.** During the interviews, the participants referred to the industry needs that must be fulfilled by the set of SKABs each one of them mentioned. Summarizing the major themes, three stand out the most: (a) improvement, innovation, and creativity to cope with change and globalized demands; (b) remaining competitive in a very demanding, challenging, and interconnected business environment; and (c) cost reductions to be sustainable in all possible senses. The automotive industry is faced with many challenges posed by globalization in terms of the need to achieve savings, new business ideas, and technological advancement.

In addition to what is stated above, the automotive industry’s leaders anticipate many trends, which are already occurring and impacting the organizations. The development of self-driven or autonomous vehicles is the most common trend. Most of
the survey participants made reference to this, anticipating changes in the current business graduate’s profile to make graduates still employable. Connectivity and mobility were two trends also recurrently cited by the participants. For example, a majority of them spoke of connectivity and mobility. Participant words such as “The connectivity between all of the devices is moving towards the automotive industry,” and “I am expecting a business graduate to know technical issues of connectivity,” as well as “Freedom to do what you want while still inside of the vehicle is a trend because new business models are related to interconnectivity.” All point towards this as an emerging need for the auto industry, and thus it is a factor for graduates to be aware of.

Technical advancement, digitalization, electronics, constant change, closer relationship with suppliers, and environmental concerns were trends also consistently mentioned as was customized products and networking capabilities. However, the relevance of insights shared in such conversations was not the identification of needs and trends per se in the automotive sector, but the implications of these trends and needs in the business graduate’s profile.

During the interviews, constant reference was made to topics and issues, which are causing new themes to emerge. These new themes have an impact on the graduates’ profile because they are connected with what recruiters are expecting. The emerging themes are expressions of the reality of the global automotive business environment in Puebla. Not only do recruiters expect the already determined SKABs, but new SKABs or enhanced competencies need to be developed to face the emerging trends in the automotive industry.
Getting things done, as an emerging topic of high importance for the recruitment process, was a demand constantly mentioned by the participants. “First, it is important to get things done. It is common that people do not get things done, so my industry is willing to find people who get things done.” Another participant had this to say, “Leadership needs to be taken to get things done,” as well as “I need a person to influence others to make things happen,” and further, “We have goals. So, we all have to get them completed. If we do not support each other, we will not reach the goal” are the participants’ opinions that are an example of the importance placed by recruiters on having a new graduate able to get things done. As per the comments of the participants: the graduate must get things done if he or she wants to be hired.

Getting things done was usually cited in reference with soft skills. Soft skills were a natural theme in this case study due to the design of the interview protocol. However, the constant reference to the idea that soft skills must prevail in the business graduates’ profile even in the face of technological advances, new trends, or constant change, is undeniable. The graduate depends on his or her personality, which, in the opinion of many recruiters, is shaped by the presence of soft skills to get things done. According to the participants, the graduate’s ability to get things done depends on their engagement with the market (tied to social skills), their capacity for fast, accurate, and flexible responses or reactions to demands (based on cognitive skills), and their personal competitiveness for performing globally (related to global skills).

To highlight this idea, many participants made statements like “Soft skills are a way to survive,” or “Soft skills helped me to get things done,” and “Leadership is one of
the most important soft skills, we are looking for leaders motivated to take the responsibility of projects.” Another participant said, “It is important to do… my question is what your contribution is? It is difficult to try to explain to a person how to think. It is important to know what you are going to do.” Thus, getting things done is expected in a graduate’s set of SKABs.

Global awareness is another emerging theme. Despite the fact that participants constantly mentioned global skills, the sense of global awareness transcends the importance of just the skills associated with the concept. Globalization is a driver that is changing the graduates’ profile to make them employable (Fulgence, 2015). This statement is also true from Puebla’s automotive leaders’ perspective, as revealed during the interviews.

The automotive sector in Puebla is made up mainly of transnational companies; therefore, it is understandable that being connected with the rest of the world to receive supplies or to send the final products is an important element. Global awareness is a mindset that employees in the automotive sector must have to perform international trade activities. Global awareness, as expressed by participants, enhances competition in a global landscape because of the understanding of others and one’s own culture, the dynamics of geographic connections, logistics and transportation issues, the international flows of capital, products and people, and the connectivity of multiple sets of stakeholders.

Global awareness implies the presence of soft global skills, which were mentioned continually by all of the participants. But, global awareness also reflects the
natural context of the modern world, which is interconnected at all times. According to one participant, “Business awareness is imperative because it is multidimensional and requires global knowledge,” but another participant’s comment can complement the perspective when stating, “If you have the ability or tools to manage all of this technology and connectivity, you will have a big opportunity to understand the entire new world of business.”

In addition, another participant stated, “All the areas have to have a vision of the future,” but despite the fact that globalization is changing the business landscape, the participants expressed similar opinions: soft skills must prevail. At the same time, the business graduate’s profile is to be enhanced by the presence of IT related abilities, technical knowledge of information and systems, and technical awareness. This new set of SKABs calls for students to gain practical and international experiences while still at the university.

Global awareness transcends the implication of being globally or socially skilled, and motivates action and to be in favor of adopting change and leaving the personal comfort zone. Proactivity and self-motivation were salient topics during the conversations, as already reported, but those attitudes are also connected with the need of being globally aware, as emerged during the interviews. Global awareness is a topic of comprehensive scope in which many SKABS coincide or are reunited.

An additional theme predominant in the interviews was the issue of people focused on people. In different ways and moments during the interviews, the participants made reference to the importance of being connected with others and willing to be team
players. Teamwork was found to be an important skill, but the emerging theme is that everything depends on people and is made for and by people. Participants expressed related ideas on this emerging theme such as, “We need to be close to people,” as well as “I need people willing to do or to be more open to people, more emphatic. If you can put yourself in the position of others, you can help them easier.” Another comment was along these lines: “Right now everything is about a team; people have to work as a team,” and “We are a people company, and we work with people, so the level of interaction is high, that is why teamwork is really important.”

The collateral topic when addressing competitiveness, closer relationships with suppliers, and being able to see the big picture is to be focused on people to satisfy demands. Related to this were comments about having a service attitude, willingness to contribute, teaching others, networking, empathy, and other SKABs also help to meet expectations and create good relationships for the benefit of all involved. Participants voiced this emerging theme with statements like, “Everybody is responsible for achieving the goals” and “We need to be so honest and accept that you depend on all the areas.”

Finally, the last emerging theme was generational differences. Eight of the 13 participants referred to the fact that there is an evident difference between the attitudes of current employees versus the attitude of the new generation of employees. Specifically, the recruiters mentioned the issue of punctuality and work schedules. Members of the Millennial generation are criticized for demanding flexible schedules and work arrangements that recruiters in some cases agree to modify if deadlines are met, and projects are satisfactorily accomplished. One participant stated, “They (Millennials) do
not desire to work long hours, or they do not have the desire to stay in the office and do something.’”

However, there are other traits in the new generation of employees that were discussed by the majority of the participants. Millennials are known for their search for instant rewards. This issue is a Millennials’ feature that contrasts with the need for self-motivation (with no immediate reward involved), which recruiters are looking for, especially for managing mid and long-term projects. Dealing with frustration is a capacity under question in the Millennial’s set of competencies, according to the participants. “They get bored very easily” and “They are not happy enough, nothing is sufficient” are comments that express the recruiters’ concern about their capacity of coping with frustration.

Since the business environment is in constant change and fast responses to customers and suppliers are expected, the ability to deal with frustration and to stay motivated have to be part of the business graduates’ set of abilities. The recruiters are very concerned about this situation in regard to the Millennials’ attitudes. Therefore, the participants urged the universities to address the issue by making students face real-world scenarios or settings to acquire the needed SKABs to overcome the potential problem of not being self-motivated and able to deal with frustration. A very specific recommendation made by one of the participants that expressed a general concern was this: “More than technical knowledge, at the university, the students must learn attitude, what means to be responsible. The university needs to put more emphasis on that.”
Participants also defined Millennials by their natural familiarity with IT tools, technical advancements, mobility, and connectivity. All of those topics are labeled as advantages that the participants appreciate. The participants recognize this advantage because it is directly connected with the industry’s capacity to remain competitive. Millennials, then, are in a better position than other generations of coping with change and other technological trends in the automotive industry. It is a demand by the participants that universities guide the Millennials to take advantage of this.

In conclusion, the research question addressing what SKABS are sought by industry leaders when recruiting a potential candidate for employment in the business area is addressed by almost all of the participants who stated that soft skills are the essence of what they are looking for in a business graduate. Soft skills must be preserved in the graduate’s profile even when trends are changing in the automotive industry and IT related skills are gaining increased importance. Hard skills and knowledge may vary depending on the position to be occupied and the position in the company to be filled, according to what participants posited. But those skills are not as demanded as soft skills are.

In the modern world, from the recruiters’ perspective, soft skills seem to be as important as are attitudes related to innovation and creative thinking because the automotive industry must remain competitive and innovative in reducing operational costs while sustaining technological developments. However, skills like leadership, planning, organizing, adaptation to change, time management, fast reaction to change, work under pressure, getting along with others, scenario assessment, and diversity
appreciation, which were not in high demand, are now becoming fundamental elements in the graduates’ performance due to the need of getting things done and performing in global scenarios. These skills are also needed to deal with people from diverse nationalities. As considered by the participants, people are the center of the action and have to be ethical, self-managed and self-motivated to help the industry in achieving its goals and in facing the anticipated trends of the industry.

**What Are the SKABs Taught Through UPAEPs Business Curriculum?**

An analysis of curriculum-related documents and other artifacts was performed to answer this question. The UPAEP’s business programs were assessed by analyzing the course materials, learning outcomes, and learning practices as they were designed by the members of the academic bodies. Seven of the nine programs of the UPAEP’s School of Business were included for this research study. These programs included business logistics, international trade, accounting, business administration, business intelligence, marketing, and finance.

In Mexico, the undergraduate program curricula at the university level are fixed. The students are not able to choose among an array of courses to assemble a program of study. Instead, undergraduate programs are designed to be specific in the number and order of classes to be taken with the intention to acquire, create, or refine the expected graduate’s professional profile. The Secretaría de Educación Pública (SEP), the Mexican Ministry of Public Education, in the document titled *Acuerdo 279*, has defined that an undergraduate program must have at least 300 credits (SEP, 2000), which represents approximately 50 courses to be taken during four to five years of university instruction.
The UPAEP’s business programs have a length of four years or eight semesters. Within the UPAEP’s School of Business nine undergraduate programs are included: business logistics, international trade, business administration, business intelligence, accounting, marketing, finance, hospitality, and gastronomy. Among them, only seven were selected for the purpose of the present case study. Disciplines related to engineering (Hernández, 2015) and Business (Audi, 2016) are the only ones required by the automotive industry in Puebla. For these reasons, hospitality and gastronomy were not considered since their graduates are not required as employees in the automotive sector in Puebla.

In concert with what is required by the Acuerdo 279 (SEP, 2000), it was found that, on average, the seven undergraduate programs selected for the present case study based research have 58 courses each. But, the programs may rank from 54 to 65 courses, complying with what is stated by the Acuerdo 279. The undergraduate programs are divided into three interconnected academic areas: general studies, business courses, and core disciplinary courses. There are several courses in each of these sections. General studies, business courses, and core disciplinary courses were assessed separately and, then, synthesized into the findings.

**Discussion of findings of general studies courses.** General studies are offered during the first four semesters and include topics such as foreign languages, ethics and social responsibility, information technology, critical thinking, academic writing, mathematics, and statistics. However, business programs like international trade and business logistics also include world economic geography as a part of the general studies.
area. According to what is stated in the documents of the Centro de Investigación y
Asesoría Curricular (CIAC, 2016), which is the UPAEP’s department in charge of
curriculum design, general education courses represent the basic competencies of a future
professional. These course contents are also consistent with the essence of soft skills
mentioned by Sloka et al. (2015): being transferable to diverse settings or contexts.

Schrand (2016) mentioned that soft skills like problem-solving, critical thinking,
teamwork, contextual understanding, and global perspectives, as well as behaviors like
collaboration and ethical reflection, are some of the issues included in general education.
Among them, the design for the UPAEP’s general studies is in consonance with critical
thinking, global perspectives through the learning of a foreign language, contextual
understanding, and ethical reflection. However, it was also found that programs like
business logistics and international trade emphasize the global perspective skill by the
inclusion of world economic geography and regional studies in their curricula.

The analysis of the curricula revealed that none of the remaining business
undergraduate programs are going beyond English language proficiency in promoting an
international perspective in students. As suggested by Egan and Bendick (2008), the
global perspective skill is needed to properly address the professional challenges to be
faced by graduates in a globalized and interconnected world. Some other activities, such
as international exchange programs for students as well as foreign visiting professors may
assist the promotion of global perspective skills. But, not all students are benefiting from
such activities.

Table 6 in Chapter 4 summarized the learning outcomes of the general studies
courses. To assure the learning objectives for the courses belonging to this section and to guarantee knowledge acquisition and competencies development, members of the faculty in charge of each area of studies select textbooks and specific assignments or exams, among other mechanisms, that all professors must follow. Those mechanisms were also analyzed and are included in Table 6.

In line with what was stated by Schrand (2016), general education courses are the means by which soft or transferable skills are promoted. Wikle and Fagin (2015) asserted that business professionals identify teamwork, communication, problem-solving, and creativity as the essential soft skills for performing in the business environment.

**Discussion of findings from business courses.** According to the document analysis made of the UPAEP’s business program curricula, the UPAEP’s general studies courses establish the initial platform from which business students can refine or create soft skills for professional performance. Skills like teamwork and communication, as well as behaviors like ethics, are included in the general studies courses’ learning outcomes. The appreciation of diversity is also included in the global perspective skills.

Within the UPAEP, business courses and core disciplinary courses are taken by students throughout the program, evolving in complexity from an introductory level to a comprehensive and practical approach. Business courses are taken by all business students regardless of the program in which they are enrolled. Business courses are marketing, finance, microeconomics, macroeconomics, introduction to administration, market research, entrepreneurship, and strategic planning.
After reviewing the business courses’ syllabi, learning outcomes, and learning activities, it was found that all of these academic documents were designed to promote the acquisition of soft skills and technical knowledge. The soft skills are mainly emphasized through the learning activities implemented by the professors, which are reviewed by the faculty in charge of monitoring each course. Those learning activities include team assignments, oral presentations, and essays, among other activities. Complementarily, the course contents are of a technical approach, providing students with the basic concepts in the world of business.

Table 7 listed the learning outcomes of the business courses. Faculty provides instruction to assure the achievement of course learning outcomes. Those instructions are stated in course syllabi. The faculty instructions can refer to assignments, textbooks, or class activities. Some of these courses end with a general comprehensive exam prepared by faculty to assure that students acquire all basic contents regardless of the professor in charge of the class during the semester.

The analysis of the business courses led to the conclusion that soft skills and technical knowledge are promoted. Content or knowledge transmitted are technical in scope, but the learning activities prepared for these courses extend the benefits of the soft skills learned while taking the general studies courses. It means that the already acquired soft skills are used to understand and apply basic technical knowledge in the diverse fields of business. Soft skills such as analysis and teamwork are the most mentioned in the business courses. However, they are now applied to business concepts or contexts. The same happens with respect to other frequently mentioned soft skills such as decision-
making and problem-solving. Oral and written communication and strategic thinking follow these two soft skills. Innovation, as a behavior, is also mentioned twice, but critical thinking skill is only cited once.

According to Hubert (2016), soft skills permit the connection to other types of knowledge because they can be extrapolated or transferred among contexts. If constantly practiced, skills allow the graduate to get sufficient experience to apply them in different contexts. Taking this statement as a reference, it was found that the UPAEP’s business courses are continuing the efforts started by the general studies courses, promoting the use of soft skills in a specific environment: business. However, not all of the learned soft skills are uniformly used in the business related classes. Analysis and teamwork continue to be salient, as well as decision-making and problem-solving. However, soft skills like global perspective and logical thinking are no longer included or clearly referred to in the business courses’ learning outcomes and learning activities, as revealed by the document analysis conducted.

In terms of knowledge, the business courses’ syllabi made constant reference to strategic planning and organization management. Economics, marketing, business or administrative processes, and finance are also recurrently mentioned in the business courses’ learning outcomes. Costs analysis, business plan, and risk management are also included but not referred to on a constant basis.

According to Zainuba and Rahal (2012), business courses are integrative in nature. It means that they need to include business-related knowledge, hard and soft skills while addressing business-related situations from multiple approaches. The business
environment is multi-dimensional, so students must experience different learning activities like analysis, case studies, internships, and cross-functional teams to develop business skills needed in the professional world (Zainuba & Rahal, 2012).

In that, it was found that the UPAEP’s business courses were designed to fuse soft skills and technical knowledge, but some soft skills are not promoted in a manner similar to that created by the general studies courses. Consequently, continuity is not properly achieved across the business program curricula, negatively impacting the process of refining the soft skills in the future graduates’ profile, while enhancing instruction in technical knowledge.

**Discussion of findings from core disciplinary courses.** It is customary that the undergraduate programs at the UPAEP include from four to six elective or optional courses from which students are free to select an emphasis in their studies. This situation represents the only option for students to take courses that are not mandatory within the curricula. These sets of courses are called specialization areas within the UPAEP. The specialization areas are designed with the intention of providing more technical knowledge to students, respecting their field of interest within the framework of a specific disciplinary field of expertise.

The Business Logistics program has three specialization areas: international trade, finance management, and business intelligence. The International Trade program was designed with three areas: customs management, business intelligence, and entrepreneurship. The Business Administration program also has three specialization areas, which are consulting, business creation, and competitiveness. The Business
Intelligence program includes three specialization areas: finance administration, business strategies, and entrepreneurship. The Accounting program has three specialization areas: specialized accounting, finance, and taxation. The Marketing program also includes three specialization areas, which are consumer psychology, digital marketing, and political marketing. Finally, the Finance program has three specialization areas as well, specifically accounting, economy, and business administration.

Besides promoting the acquisition of highly specialized knowledge, the above areas are also designed to create synergies among the business programs within the UPAEP’s School of Business. So, students have the possibility of finishing dual-degree programs in a shorter period of time. That is considered an advantage because the graduates are thereby prepared to perform professionally in two complementary business disciplines.

After conducting an assessment of the core disciplinary courses, it was found that several soft skills are developed. Teamwork and communication skills are notable among all the soft skills mentioned in the programs’ documents. Learning activities were designed to promote collaborative work via the creation of student teams to address the technical topics of a class. It was also evident that communication skills are promoted by the presentations made by students in front of the class to explain discipline-related concepts. All of the courses’ learning activities equally emphasized both oral and written forms of communication.

Since all of the courses have integrative or comprehensive projects or seminars, it can be inferred that the students’ synthesis and analysis skills are also promoted.
According to Schubert et al. (2013), synthesis is a holistic learning process that is implied in information literacy skills because researching, evaluating, and using information are the steps needed to deal with information. Therefore, these related skills, namely analysis, information literacy, and synthesis, are promoted by the core disciplinary courses of the UPAEP’s School of Business.

In addition, Duran and Dökme (2016) mentioned that critical thinking is also related to the synthesis and analysis skills because critical thinking skills are used to assess a situation from different angles, detect its variables, and the interplay among them. To that end, many sources of information are used to explain events or support a personal position. Adopting a position, shaping a personal point of view, or explaining a situation or concept requires analysis and synthesis skills along with critical thinking skills (Duran & Dökme, 2016). Using this theoretical background, it can be stated that the UPAEP’s core disciplinary business courses are also designed to contribute to the development of critical thinking skills.

Besides, communication, teamwork, analysis, and synthesis, no other soft skills were mentioned with any frequency in the documents pertaining to the core disciplinary courses of the UPAEP’s School of Business. However, the global perspective skill is included and mentioned recurrently in the topics addressed by and the learning activities performed in the international trade program. A global mindset is presumed by the World Economic Forum (2016), as a prerequisite for being employable in today’s world given the changes in worldwide industrial composition or structure. A global perspective is also part of the UPAEP’s institutional strategies (CIAC, 2016), but it is not consistently
incorporated into the UPAEP’s School of Business undergraduate programs, as revealed in the document analysis.

Innovation or the capacity of being innovative is a behavior mentioned in the core disciplinary courses, but it is not of significant impact since it is only stated as one of the six disciplinary areas of the Marketing program. According to Cobo (2013), innovation-related attitudes are essential in a graduate’s profile to develop the current state of society and to deal with emerging technologies. This behavior was promoted by the business courses in general but is not consistently taken up at the core disciplinary course level, except by the Marketing program.

Contrary to what happened to communication, analysis, and teamwork, which are soft skills present not only in the business course area but also in the core disciplinary course area, problem-solving, decision-making, and strategic thinking are not clearly identified in the learning activities of the core disciplinary courses. No other skills are consistently found across all programs. So, it was found that there is no consistency from one area of the curriculum to another in terms of soft skills’ development.

Regarding hard skills and discipline-related knowledge, it was evident that all of the core disciplinary courses promote the acquisition of hard skills, as well as highly specialized knowledge and technical abilities. Specific knowledge of technical approaches is transmitted to students via these courses to make them professionals in a certain disciplinary field. The technical side of the graduate’s profile is mainly derived from these courses’ impact in the curricula. However, four sets of knowledge were
mentioned on a more frequent basis than others: finance, business or administration processes, logistics, and international trade.

Other knowledge such as marketing, law, and auditing are also included in the core disciplinary course design. But, across disciplines, it was only found that approximately 28% of the business undergraduate programs of the UPAEP’s School of Business have technical knowledge in finance, business or administration processes, logistics, and international trade. It means that only two of the seven programs share this knowledge in the lecture hall. The rest of the programs are more highly specialized in their disciplines and do not promote the acquisition of interdisciplinary skills after instruction in technical knowledge.

Interdisciplinary skills promote cross-functional teamwork and collective knowledge creation (Imafuku, Kataoka, Mayahara, & Suzuki, 2014). Professionals from different fields can enrich the learning process in a collaborative manner in which not only hard but soft skills are developed (Imafuku et al., 2014). Per the analysis, it can be said that this collaborative and interdisciplinary scenario is not propitiated at the UPAEP, at least at the upper level or senior classes.

Specialized software is used in six of the seven undergraduate business programs. It means that 86% of the business graduates master software abilities of a disciplinary scope. It was found that this ability is consistently reinforced in the many core disciplinary courses of the business logistics, international trade, business intelligence, accounting, marketing, and finance programs. Therefore, the students have sufficient opportunity to acquire the knowledge and mastery of the discipline-related software as
part of their professional abilities. The Business Administration program does not report the use of specialized software. Only in two of the seven programs, International Trade and Business Logistics, is SAP instructed as a way to make the students familiar with this ERP or software.

Abilities such as cost analysis and strategic management are also mentioned in the core disciplinary courses. Additionally, they were present in the business courses. However, they are not referred to in more than just one program. Other types of knowledge such as economics, business plan, and risk management, which were developed through the business courses, are not specifically referred to in the core disciplinary course documents. Therefore, there is no documentary evidence to assume the continuity of these SKABS throughout the curricula of the UPAEP’s School of Business programs.

In addition to the courses found in the general studies, business, and core disciplinary areas, students must perform 480 hours of social work as part of their academic load. The Mexican Ministry of Education stated that all students have the obligation of contributing to society with social work performed during their university preparation (SEP, 1981). So, this obligation is part of the curriculum, but it is not a course. However, it can assist students in the development of interpersonal or social skills such as communication and collaboration (Robles, 2012), but those skills, along with some behaviors such as responsibility and civic engagement, are not specifically mentioned as a part of this social work obligation. And, there is no syllabus, learning
outcomes, or learning activities associated with this requirement. Therefore, social work was not taken into consideration for document analysis.

There is another activity that is inserted in the curricula of each program, but is not a course: professional practice. It is also part of the mandatory activities that must be fulfilled by all students before graduation. Professional practice is an internship of approximately 240 hours that students must complete in an organization or industry to practice professional activities and gain professional experience. Internships are a concept repeatedly mentioned in the literature on graduates’ employability. As per the voices of several researchers, internships should be included in the university curricula (Chillas et al., 2015; Owens-Jackson et al., 2013; Sloka et al., 2015; Zamora et al., 2011). For that reason, it was also analyzed to understand its contribution to the UPAEP’s business graduate profile.

There is no syllabus for this activity since it is not a course. There are no stated learning outcomes or learning activities because it is an activity performed outside the university with no professor overseeing its evaluation, in which students acquire workplace experiences. However, the CIAC’s (2016) regulations defined that the internships are expressly devoted to exercise disciplinary skills in a professional workplace environment. Thus, it can be inferred that hard skills, abilities, and business-associated knowledge are refined through the practical experience of the students. The professional practice also enhances some soft skills of social scope. But, the emphasis is placed on the further development of hard skills and disciplinary knowledge, via experiential learning.
Entrepreneurship is an additional area of knowledge that all business students must enroll in. All of the business students have an introductory course on the topic, but some of the business programs include a specialization area in the matter. Therefore, students are not only presented with this knowledge, as suggested by Parker and Pearson (2013), but they also have the possibility of specializing in the topic. Being trained in entrepreneurship is a determinant in promoting other skills such as strategic competency, conceptual competency, and organizing competency (Melkinova & Zascerinska, 2016).

The UPAEP also has two avenues for students interested in entrepreneurship: intrapreneurship and social entrepreneurship. Entrepreneurship training fosters the acquisition and development of SKABs related to crisis solution, leadership, risk taking, change management, creativity, and willingness to learn (Cadar & Badulescu, 2015). However, intrapreneurship is also related to the development of the behaviors of innovation and being proactive as well as highly committed to the company (Cadar & Badulescu, 2015). Rekha, Ramesh, and JayaBharathi (2015) stated that intrapreneurs are risk-takers, motivated individuals, and team builders, but that their impact is only felt within the companies. They do not create jobs.

The main difference between the concepts of intrapreneurship and entrepreneurship is that an entrepreneur creates new business and is an employment generator, while an intrapreneurship innovates within the walls of a company producing new business ideas, processes, or products (Cadar & Badulescu, 2015). In any case, the UPAEP’s students instructed in entrepreneur- or intrapreneur-related knowledge are in
the position of developing management abilities, self-motivation, innovative spirit, and proactivity. All of those are SKABs that can be used in different contexts.

Assessing attitudes via a document analysis is a challenging undertaking. Attitudes or behaviors need to be observed to be evaluated. The document analysis conducted to retrieve what SKABs are transmitted to students by the UPAEP’s School of Business is not the mechanism to assess the students’ behaviors or attitudes. Questionnaires directly applied to students could be the way to obtain this sort of information, as done by Bagherinia et al. (2015). Making students direct participants in the context of this case study would go beyond the case study’s design and scope. Thus, findings in the matter of attitudes transmitted to business students must rely on what the UPAEP’s philosophy states about the education given to the students. The UPAEP’s philosophy reflects on the institution’s educational model, which shapes the action of faculty members in the lecture hall and additional educational activities that impact the instruction of the students (CIAC, 2016).

The UPAEP’s educational model references the following behaviors, which are targeted as the students’ outcomes: responsibility, serving others, the search for truth, respect for humans and human dignity, congruency, integrity, honesty, justice, and civic engagement (CIAC, 2016). In the UPAEP’s mission statement, reference is made to the university’s commitment to forming leaders. So, leadership associated skills and ethical behaviors are expected in a graduate from the UPAEP.

Besides mentioning the ability to see the big picture, Greer (2016) stated that the salient attitudes of a leader are honesty, being a source of inspiration for others, trust,
being visionary, the willingness to serve others, motivation, integrity, responsibility, self-discipline, being a good listener, and executor. From that list of the attitudes or behaviors of a leader, the following are included in the UPAEP’s philosophy: responsibility, the willingness to serve others, truth, integrity, and honesty. Those attitudes or behaviors are expected of the UPAEP’s graduates.

Summary of discussion of findings from a review of UPAEP’s business curriculum documents. In terms of skills, the soft skills constantly mentioned across the three areas were communication, analysis, critical thinking, and teamwork, with different degrees of emphasis in each area. Beyond those skills, only global perspective was found to be present in two areas: general studies and core disciplinary. This situation revealed that there was neither consistency in the curricula design nor the implementation of the UPAEP’s strategic goal of the internationalization of education. However, there was progress in developing a global perspective in graduates. Problem-solving and decision-making were found in the general studies and business areas, but they lack presence in the upper-level classes, where students are expected to apply the acquired SKABs to real cases or professional-related situations.

Logical thinking was only addressed in courses within the general studies area, while strategic thinking and innovation were found in the business area. However, it can be inferred that due to the type of learning activities designed for the core disciplinary courses stated in Table 8, these skills will contribute to the development of information literacy skills. Information literacy skills along with synthesis were only mentioned at the core disciplinary courses level as is expected for comprehensive courses.
For hard skills, it was found that the general education area only contributes to the promotion of information literacy, mathematics, and statistics. The hard skills are developed at the business and core disciplinary areas through applying them to discipline-related concepts and projects. Hard skills are used to enhance the development of business knowledge such as strategic planning, marketing, business or administrative processes, finance, and cost analysis.

In terms of knowledge, geography is found in the general education in only two programs, improving the skill of contextual understanding. However salient knowledge throughout the curricula is strategic planning, marketing, business or administrative processes, finance, and cost analysis. In the business area, organizational management, economics, risk management, and business plan can be added to the list of technical knowledge. Organizational management and economics are at a basic level because their contents include introductory concepts or overviews of the organizations and the nation’s economy respectively. However, risk management and business planning are of a more comprehensive scope though they are not developed in the core disciplinary area.

In the core disciplinary area, technical knowledge such as logistics, international trade, law, and auditing was identified. Logistics and international trade were repeated in two of the seven business programs. Law and auditing were of a higher level of specialization within the disciplines, as these require more technical approaches.

On the one hand, the use of specialized software was a constant in the university’s education of business students at the UPAEP. Specialized software is used in six of the seven programs. But, SAP instruction was only present in two of the programs. So,
software literacy was the ability more cited of all that were found. On the other hand, English language proficiency is required in all of the business programs, making this ability an ever-present component of curricula. Cost-analysis was also mentioned but not on a regular basis.

Attitudes or behaviors were not directly assessed. Behaviors were inferred from the UPAEP’s foundational documents and some statements in the academic documents of the School of Business. Leadership-related attitudes are salient. Honesty, responsibility, service attitude, motivation, and integrity are considered leadership-related behaviors. Besides these behaviors, innovation is also cited but only for one business program.

The curricula of the UPAEP’s School of Business undergraduate programs were analyzed, considering the number of courses per program in each of the three areas to contrast the findings against the SKABs promoted in general by each of the three areas: general studies, business, and core disciplinary courses. By identifying which of these three areas prevails in the curricula design, the emphasis placed by the program on a type of SKAB or a mix of them can be determined. The weight of each area in the program’s composition is a determinant in the type of SKABS that are promoted.

What Gaps Exist Between the SKABs Auto Industry Recruiters Desire and the SKABs Taught Through UPAEP’s Business Curriculum?

The findings from interviews with auto industry recruiters were compared with the findings of a review of UPAEP’s business curriculum and related artifacts to answer this question. The findings of this comparison were reported in Chapter 4. With the intention of discussing the findings and making recommendations for the application of
this case study, here the findings will be summarized, compared and contrasted. Conclusions can be drawn by using skills, knowledge, abilities, and attitudes separately as guiding topics, along with additional information that can be used to produce benefits for the potential audience, stakeholders, and lead to leadership actions.

**Skills.** From the perspectives of different researchers, the literature review revealed that soft skills were preferred over hard skills or technical knowledge (Dobratz et al., 2015; Kantane et al., 2015; Meenai & Ahmed, 2012; Messum et al., 2015; Tan et al., 2013; Walk & Wright, 2014). It happened the same in the context of the automotive industry in Puebla. The main soft skills cited by the participants were global perspective, teamwork, communication, analytical thinking, and negotiation. All of these are global, social, and cognitive skills mentioned by the participants, which were also prominent in the conclusions of the authors reviewed for purposes of framing the present case study with previous research.

The identification of soft skills made clear what the recruiters’ expectations are during a recruitment process. The recruiters constantly mentioned that when having two candidates equally prepared in substantive business studies, they prefer the one who displays soft skills. Technical knowledge or hard skills are also desired, but they are not a determinant in the recruitment process. This is a coincidence with what was stated by authors like Kantane et al. (2015) and Messum et al. (2015) mentioned in Chapter 2. In terms of employability, one conclusion is that soft skills have a positive impact on the new graduate’s profile.
On the part of the university, the main soft skills inculcated in the students were communication, analysis, teamwork, and critical thinking. However, no consistency was found among the curricula of each program in promoting a sounder acquisition of these soft skills. In terms of global perspective, a skill highly demanded by the participants, this skill is only transmitted to students via proficiency in a foreign language: English. This condition is insufficient to meet the recruiters’ needs because they are expecting to find cultural intelligence, cultural sensitivity, and multicultural skills in the graduate. In only two undergraduate business programs, courses on world economic geography and international negotiation strategies are included, so students have an additional opportunity to enhance the global perspective skill.

Walk and Wright (2014) discussed the need to incorporate global skills in the graduate’s profile. These same authors also assert that universities are not complying with this industry demand. They also stated that professors should not be satisfied only to discuss cultural differences, but to develop appreciative experiential learning to present students real cultural diversity situations. It is a conclusion, as per this research case study’s findings, that the UPAEP is not properly developing global skills, and that professors are not adequately introducing the students to the experience of global diversity and multicultural environments.

The members of academia in the UPAEP are mainly focusing their instruction on the learning of technical or hard skills. On average, 74.7% of each program’s composition is devoted to the acquisition of technical knowledge. Therefore, students are well prepared in the technical dimension of their discipline but do not have the right mix
or balance between hard and soft skills. The UPAEP’s business students are being developed in technical preparation, but that does not prepare them to transfer their main strengths to different contexts, making them mainly focused on their field of discipline. Interdisciplinary skills are the basis for becoming cross-functional (Imafuku et al., 2014), a characteristic that is desired and needed by industry leaders. That is because the workplace-related activities depend on the employee’s ability to perform in multicultural teams, not only speaking of different national cultures but also of diverse teams (from a wide array of professional fields) inside the company.

Following these findings on the topic of skills, it can be stated that there is a gap between university instruction and industry needs. Mihaela and Raluca (2015) also highlighted this mismatch between academic instruction and industry needs. The current status of the automotive industrial sector in Puebla and the UPAEP instruction is very similar to what is reported by authors like Mihaela and Raluca in a context different from the Mexican context.

Despite the fact that there are some alignments in terms of communication, teamwork, and analytical skills, the lack of consistency in promoting skills during the academic life of the student does not guarantee the expected level of development of these soft skills in the graduate. The development of hard skills is a given because faculty focuses on developing these through discipline-related activities or assignments. However, recruiters do not preferentially desire hard skills. Hard skills are desired to a certain extent, but are not a determinant in a recruitment process, according to the findings obtained from interviewing recruiters. It can be concluded that time to
employment is accentuated by the presence of this gap or misalignment, especially when recruiters mentioned that a candidate with no soft skills is not employable.

**Knowledge.** In terms of knowledge, recruiters stated that they need future employees to have knowledge of international trade, free trade agreements, logistics, customs, foreign law, international business, and INCOTERMS. This set of knowledge was not referenced in the literature review conducted for this research study. Nevertheless, the automotive sector in Puebla is made up of 68 companies from different nationalities that are active worldwide, importing and exporting parts and vehicles. Therefore, knowledge associated with international trade is important for performing business operations in this industrial sector. The industry recruiters also required knowledge as diverse as accounting, national law, and finance. Authors mentioned this set of knowledge when making reference to a traditional educational model in which students gain the theoretical background of a discipline (Kickul et al., 2012).

Knowledge of accounting, national law, and finance is basic in the business environment, especially when the participants mentioned the need for reducing operational costs to remain competitive in a highly demanding international business scenario. In consonance with what is stated by Clinebell and Clinebell (2008) about the use of the traditional model of education to teach basic concepts of business, the UPAEP is using the traditional approach to education as well. This situation can be caused because the courses of finance, accounting, and national law are delivered in the first semesters from a non-practical approach to that knowledge.
The university’s professors are teaching courses in finance, accounting, and business administration. These courses are part of the basic set of knowledge for a business student. These courses are taught using a traditional approach to education, advocating academic rigor of the fundamentals or basic concepts of the business world (Clinebell & Clinebell, 2008).

In the introductory course of business administration not only business organization and processes are included as part of the content, but also the national legal framework. This course is taught from a traditional approach as well. Much technical knowledge, related to each of the business disciplines, is included in each academic program, but the ones referred to here are the common courses to be taken by all business students. In conclusion, it can be said that most of the common business courses are taught according to a traditional model of education.

Pertaining to substantive, technical knowledge, the gap between industry needs and university preparation is not wide in regard to the basic notions of business such as finance, accounting, and national law. Students are adequately prepared in the elements of knowledge the employers are requesting. Since decision-making is a constant activity in an organization’s performance, the UPAEP business students will be prepared to participate in that process, based on their generic business skills and specific discipline-related knowledge. It is important to recall that participants mentioned that more technical knowledge is needed depending on the position to be occupied. At the university, the technical knowledge is transmitted depending on the disciplinary field,
which then relates to the positions that graduates will occupy in their professional work environments.

What was expressed in the previous paragraph is an alignment between industry needs and university preparation. But, that does not happen uniformly in terms of other highly prioritized knowledge such as international trade, free trade agreements, logistics, foreign law, customs, and INCOTERMS. Because of their international activities, companies are in need of this knowledge. So, it is needed in the graduate’s profile. But only two of the UPAEP’s programs meet this need. It can be concluded that only the students of these two programs, international trade and business logistics, have a better possibility of being hired in a shorter time. Hence, time to employment is also slightly impacted by this partial misalignment between industry needs and university instruction.

Abilities. Pertaining to abilities, the industry recruiters mentioned three as determinant features in the graduate’s profile: English, software literacy, and the familiarity with an ERP called SAP. English is the language of business used around the world, so a future employee of a transnational firm with global operations needs to be fluent in English. Negotiations, presentations and other business conversations are conducted in English. Additionally, the recruiters mentioned that a current trend within the automotive sector is to be closer to customers or suppliers, who are generally located in proximity to them but are not always of Mexican origin or are located in other countries of the world. Thus, English proficiency is an indispensable ability.

On the part of the university, English is the only ability being consistently developed in the students. Students take four mandatory semester courses and a TOEFL
score is required after completion of the program. Additional activities are offered to increase this language proficiency such as exchange programs. It can be expected that this ability is in alignment with industry needs.

The recruiters are also expecting software literacy from graduates, mainly exemplified by Microsoft Office software. Employees are expected to conduct presentations, to provide reports, to understand figures, and to analyze contexts based on macro indicators or variables, as part of their normal activities. That is the reason why this kind of knowledge needs to be included in the graduate’s profile. Business processes are better understood and conducted when Microsoft Office, like Excel, is used to prepare the material in support of a decision-making process. Not only is product development enhanced by software literacy, as expressed by Kawakami, Barczak, and Durmusoglu (2015), business creation and business understanding are also served by the application of software (Jagodic, 2016). Software literacy is an additional industry need that the university is fulfilling. It can be stated that students are prepared to understand the business world and to use IT tools to present information needed for decision-making.

In terms of SAP proficiency, this is a highly desired ability that even has a direct impact on the salary level of employees as stated by one of the participants. No mention of SAP was made by any of the authors cited in this research study. But SAP is not a singular feature of Puebla’s automotive industry. As stated by the participants, this ERP is the most commonly used in many industrial sectors. Research-based studies are referring to SAP as part of business-associated courses, like the one conducted by Laosethakul, Tarasovich, and Boyer (2016), but SAP ability, so far, is not associated with
employability skills in the international context. SAP is related to supply chain processes. However, during interviews, SAP was not specifically mentioned as a tool for supply chain management. It was only mentioned as an ability that business graduates should have regardless the position to occupy within the company. SAP familiarity is demanded by Puebla’s automotive sector as an element of the business graduates’ employability skills.

Six of the seven programs promote the use of specialized software for data mining, products classification, customs activities, among others. Students can practice their discipline while getting familiar with specialized software. But, only two of the programs include a course on SAP in addition to other specialized software of disciplinary scope. Thus, SAP is not an ability developed uniformly in all of the UPAEP’s business students, a problem that reveals a misalignment with an industry priority.

Cost analysis and strategic management abilities are included in only one of the business programs, a fact revealed by the document analysis. These abilities are complementary to the knowledge on finance but are not generally taught to all of the UPAEP’s business students. So, cost analysis and strategic management have no substantial impact on the final preparation of all business students. Fortunately, the participants did not refer to these abilities.

In reference to abilities, there is a substantial gap between the two contexts: industry and university. English is the only area in which industry needs and academic instructions are fully reconciled. But, in terms of SAP, the UPAEP is not properly
meeting industry demands. As stated before, SAP literacy is a feature that positively impacts the salary and work conditions of employees if it is part of their professional profile. From the perspectives of the participants, having SAP as part of the graduate’s abilities contributes to enhanced possibilities of getting hired. Therefore, an undeniable conclusion is that not preparing students in SAP is a factor that contributes to a long job search because graduates become less employable since they do not have this highly desired ability contributing to a successful recruitment process (Azevedo et al., 2012) or to gain improved work conditions and increased salary levels.

**Behaviors.** Being innovative, creative, and able to make proposals or contributions to the company were the predominant desirable attitudes mentioned by the participants. These three attitudes or behaviors coincide with the industry needs of being competitive. Not only authors like Rodriguez-Ferradas and Alfaro-Tanco (2016), but also the recruiters stated that the automotive sector is a very demanding and competitive one, so firms need to keep up with the challenges by being innovative and creative. Since no specific mention was made in any of the research studies reviewed about the automotive sector, it cannot be stated that a competitive environment is reported for this sector in other parts of the world. The literature review did not reveal any research addressing the specific and unique situation of the automotive industry. This gap is a research gap being addressed by this research study.

What can be stated after the literature review is that globalization forces are factors impacting the firms’ quest for competitiveness (Fulgence, 2015; Jamison, 2013). The automotive industry in Puebla is deeply involved in global operations impacted by
globalization forces and the search for competitiveness. So, it is understandable that
innovation and creative thinking are attitudes that need to be present in an employee.
Besides innovation and creative thinking, the employees’ or graduates’ willingness to
make proposals and contribute to the firm with new and fresh ideas is also desired.
Proposals made by employees are also expected to increase the company’s
competitiveness.

Ethics and proactivity were also mentioned. In terms of ethics, Floyd et al. (2013)
referred to it as a moral habit that needs to be included in the concept of employability
skills. So, ethics being mentioned by Puebla’s automotive recruiters is in consonance with
similar recommendations or demands voiced in other contexts, in which course offerings
in ethics are a demand directed at universities. Authors like Floyd et al. and Jorge and
Peña (2014) insisted in promoting the trend of business schools around the world
including ethics in the business curricula because of the world economic crisis. The
automotive industry recruiters in Puebla, who are also demanding ethics in the profile of
business graduates, replicate this attitude.

Proactivity was not detected during the course of the literature review. It could be
concluded that it is not relevant or is present in other contexts, meaning there is no need
to demand it from a graduate. But, in the Mexican context, it was constantly mentioned.
Thus, while not commonly encountered, it is mentioned as needed in a candidate’s profile
because of the demanding environment of the automotive industry.

No document analysis was conducted to assess the behaviors of the UPAEP’s
students. Based on the premise that behaviors need to be observed to be evaluated, or that
behaviors can only be evaluated if students are asked about them as observed by
Bagherinia et al. (2015), there is no information on the part of the university to contrast or
to compare with industry needs in terms of behaviors. Innovation as a behavior is only
mentioned in the Marketing program’s learning outcomes. From that data, it can be
implied that only Marketing students are educated in this attitude. It can also be
concluded, but not supported by evidence, that instruction in entrepreneurship fosters the
acquisition of an innovative and creative attitude since these attitudes are needed to
develop new business ideas (Robinson & Stubberud, 2015). However, according to
Dobratz et al. (2015) and Melkinova and Zascerinska (2016) entrepreneurship instruction
is also tied to the development of skills like emotional intelligence, networking,
leadership, persuasion, and negotiation.

Ethics is also a central element of the university’s discourse. Constant mention of
an ethical attitude can be found in the university’s documents. But, no assessment was
made directly with the students since that was beyond the scope of this study. However,
there is an omission in the UPAEP’s programs, which is constantly demanded in the
literature supporting the present research study: no courses in business ethics are included
in any of the program curricula. Jorge and Peña (2014) recommended business ethics be a
specific course offered in all business curricula. Floyd et al. (2013) mentioned that in
only one-third of American universities is ethics part of the curricula. In the UPAEP’s
programs, the course is absent. It cannot be said that this is an example of what happens
in all of the universities in the country, but it is an industry need which is not being
addressed by the UPAEP, as revealed via this case study. Therefore, the employability of graduates is negatively impacted if there is no evidence of instruction in ethical behavior.

Since no assessment was made at the university level about attitudes, there is no evidence to determine if there is a gap between the industry’s needs and university instruction. No assertive conclusions can be drawn because more information needs to be generated and a different research methodology needs to be designed to address this topic. However, from a merely document-based approach, there is a gap as respects the aspect of behaviors. From the behaviors demanded by the recruiters (innovation, creative thinking, ethics, and proactivity) only two appear to be covered by the UPAEP’s teaching: ethics (included only in the foundational documents) and innovation (inserted in the Marketing program).

**Other Topics**

Emerging themes were revealed after interpreting and categorizing the participants’ contributions. The identified emerging themes are as follows: getting things done, global awareness, people focused on people, and the generational differences. It was not possible to assess the academic instruction of the UPAEP to determine if academic staff had addressed these emerging topics. It goes beyond this case study’s scope, but it could be a topic for further research.

The participants commented about the fact that soft skills are essential to get things done. Since a gap in the field of soft skills between the industry’s needs and academic instruction was detected, the industry need of getting things done is only partially addressed. Communication, analysis, and teamwork, which are the skills
demanded by the recruiters and developed by the UPAEP’s professors, can be a sound foundation for inspiring in the students a sense of responsibility, proactivity, and self-motivation to get things done.

In terms of global awareness, the UPAEP’s faculty needs to re-direct the current practice of trying to create a global perspective skill in students by only focusing on language proficiency. In fact, from the recruiter’s perspective, language proficiency is not related to global awareness. Global awareness is a matter of understanding the Mexican and the foreign cultures to perform globally. Global awareness is the ability to design logistics routes based on knowledge of geography and cultures. Global awareness is enhanced by the presence of soft skills to address the interdependency of the world and the trend of connectivity.

At the UPAEP, soft skills are not completely developed via academic instruction, and knowledge of geography and logistics are not transmitted to all of the business students. Multicultural instruction or practical experience in diverse cultural scenarios is not consistently promoted in all business programs. All of these factors contribute to a misalignment between what recruiters demand and what students are endowed with. It can be concluded that professors will need to make additional efforts to overcome that prevailing condition.

People focused on people was also a theme discussed by the recruiters. From the recruiters’ perspective, teamwork is the key word in the process of acknowledging that goals are achieved by the joint effort of all participants. Constant reference is made in the literature, pertaining to employability skills, about teamwork. Dobratz et al. (2015)
mentioned that internships favor the acquisition of teamwork skills. Milhauser and Rahschulte (2010) concluded that teamwork can bridge a gap between industry needs and university preparation. Runhaar et al. (2014) stated that transdisciplinary teamwork is necessary for professional performance. Finally, Wkle and Fagin (2015) made reference to teamwork as a part of the graduate’s profile.

It can be concluded that teamwork, a skill promoted by the UPAEP’s faculty, will be an element appreciated in the graduate’s profile to meet the industry leaders’ expectation of graduates being focused on people. Internships as a mandatory activity for UPAEP students can assist in furthering the capacity to be a team player. The issue of practical experience was introduced in the conversations when speaking of the need of having people focused on people. Gaining practical experience is the objective of internships, an additional reason to continue the practice of internships.

People focused on people was also referred to by the recruiters in the context of the emerging trend that supply chains have to work from a closer perspective and that organizational areas are co-responsible in achieving goals and performing activities. Again, soft skills such as networking, as well as attitudes like empathy and the willingness to contribute, are related to the theme of people focused on people. It can be concluded that soft skills tend to be the cornerstone of a graduate’s performance. Consequently, work readiness depends on the promotion of soft skills.

Finally, the theme of the generational differences was revealed too. Millennials per se are not mentioned in the literature reviewed for the present research study in regard to employability. The description of the Millennials generation created by the
participants’ contributions seems to be a factor impacting on the graduates’ possibility of getting hired within the automotive industry of Puebla. Contrasting with other research studies conducted around the world, the Millennials, as a topic impacting employability, is encountered here for the very first time.

It was a theme referred to by the participants in a very emphatic way. Again, the topic behind this emerging theme revolves mainly around personality. As stated by the participants, soft skills are central to one’s personality. Personality traits are not resolved at a university level or by means of academic instruction, but universities are expected by employers around the world to develop soft skills in students. Specifically, in Puebla, the participants also challenged the university to address the Millennials’ personality issues.

Moghaddam (2017) asserted that some academic activities like internships help to modify or shape personality traits when students are faced with experiential learning. In that, internships are a common element not only in the studies reviewed to frame or academically support this research case study but also in the opinions of the participants selected for this research study. Therefore, it is concluded that internships, as an example of experiential learning, not only play a central role in shaping the graduates’ profile by contributing to the development of soft and hard skills, but also by getting students closer to or incorporated in real workplace scenarios.

In conclusion, technical knowledge is important, but soft skills are essential. Hard skills and technical knowledge or abilities can be developed by means of a traditional model of education, while soft skills and attitudes depend on practical experiences or social interaction with workplace connected learning. Among other authors,
Chandrasekaran et al. (2015) and Malik and Wickramasinghe (2015) stated that university instruction is enhanced by a closer I/U relationship. It must be concluded that a close I/U collaboration in the Mexican context can contribute to the new graduates’ employability.

This case study was designed and conducted to address the following main research question: what gaps exist between the skills, knowledge, abilities and behaviors industry recruiters’ desire and the skills, knowledge, abilities, and behaviors business students learn through the UPAEP’s curricula? After analyzing the data encountered in the two phases of the research design and after connecting the findings with the contributions from the literature on the topic and the Mexican context, it can be stated that there is a demonstrable gap or a misalignment between the education provided at the university level at the UPAEP and the needs of the automotive industry in Puebla. Strategies need to be placed in motion to overcome that situation.

The misalignment is impacting the employability of new business graduates. This gap, which is not equal in all areas, can be tracked to each of the SKABS as explored in previous paragraphs, it can be concluded that this gap can be summarized in the importance of soft skills in the graduates’ profile. This conclusion is consistent with conclusions at which other researchers have arrived in studies conducted in different countries and for diverse industrial sectors around the world. The problem of time to employment faced by new graduates and the complaint of industries about new graduates not being able to meet their needs is also found in Puebla within the automotive sector.
So, a call to action is needed to reverse this situation. Not only new graduates will benefit, but companies, and the country as well.

**Application of Findings and Conclusions to the Problem Statement**

The problem addressed by this research study was the longer than the average length of time invested by new graduates to find employment. Based on national statistics provided by Universia Mexico (2013, 2014), the problem of time to employment was not limited to the UPAEP students’ situation. It was a generic reference to a problem present at the national level. But, pursuant to the findings retrieved in this case study, the reported misalignment between industry needs and academic instruction is a factor to consider in the UPAEP’s context.

There are several conclusions, which can be separated according to a common or a shared theme. First, three conclusions surrounding the topic of soft skills: soft skills have a positive impact on the new graduate’s profile, among soft skills, teamwork is essential, and within the UPAEP’s context, global skills need to be improved. Since soft skills seem to be the cornerstone for a new graduate’s employability, it is suggested that graduates be endowed with these skills. Hart Research Associates (2015) and Milhauser and Rahschulte (2010), among others, also arrived at that conclusion to increase graduates’ employability. If graduates are employable, it is because they have the right set of SKABs to meet industry needs (Azevedo et al., 2012; Carnevale et al., 2013; Hamid et al., 2014). If industry needs are met by a suitable graduate’s profile in the recruitment process, the time invested in finding a job position is substantially reduced.
Beside soft skills, there are other components in the graduate’s profile that are the common base of the second set of conclusions: attitudes, abilities and hard knowledge. The conclusions united by this common base are two: students are not being prepared in SAP, and they need to be proactive. As revealed by the recruiters, SAP is desired since the industry is working with this ERP, which is very specialized. The learning curve expected if a new employee is hired without mastering SAP is longer than the one of a new employee with knowledge and ability acquired as to SAP. Therefore, SAP is a factor that makes new graduates employable, and their search for a job is shortened.

Proactivity is the driver for making proposals to enhance or to innovate a business. It is also the driver for getting things done, and it is the prelude of being self-motivated to move forward and to keep learning in a changing environment. According to the recruiters, the automotive firms are in an urgent need to be competitive. It is reported that the automotive industry is active in a highly dynamic and demanding environment, so proactive people are wanted. If a proactive attitude is shown in the graduate’s profile, the graduate is employable. Thus, the time to employment is positively impacted.

A final set of conclusions has to deal with the educational model. These conclusions are: as the UPAEP is using the traditional model of education for teaching the general courses and the common business courses, there is a need for introducing more experiential learning to enhance work readiness, new skills need to be developed to deal with trends like connectivity, global relationships, and logistics related issues, and I/U increased collaboration is needed to make students employable. If a strategy can be designed to overcome the current use of the traditional model of education for at least
half of the courses of a business undergraduate program by combining more praxis-based education as recommended by AACBS (2016), the problem of time to employment will be better addressed.

Summarizing, time to employment is negatively affected by the focus placed, during academic instruction, on hard skills and technical knowledge instead of soft skills. Time to employment is also affected by a misalignment in terms of other important needs such as SAP. The misalignment between what industry leaders need and what the students are receiving as university education is impacting time to employment. The UPAEP is not too far separated from the industrial sector, but from a preventive approach, the time to employment must be addressed.

During the document analysis of the UPAEP, it was seen that praxis-based education is present in the upper-level semesters and that some developed soft skills are the same as those that industry recruiters are looking for. Ethical behavior is promoted and language proficiency is properly addressed. Some efforts are made in some of the programs to promote international trade and logistics related knowledge, as well as to enhance the acquisition of global skills. But consistency and strategic institutional planning are expected to reduce the misalignment between university instruction and industry needs to impact the problem addressed by the present research study positively.

**Application to Leadership**

Leadership is the act of guiding others (Anca, 2015). According to Gandolfi and Stone (2016), leadership is a multi-faceted topic that requires group efforts, following strategic direction, and a clear vision to accomplish a mission. In consonance with
Kouzes and Posner’s (2012) contributions, Posner (2016) stated that there are five leadership practices: model the way, inspire a shared vision, challenge the process, enable others to act, and encourage the heart. For this case study, the findings may drive leaders to make decisions pertaining to the improvement of the new graduate’s suitability for employment.

It has been found that there is a misalignment between the industry’s needs and academic instruction that seems to be impacting the new business graduates’ employability rate. So, as leaders of an academic institution devoted to educating the new generation of professionals, the creation of a vision of the future in which new graduates are more employable and get hired in less time is an action that needs to be taken. In the words of Kouzes and Posner (2012), envisioning the future in terms of new graduates’ employability is a leadership task. All findings and conclusions have demonstrated that business graduates’ employability is affected, so an enhanced rate of employability of UPAEP’s business graduates has to become a source of motivation.

According to Sparks and Repede (2016), the leader needs to find the internal motivators of the followers for the goal to be accomplished. Eliophotou-Menon and Ioannou (2016) reflected on the commitment of the professors to academic outcomes. Therefore, both perspectives are suggested to the UPAEP’s leaders in the quest for motivating the UPAEP’s academic community to be creative and innovative in improving the learning process, so a higher level of business graduates’ employability can be reached. Leadership is all about finding the right stimulus for change (Eliophotou-Menon & Ioannou, 2016), and change is needed to align I/U realities in this case study.
The vision of the future in terms of new graduates’ employability has to be a shared one. A shared vision is also a leadership task (Posner, 2016). To complement the vision of future enhanced employability, reduced time to employment can be a source of inspiration if adopted as a shared vision following leadership intervention. Enhanced employability and reduced time to employment is an ideal that should excite faculty to work for achieving it (Posner, 2016). The university reputation will be positively shaped in consonance with the School of Business’ reputation for producing employable graduates. Brooks and Calkins (2016) and Dostaler and Tomberlin (2013) agreed that education-based performance of graduates, as well as program value and quality of education, are determinants in a university’s reputation. Those can be the motivators or driving forces to inculcate a shared vision within the UPAEP’s academic community.

Finally, leadership also implies the ability to guide through challenges. Dynamic organizations like universities are required to keep up with the pace of the labor market and global trends. Leih and Teece (2016) asserted that a proactive management style is needed. Innovation and the alignment of education with labor market requirements are some of the challenges that leadership must face. But, according to the findings of this case study, the main challenge is to reinvent the current I/U paradigm. In the Mexican context, universities and industries are not accustomed to work together. Few examples of joint work effort can be found. In the field of internships, more examples are present. But, in terms of curricula design in collaboration with industry leaders, there is still an opportunity to improve the current status quo. Consequently, leadership action is required to reinvent the level of I/U collaboration for the benefit of graduates.
Decision making to reshape or redesign the curricula of business programs in consonance with this research case study’s findings was the main leadership action derived from the research conclusions. It is also necessary to motivate and provide direction to the entirety of all academics at the UPAEP to work for a better future in terms of new graduates’ employability. This vision of the future can be coupled with the inspiration provided by the goal of reducing the time to employment. Furthermore, an attitude committed to overcoming present challenges and archaic approaches to I/U relationships is a goal that the UPAEP’s leadership is presented with, according to the findings of this research study. As suggested by Ernst and Chrobot-Mason (2011), a transformational approach to leadership in which openness to change is an ever-present trait required so that new opportunities can be discovered. And it is the approach that the UPAEP’s leaders will need to adopt.

**Recommendations for Action**

In the search for I/U alignment, which will positively impact employability and reduce time to employment, the constant mention of the importance of soft skills in the graduate’s profile has to be taken into consideration by the UPAEP’s leaders. Soft skills were found to be the cornerstone for employability. Teamwork, communication, and analysis were the three central soft skills always present in the dialogues conducted with the participants. These skills were also found in the document analysis, but it was also found that they were not consistently refined or developed throughout the curricula. Therefore, one important action that the UPAEP’s leaders, specifically the members of
academia, are faced to make is to promote soft skills in a consistent fashion across the entire curricula of the business programs.

Among the soft skills, global skills such as adaptation to multicultural environments, cultural intelligence, and cultural sensitivity were mentioned and considered by the recruiters as indispensable to perform global operations like the ones conducted in the automotive industry of Puebla. The UPAEP’s faculty contribution to promoting the acquisition of global skills is limited to English proficiency. Only the students from two business programs take courses of world economic geography and international negotiation strategy, a situation that does not meet the recruiters’ expectations. So, in consonance with the UPAEP’s institutional strategic goals, business students need to acquire a global perspective skill, which is not evidenced by only a TOEFL score. Students need to be exposed to more multicultural scenarios, international activities, and cross-cultural experiences. For that, not only the professors of the School of Business are called to action, but also other areas in the university such as exchange programs, the global perspective committee, and the internationalization department need to be involved.

SAP was found to be the ability to perform professionally in a specialized software or ERP, and that was mentioned by all of the participants. However, only two of the UPAEP Business School’s programs included this concept in their curricula. So, most students are not properly prepared to meet the requirements of recruiters, who represented diverse industries and positions within their organizations. SAP-related instruction needs to be a mandatory course if students are to become employable.
Therefore, the members of academia in the School of Business are confronted with the demand of the automotive industry to prepare students with knowledge of SAP. Doing that will decrease time to employment, but will also give students the possibility of being better paid, as mentioned by one of the participants.

In addition to these actions, it is important that students have more experiential learning activities. Hard skills can be refined through internships, which are already considered a mandatory requisite in all of the business programs. But, other types of praxis-based education need to be implemented to contribute to the development of soft skills, global awareness, consciousness of the demands and impacts of real workplace situations, and self-motivation to meet industry goals and objectives.

In that, the entire community of the UPAEP is required to act. Not only is faculty charged with this responsibility, but all of the areas in the university are because the mission of forming professionals is an institutional mission. So, the main responsibility is for the UPAEP’s leadership to motivate and provide direction to the community to enhance in-classroom and extramural activities to make business students attractive to recruiters. Students’ attractiveness is a cornerstone of a business school’s reputation (Brooks & Calkins, 2016).

I/U alignment is the key action incorporated in the entire process of analyzing findings and drawing conclusions from them. For action, there are two recommendations of comprehensive scope that can be made. First, the university’ leaders have to facilitate the transition of the UPAEP’s educational model to a blended approach of education. It means that the traditional approach to education needs to be preserved in those courses in
which basic or theoretical concepts are provided to the students. Wait and Govender (2016) made reference that the traditional model of education is suitable for discipline-specific basic notions.

However, Wait and Govender (2016), Congleton (2014), and Lastner et al. (2016), suggest that the educational model of an institution also needs to permit the inclusion of workplace experiences. Therefore, practitioners can be invited to the UPAEP’s lecture halls to share real-world examples, business cases, problems they face on a daily basis, a big picture of the workplace dynamics, etc. Traditional and practitioner models of education are blended to overcome the prevailing gap between industry needs and university instruction. This fact can be motivated and facilitated by the UPAEP’s leaders in all parts of the organization, but the members of academia are responsible for working in a collaborative environment with leaders of industry in Puebla.

The second recommendation for institutional action is concerned with building closer I/U relationships. The consequences of that will be felt in the ability of the university’s community to keep pace with the modern world to make students employable. Industry leaders can provide the university with first-hand information about its needs, the trends, and the changing business landscape so that new learning or SKABS, reported as indispensable, are included in the curricula. The industry recruiters, in a closer relationship with the university’s leaders, can find talent in an easier way and, if I/U realities are reconciled with the curricula, industry recruiters can be confident of the suitability of graduates. Thus, the recruitment process is also benefited, and industry
leaders will not have to complain about the graduates’ preparation, while graduates will be endowed with the right set of SKABs to be employed in a shorter time.

The aims of the matching theory of educational processes (Mason et al., 2009) mentioned in Chapter 2 can be achieved if these recommendations are acted upon. According to Mason et al. (2009), graduates prepared to meet needed labor-market skills are more employable. Thus, time to employment tends to decrease if the quality of the employer-graduate relationship increases as a result of I/U alignment.

**Recommendations for Further Research**

In the process of analyzing data, making sense of it, and gaining a deeper understanding of industry needs and university business instruction, some issues were detected that could be subjected to further research. A single research study cannot provide a full understanding of such an important but also dynamic topic as employability of new graduates. However, it can be the first step in advancing the current state-of-the-art, at least in the Mexican context.

Technical knowledge was found to be the focus of university instruction in the business programs assessed. But, this is a finding that cannot be transferred to other settings of academic instruction. Therefore, it is advisable to investigate the topic in other disciplines or other universities to have a panoramic view if this fact is only a feature of the UPAEP’s business instruction or it is a generalized phenomenon in the context of Mexican education in business or other disciplines.

Soft skills were referred to as the main factor expected from an employee-to-be. Hence, it is pertinent to dig into other contexts (academic disciplines or industries) to
determine if this finding is unique or not. Getting to know the current state of the art in terms of business or education in other disciplines represents an enhanced benefit derived from this case study to impact time to employment and employability positively. It is advisable to keep using interviews as the research instrument. A full understanding of a particular situation is achieved by listening to the voices of those involved.

Proactivity, along with ethical behavior, were some of the important attitudes that were not assessed due to the design of the research method. As stated before, attitudes cannot be measured if they are not observed. Consequently, an enhanced version of the present case study can contribute to knowledge generation if a different research design is created. The new research design should incorporate an assessment of attitudes through the lens of student involvement, not only by a document review. This recommendation is made for further research in the same context or different ones because attitudes seemed to be very important for the recruiters. Therefore, it is recommended to involve students. This recommendation can serve two purposes: extension of the current research study and replication of the study in a different setting. The last scenario is related to transferability.

The faculty’s composition is an issue of great importance. It was found that the practitioner model of education was commonly referred to as the means to adequately prepare the students. The blended model of education was also recommended to universities. Hence, the question arises about the model of education currently used in Mexican universities. Getting to know the current educational model or any possible trend on the topic that could change the Mexican educational paradigm can be of assistance to better equip students with the SKABs demanded in the workplace. It is
recommended that the scope of a future case study be expanded to incorporate the issue of the educational model used by universities in Mexico.

Among the emerging themes detected, one is of singular importance since it was not referred to in other research studies conducted in diverse countries. As expressed by the participants, the topic of the generational differences is a factor contributing to the complexity of the current recruitment process. However, Millennials are the next generation, and in the not-too-distant future, they will take over existing positions within an organization. So, it is recommended to determine new ways of amalgamating their behaviors with industry dynamics so as not to impact negatively on its competitiveness in terms of human talent. Further research into this topic is suggested. Gaining insights into the matter from the perspective of diverse industrial sectors, but also from the perspectives of diverse countries, could assist in determining if this is a topic limited only to the automotive industry in Mexico or if it is an international concern as well.

The natural case study delimitation of being narrowed to a single industrial sector calls for an invitation to conduct further research in other industrial contexts and other automotive cluster in Mexico. Stake (1995) and Yin (2014) asserted that this delimitation is the basis of a case study’s richness and uniqueness. In Mexico, there are other states besides Puebla where other automotive clusters are located. The first step in extending the current case study could be to replicate the research exercise in those other states. A second step could be to include other industrial sectors that are peripheral to the automotive industry. The benefits of the findings will be of a larger scope if other contexts are assessed in an equal manner to compare and contrast research-originated
results that could be shared to motivate leadership actions to solve the international concern of the employability of new graduates.

Finally, I/U alliances were mentioned as a possible bridge between industry needs and academic instruction. Hence, it is recommended to design a research study in which I/U alliances are fully investigated. If I/U alliances are to be promoted in the Mexican context, it is advisable to conduct research on the industry side as well as on the university side to determine the current causes preventing a closer I/U relationship. The knowledge on this topic can help leaders of both parties to design and implement strategies to overcome the current I/U paradigm in Mexico.

**Concluding Statement**

Gaining deep insights into the dynamics of the greatest contributor to Mexico’s GDP (CIA, 2016) was the ultimate benefit of this research study. Delimiting the case study to a single industrial sector (automotive), to a specific discipline (business), and to the educational model of a single prestige institution of higher education in the region (UPAEP), permitted the understanding of the case settings in terms of new business graduates’ employability. New graduates’ employability is an international concern, as evidenced by the literature review conducted for the purpose of the present research study. It is also a national concern in the context of Mexico, but because it has not been widely researched, it cannot be fully appreciated.

The impact of the low rate of new graduates’ employability worldwide has consequences of a large social impact like the phenomenon called NEET. So, it is not a problem per se that only graduates face. It is also a social concern that impacts
productivity and competitiveness. Industry leaders, in general, are complaining about the universities’ failure to produce employable graduates. So, it was urgent to elucidate the topic through academic research to be in the position of recommending a solution.

The findings derived from this case study contributed to narrowing the gap in knowledge and the lack of research into the topic in the Mexican context. It also served the purpose of analyzing a single industrial sector of vital importance for the nation’s economy. But, it is also different from other comparable research in which no single industry was assessed. However, the main findings are in agreement with worldwide research findings: soft skills are more important because, in a globalized world, global and social skills are salient, while hard skills are desired. Hard skills are not determinant factors, and a blended model of education needs to be adopted to create synergies between industry and university.

If these findings are taken into consideration, educators will be in the position of adapting business curricula to industry needs, making students more attractive. Time to employment concerns will be served if I/U interactions are promoted, a situation that still represents a challenge in the Mexican context. That is why transformational leaders are needed to envision a better future for graduates, to share the vision of reducing their time invested in job search by innovating educational practices, and to provide guidance through the maze of challenges, which will be encountered in the intent of shifting the current I/U paradigm in Mexico.
REFERENCES


Baryniene, J., & Krisciunas, K. (2013). Tuning of academic and business sectors’ positions for better competence of graduates. *European Integration Studies, 7*, 159-167. doi:10.5755/j01.eis.0.7.5068


Centro de Investigación y Asesoría Curricular. (2016c). *Servicio social y prácticas profesionales*. Puebla, Mexico: UPAEP.


Davis, J., Bernardi, R., & Bosco, S. (2013). Examining the use of Hofstede’s uncertainty avoidance construct in a major role in ethics research: A 29 year review. *International Business Research, 6*(1), 63-75. doi:10.5339/jbr.v6n1p63


Kantane, I., Sloka, B., Buligina, I., Tora, G., Busevica, R., Buligina, A., … Tora, P. (2015). Expectations by employers on skills, knowledge and attitudes of
employees. *European Integration Studies*, 9, 224-234. doi:10.5755/j01.eis.0.9.12809


Mexico central region automotive cluster: Microeconomics of competitiveness.


doi:10.177357.583ff4f75416d52b11dd1a6846687091a9


doi:10.1177/1080569912460400


Retrieved from


Secretaría de Educación Pública. (2000). *Acuerdo número 279 por el que se establecen los trámites y procedimientos relacionados con el reconocimiento de validez oficial de estudios del tipo superior.* Retrieved from

https://www.sep.gob.mx/work/models/sep1/Resource/42b00ee7-33da-4bff-85e3-ef45b0f75255/a279.pdf


http://noticias.universia.net.mx/actualidad/noticia/2014/05/22/1097233/desempleo-juvenil-cuales-afectados.html


APPENDIX A

Interview for Industry Representatives
APPENDIX A
Interview for Industry Representatives

Study objective: The intention of this qualitative research is to explore industry’s needs via interviews conducted in a one-one-one format, with the aim of detecting industrial requirements for human resources to enhance the employability rate of the graduates in the area of Business by reducing the time spent in searching for a job position after graduation.

Section 1

Participants’ general information

1. Name: __________________________________________________________
2. Gender:     F     M
3. Age: ____________ years
4. Academic degree:__________________________________________________
5. Name of the company working for: ____________________________________
6. Company’s industrial sector: __________________________________________
7. Company’s location: ________________________________________________
8. Position within the industry:__________________________________________
9. Time of working for the company:____________________________________
10. Is the participant involved in recruitment processes?:  YES  NO
11. Does the participant conduct recruitment interviews?:  YES  NO
12. Has the participant ever hired a new graduate from a Business School?:  YES  NO
Section 2

Interview general questions

Instructions: The questions are going to be asked by the researcher.

1. How is the new personnel hiring process initiated?

2. What position do the firm’s individuals involved in the recruitment process occupy?

3. What skills are considered during the recruitment process?

4. What knowledge is considered during the recruitment process?

5. What abilities are considered during the recruitment process?

6. What attitudes are considered during the recruitment process?

7. What connections do you see between the skills, knowledge, abilities, and attitudes of new hires and the needs of the industry?

8. Are there any specific skills, abilities, knowledge or behaviors that the recruiter is expecting from the new graduate’s profile?

9. What future trends do you see in the industry that might impact the skills, knowledge, abilities, and attitudes of the workforce in Mexico?

10. What is the current degree of interaction or collaboration between your company and a university?

11. In what ways do you think cooperation between your company and the university could improve our graduates’ work readiness?

12. Is there anything else that you would like to share or add?

Thank you so much for sharing your comments.
APPENDIX B

Research Participant Informed Consent
APPENDIX B

Research Participant Informed Consent

CITYU RESEARCH PARTICIPANT INFORMED CONSENT

School/Division of: Applied Leadership

I, _______________________________, agree to participate in the following research project to be conducted by Soraya Reyes Guerrero, student in the Doctor of Education in Leadership program. I understand this research study has been approved by the City University of Seattle Institutional Review Board.

I acknowledge that I have received a copy of this consent form, signed by all persons involved. I further acknowledge that I have been provided an overview of the research protocol and a detailed explanation of the informed consent process.

Title of Project:
What employers want and what universities teach: A comparison of UPAEP business programs and auto industry recruiting in Puebla region

Name and Title of Researcher:
Soraya Reyes Guerrero

For Student Researcher:

Faculty Supervisor: Dr. Arron Grow

Department: School of Applied Leadership
Purpose of the Study:

The purpose of this qualitative study is to identify the needs of Puebla’s automotive industry in terms of human talent and to contrast them with the current higher education curricula in business studies. These two factors will be subjected to a comparative analysis with the objective of assisting in the process of decision-making within the UPAEP’s School of Business for increasing graduate employability.

Research Participation:

I understand I am being asked to participate in this study in one or more of the following ways (the checked options below apply):

- [ ] Respond to in-person and/or telephone interview questions;
- [x] Answer written questionnaire(s)
- [ ] Participate in other data gathering activities, specifically, ________;
- [ ] Others, specifically, ________________________________.

I further understand that my involvement is voluntary and I may refuse to participate or withdraw my participation at any time without negative consequences. I have been advised that I may request a copy of the final research study report. Should I request a copy, I understand I may be asked to pay the costs of photocopying and mailing.
Confidentiality

I understand that participation is confidential to the limits of applicable privacy laws. No one except the faculty researcher or student researcher, her supervisor and Program Coordinator (or Program Director) will be allowed to view any information or data collected whether by questionnaire, interview and/or other means. If the student’s researcher cooperating classroom teacher will also have access to raw data, the following box will be checked. □ All data (questionnaires, audio/video tapes, typed records of the interview, interview notes, informed consent forms, computer discs, any backup of computer discs and any other storage devices) are kept locked and password protected by the researcher. The research data will be stored for five (5) years (or more of required by local regulations). At the end of that time all data of whatever nature will be permanently destroyed. The published results of the study will contain data from which no individual participant can be identified.

Signatures

I have carefully reviewed and understand this consent form. I understand the description of the research protocol and consent process provided to me by the researcher. My signature on this form indicates that I understand to my satisfaction the information provided to me about my participation in this research project. My signature also indicates that I have been apprised of the potential risks involved in my participation. Lastly, my signature indicates that I agree to participate as a research subject.
My consent to participate does not waive my legal rights nor release the researchers, sponsors, and/or City University of Seattle from their legal and professional responsibilities with respect to this research. I understand I am free to withdraw from this research project at any time. I further understand that I may ask for clarification or new information throughout my participation at any time during this research.

Participant’s name: _____________________________________________(please print)

Participant’s signature: _________________________________ Date: ______________

Researcher’s name: Soraya Reyes Guerrero

Researcher’s signature: _________________________________ Date: ______________

If I have any questions about the research, I have been advised to contact the researcher and/or her supervisor, as listed on page one of this consent form.

Should I have any concerns about the way I have been treated as a research participant, I may contact the following individual(s):

Dr. Kelly Flores, Program Coordinator, City University of Seattle at
521 Wall Street, Suite 100. Seattle, WA 98121. USA

Phone: 206-239-4500

Email address: kflores@cityu.edu
APPENDIX C

Instrument Validation Matrix
Research purpose: Identify the needs of Puebla’s automotive industry in terms of human talent and to contrast them with the current higher education curricula in business studies.

Instrument Validation Matrix objective: The present instrument is used to validate the Interview protocol’s items or questions against their pertinence and relevance to the research purpose and the research questions.

Expert’s opinion objective: The opinion expressed by the experts or judges via this Instrument’s Validation Matrix will permit the design of the final interview protocol, which will be used to retrieve information from the Puebla’s automotive industry in terms of their needs when hiring new business graduates, the level of cooperation between the industry and a university, and the skills, knowledge, abilities, and attitudes a business graduate is expected to have.

Instructions:
The interview protocol (attached to this Instrument’s Validation Matrix) was prepared to obtain information from Puebla’s automotive industry in terms of their needs when hiring a new business graduate, the level of cooperation between the industry and a university, and the skills, knowledge, abilities, and attitudes expected to be present in a business graduate. The items or questions
are related and categorized in three main topics which are aligned with the research questions: a graduate’s profile, industry needs, and I/U collaboration. The judges are asked to: “please read the interview questions and grade whether the interview question is aligned with the research question and is valid to retrieve the information needed from the industry recruiters. The number 1 means you validate the item, the number 0 means you do not validate the item. Opinions, comments, or suggestions can be provided for each question or for the entire research topic at the end of the instrument. Finally, you are asked to evaluate the interview protocol’s validity and pertinence.”
# Instrument Validation Matrix

Name: _____________________________________________

Academic degree: ____________________________________

Area of expertise:_____________________________________

Position:____________________________________________

Company’s name:_____________________________________

Years working for the company:_________________________

Date:______________________________________________

Signature:___________________________________________

<table>
<thead>
<tr>
<th>Research topic and sub-topics</th>
<th>Research question</th>
<th>Interview questions Number</th>
<th>Agree (1), Do not agree (0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Graduate’s profile</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Skills</td>
<td>What are the skills, knowledge, abilities, and behaviors business students learn</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>b. Knowledge</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Abilities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Attitudes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Connections of the above</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. Specific or additional</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SKABs needed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. Others</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


2. Industry needs
   a. Recruitment process
   b. Recruitment process tied to graduate’s profile
   c. Industry needs
   d. Future trends in the industry
   e. Others

   According to the automotive industry recruiters, what are the skills, knowledge, abilities, and behaviors sought for when recruiting a potential candidate for employment?

3. I/U collaboration
   a. Current degree of I/U interaction
   b. Ways to cooperate with the intention to increase graduates’ work readiness

   What gaps exist between the skills, knowledge, abilities, and behaviors industry recruiters’ desire and the skills, knowledge, abilities, and behaviors business students learn through UPAEP’s curriculum?

Comments: 

<table>
<thead>
<tr>
<th>Validity of the interview protocol</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Pertinence of the interview protocol with the research purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIGH</td>
</tr>
</tbody>
</table>