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Abstract
Developing interculturally competent students who can compete successfully in the global market is one of the challenges for institutions of higher education. A common assumption is that the processes by which people are educated need to be broadly consistent with the way in which organizations operate in a globalizing environment, especially enterprises along the border of the United States and Mexico. The geographical proximity of these countries creates a global dynamic between the two cultures requiring international staff. With this in mind, we turned to managers of Hispanic-owned business to report whether they believed, their employees possess the competences (knowledge, skills, attitudes, and experiences) deemed necessary for attaining global competency. We developed a questionnaire created by Hunter (2004) to measure global competences. In our results we found that employees of the Hispanic enterprises that were targeted do not generally have a high level of global competence according to our indicators.

Key Words: Competence, Global, Hispanic Enterprises, Border USA-Mexico.

Resumen
El desarrollo de los estudiantes interculturalmente competentes que puedan competir con éxito en el mercado global es uno de los retos para las instituciones de educación superior. Una suposición común es que los procesos por los cuales las personas son educadas tienen que ser ampliamente consistentes con la manera en que las organizaciones operan en un entorno de globalización, especialmente las empresas localizadas a lo largo de la frontera entre Estados Unidos y México. La proximidad geográfica de estos países crea una dinámica global entre las dos culturas que requieren personal con competencias internacionales. Con esto en mente, se encuestado a los gerentes de negocios de propiedad hispana para conocer si consideran que sus empleados poseen las competencias (conocimientos, habilidades, actitudes y experiencias) que se consideren necesarias para el logro de una competencia global. Se desarrolló un cuestionario creado por Hunter (2004) para medir las competencias mundiales. En los resultados se encontró que los empleados de empresas hispanas que fueron encuestadas generalmente no tienen un alto nivel de competencia global de acuerdo con nuestros indicadores.

Palabras Clave: Competencia, Global, Empresas Hispanas, Frontera Estados Unidos-México.
Introduction

Institutions of higher education in the United States face many challenges in preparing students to become interculturally competent in the global marketplace. These institutions have the task of remaining intellectually and culturally relevant in a rapidly changing world. Some researchers suggest that universities should make a deeper commitment to prepare graduates worldwide, but the burden of providing an international education falls on both universities and government agencies. They must increase the number of international student and teacher exchanges and create and integrate transnational educational consortia.

If students have better international preparation, they can develop their global competence in multinational or Hispanic enterprises and the companies will therefore perform at a higher level and be more competitive. Multinational companies in the United States, for obvious reasons, have a greater need to have global employees. This is especially true in the case of companies located on the U.S./Mexico border, where there are geographical market dynamics between the two countries. For this reason, the objective of this research was to determine whether employees who work in the Hispanic businesses located in a border region, such as in the city of Tucson, Arizona, have the appropriate level of global competence necessary to work effectively in these international companies, and if American universities in this area adequately preparing their students to be competitive.

But what exactly is global competence? This is currently a very widely-discussed topic. In our research, we found definitions that include elements such as having ability to speak other languages, having knowledge of other cultures as well as possessing components of flexibility, empathy, and adaptability to other cultural, political and business environments. (Lambert 1996, Olson and Koege 2001, Curran 2002, Brustein 2003, Deardorff 2004 and Hunter 2004, Blanco M, Fasci M. & Valdez J., 2009)

However, we agree that global cross-cultural competence includes knowledge, skills, attitudes and experiences that enable a person to have effective interaction with people from other cultures. In our study we adopt the definition created by William Hunter (2004) in his research on global competence. Hunter proposed in his study on strategies to internationalize American institutions some elements necessary to becoming globally competent: knowledge of others and one’s self; the skills to interpret, interact and discover; the ability to value the beliefs, values, and behaviors of others; and the ability relativist one’s self.
By analyzing the existing need to have a more international education in order to create employees with greater global competence, our research question focused on asking if the employees of hispanic businesses in the Tucson metropolitan area at the (United States-Mexico Border) have global levels of knowledge, skills attitudes and experiences to be considered globally competent thereby enabling them to perform more competitively?. This work will present a review of the literature, a discussion of the methodology for the examination of the research question, our findings, and some conclusions.

**Literature Review**

**International Education**

To offer an international education, institutions of higher learning should be preparing students in a global environment, which would facilitate their learning about other cultures, which in turn may increase sales or allow them to provide services to other foreign companies. Employees should also speak other languages in order to communicate freely and work multilaterally. They also must learn to interact with people from other countries in order to improve the competitiveness of these businesses especially in the case of multinational corporations. It is equally important that employees have strong knowledge of the geography and history of other countries.

At present, most countries should work toward offering an international education to students, which would award them greater global competence for when they begin working in international companies. In the case of the United States, the lack of global competency in the educational system became evident in the 1950’s. The National Defense Education Act noted in 1958 that only 15% of all college students were studying a foreign language at that time. They acknowledged America’s need to confront serious deficiencies in many fields, including the inability to communicate with foreign audiences. To rectify this problem, the Educational Act helped create the establishment of foreign language learning centers at universities around the country.

The lack of global competence, 50 years later, is still an issue, in 2002 others problems emerge in the American international educational system par example a very low rate of participation in student exchange and study abroad programs, estimated at 3%, it’s an scandal as Godbey and Turlington said (2002). The problems extended into secondary and primary education in the research made by the National Geographic Society about the knowledge of school-aged students from variety of countries in the subject of world geography, where the American school children ranked in the bottom third (National Geographic Society, 1998)
To have international education, the American system needs to expand the globalization in teacher education programs in order to prepare globally minded teachers. Only few College and Universities have organized international fields experiences that truly meet intercultural competences, international collaboration and global awareness to teach from a global perspective. Merryfield’s research (1995) demonstrated that many employers are discontented with American colleges and universities because they don’t prepare their graduates to become part of the global workforce. In the same way, Maxwell (in Business-Higher Education forum 2004) concurred in saying, “The U.S. higher education system is doing a terrible job of preparing globally competent student” (p. 29).

These studies prove the need to increase global education in universities. In order to achieve truly international education, the educational system also needs to expand the level of globalization in teacher education programs in order to prepare globally-minded teachers who will impart global knowledge to their students. Colleges and universities need to increase international field experiences for the teachers themselves that truly create intercultural competencies, international collaboration and global awareness to teach from a global perspective.

The importance of global education is also supported by Cendant Mobility, a global relocation management firm, they proved the need to impart global education in order to improve the competitiveness of businesses. In a survey conducted in 2002 that polled 180 human resource managers on six continents who collectively managed 200,000 people they found that global competence is critical to the success of cross-border workers (Cendant Mobility, 2002). Also, a Green (2000) studies describe that before becoming globally competent the students must be globally literate and possesses a high degree of international understanding and intercultural competence

Similarity, Broad (1998) proves the necessity of increasing international education, as their results show that mid-level managers, chief executive officers, and human resource professionals consistently state a need for college graduates who are “knowledgeable about the global environment in which they must function and be facile in the cultural diversity it entails.” (p.vi) For this reason, colleges and universities must make a deeper commitment to prepare global-ready graduates
Global competencies

The need for employees to have global competence through international education is very important because we're currently working in a globalized world with fewer and fewer business or geographical barriers. As Godbey and Turlington (2002) say, globalization is arguably the central social, cultural, political and economic phenomenon of our times. Work, in both the non-profit and for-profit sectors, is increasingly geographically distributed, technologically mediated, team-based, international collaborative and multicultural. It is a phenomenon that represents the emerging world wide interdependence of individuals and countries. College and universities must plan their futures in the context of a globalizing world, where not only economic production, but leisure, social, and welfare policies are now subject to external influences.

This phenomenon of globalization has impacted nearly all national and multinational companies. Firms compete daily with other companies in the world; their products can be sold anywhere on the globe. With the advancement of telecommunications and transportation comes a more competitive international market, so companies have to make a greater effort to compete successfully in a global market. For this reason, companies require international employees who have the knowledge, skills, attitudes and experiences (global competence) that enable them to penetrate the world market more easily.

Many authors have worked to define what a person needs in order to claim global competence. Olson and Koeger (2001) surveyed staff and faculty at New Jersey City University to assess the relationship between international experiences, intercultural sensitivity and global competence. Their results led them to define a globally competent person as “one who has enough substantial knowledge, perceptual understanding and intercultural communication and skills to interact effectively in our globally interdependent world” (p.116). Lambert (1996) identifies a globally competent person as someone who has knowledge of current affairs, empathizes with others, maintains a positive attitude, has an unspecified level of foreign language competence, and values differences between people and cultures. In the private sector, the Swiss Consulting Group, a transnational management firm, identifies in its Global Competency Report 2002, five essential global skills: intercultural facility, effective two-way communication, diverse leadership, systematic best-practice sharing, and a truly global design process strategy.

In the U.S. educational system, William Brustein (2003), Director of the University Center for International Studies at the University of Pittsburgh, defines global competence as “the ability to communicate effectively across cultural and linguistic boundaries and to focus on issues that
transcend cultures and continents.” For Brustein, the different aspects of global competence include: the ability to work effectively in different international settings; an awareness of the major currents of global change and the issues arising from such changes; knowledge of global organizations and business activities; the capacity for effective communication across cultural and linguistic boundaries; and a personal adaptability to diverse cultures.

The social researcher William Hunter (2004) establishes in his thesis a definition of the term “Global Competence.” Using the Delphi Technique (Group Techniques for Program Planning), he asked a panel composed of 17 experts who were either international educators or human resources managers/directors for transnational corporations and 42 human resources managers to define the term “global competence.” The panel defined global competence as “Having an open mind while actively seeking to understand cultural norms and expectations of others, leveraging this gained knowledge to interact, communicate and work effectively outside one’s environment.” (p.1)

In all of these definitions we can find common aspects such as knowledge, skills, attitude and experience with respect to the outside world. If we review the basic concept of competencies we find these topics are closely related. A competency is a set of defined behaviors that provide a structured guide enabling the identification, evaluation and development of the behaviors in individual employees. Some scholars see “competence” as a combination of knowledge, skills and behavior used to improve performance; or as the state or quality of being adequately or well qualified, having the ability to perform a specific role.

In this paper we consider it necessary to include the experience one has with the outside world in order to have global competence. Not only are the knowledge, skills and behavior (attitude) important but so is the experience with the outside world as it can help further develop global competencies of employees. For this reason we adopt the outline that Hunter presents in his thesis where he integrates an instrument of 22 questions or a “Global Competency Checklist” to measure the knowledge, skills, attitudes, and experiences necessary to becoming globally competent.

The following are some concepts that Hunter defines in each of the elements of global competence of employees:

- **Knowledge:** Understanding cultural norms and expectations, globalization terms and supranational entities, knowledge of world events and world history.
• **Skills:** Ability to speak English and at least one other language, be linguistically and culturally competent, have the ability to live outside one’s own country, collaborate across cultures, participate in projects with people from other cultures and traditions.

• **Attitudes:** Recognition of other cultures, a non-judgmental attitude, openness to new experiences, ability to cope with different cultures.

• **Experiences:** Foreign trips of a long or short duration, experience of culture shock, regular interaction with people of other cultures, study abroad.

**Methodology**

Having studied the theoretical framework that allowed us to analyze the elements of global competence that require employees to be internationally competitive and based on the objective of our research, we propose the following Hypothesis "most of the employees working in Hispanic businesses on the southern border of the United States have the necessary skills to be considered globally competent. The employees have a good level of global competence (knowledge, skills, attitudes, and experiences) represented by an agreement that the population mean for each Likert statement is ≥ 4 (Likert scale level = 4: Agree). An alternate hypothesis is that the population mean is less than 4. Hence the null and alternate hypotheses are as follows:

**Hypothesis:** $H_0: \mu \geq 4$ (agree), $H_1: \mu < 4$

To prove our hypothesis we conducted a survey using the Likert scale choices (1=Strongly disagree, 2= Disagree, 3= Neutral, 4= Agree, 5=Strongly agree). Our survey instrument was based on Hunter’s (2004) consensus definition of the term “global competence,” as devised by the Delphi panel and review of the relevant literature. We integrate 15 questions based on 22 question survey of William Hunter "Global Competency Checklist" which measures global competencies.

We decided to use Hunter’s instrument as a base. Several important reasons influenced the decision to work with the Hunter questionnaire. The first was because the questionnaire was integrated and validated based on the results of work sessions he had with several leaders in the field including experts on international education and human resources managers and directors of transnational corporations who understand the subject of global competence.

The second reason we used Hunter’s instrument is due to the fact that the questionnaire was sent to 133 international educators at higher educational institutions from universities that self-nominated for inclusion in the “Profiles of Success at College and Universities Internationalizing the Campus 2003,” and to 42 human resource directors representing
transnational corporations, in order to measure the global competencies of employees. We believe that these aspects validate the use of his survey to measure global competence.

The third reason is due to the fact that in our work, we want to measure the global competence of employees in Hispanic enterprises located on the U.S./Mexico Border, which makes them transnational corporations.

Our survey is divided into three sections. The first section is designed to extract general information about the characteristics of the Hispanic enterprises located in Tucson, Arizona; the second section measures the global competence of the employees; and the third section defines the management style in the employee’s organization in order to characterize the degree of employee participation found in the workplace. In this paper we analyze only the second section of the questionnaire to measure the knowledge, skills, attitudes, and experiences of the employees.

The instrument was pilot-tested to ensure that respondents understood the questions, the terms used in the survey, and the potential uses for the data collected. There were some changes. We decided to alter some of Hunter’s questions; to make them more comprehensible, and eliminate others and we also included two more questions to assess whether universities in the U.S. provide global education to their students.

**Procedures**

The data used in this paper was collected from the Tucson Hispanic Chamber of Commerce, it has 643 members including both Hispanic and non-Hispanic-owned businesses, reviewing the database we were able to determine an approximate of 67 small and medium Hispanic-owned businesses. In 1989, the Tucson Hispanic Chamber of Commerce (THCC) was incorporated in the State of Arizona. The purpose of the Chamber is to provide, promote, and advance, on a nonprofit basis, the general welfare and prosperity of the Tucson area. We selected small and medium Hispanic-owned businesses only because we believe that these companies, due to their proximity to the border with Mexico and the dynamic lifestyle in Tucson, Arizona may require even more employees who have global competence in order to successfully run their business and increase their competitiveness.

The questionnaire and cover letter were sent electronically to the 67 owners of the Hispanic enterprises. The e-mail invitation to complete the questionnaire assured the anonymity of the respondents, who were sent to a website accessible to the authors via hyperlink. Additional information was gathered in direct interviews with managers of the Hispanic Chamber
enterprises during several luncheons with the support of the Chair of the Business Education Committee of the Chamber.

In this research project we decided to apply the survey to managers or owners of Hispanic businesses located in Tucson based on the size of their businesses. Most of the selected companies are small to medium Hispanic businesses. Some of them only consist of a business owner, in some cases a Mexican-American entrepreneurs, The manager of these companies, due to the small number of employees, usually knows more about their employees therefore enabling them to estimate the knowledge, skills, attitudes and experiences that their employees may have in the international arena. We chose to survey managers rather than the employees themselves, because it was more difficult to draw a sample of all the employees of all 67 companies and very difficult to survey each one.

The number of total responses was 40. We sent 67 questionnaires by e-mail and had 13 returned (a 19% response rate). From personal interviews of members of the Tucson Hispanic Chamber of Commerce, 27 more were collected (67% response rate). The final sample size for our research was 40 respondents. We believe that this sample is representative especially if we rely on studies conducted by Iacobucci and Duhacheck (2003) for confidence and reliability measurement of instruments, where it is shown statistically that the minimum sample size for research in management science can be 30 surveys.

Results

In order to test the internal consistency of our instrument, we calculated Cronbach’s alpha coefficient for each competency indicator group and contrasted our values with the following values required by standard convention. An alpha value of 0.60 is acceptable for exploratory research; it should be at least 0.70 to be considered adequate; and a minimum criteria of 0.80 is required to be considered a good instrument.

According to Nunnaly and Bernstein (1994), an alpha reliability value of 0.70 could be considered satisfactory for exploratory research, but for other scenarios these researchers state that a value of 0.80 or even 0.90 should be required (pp. 264-265). The reliability of our instrument (Table 1) is good considering these minimum levels.

With an alpha value of 0.80 as the cutoff point for adequate consistency, we found adequate Cronbach alpha levels for four groups: knowledge (0.862), skills (0.870), attitudes (0.849) and
education (0.800). The remaining group, experience (0.673), did not reach an adequate level, but it could be considered acceptable for exploratory research.

Table 1. Instrument Reliability

<table>
<thead>
<tr>
<th>Cronbach’s Alpha</th>
<th>Confidence interval</th>
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<tbody>
<tr>
<td></td>
<td>Lower Bound</td>
</tr>
<tr>
<td>Knowledge</td>
<td>0.862</td>
</tr>
<tr>
<td>Skills</td>
<td>0.870</td>
</tr>
<tr>
<td>Attitudes</td>
<td>0.849</td>
</tr>
<tr>
<td>Experience</td>
<td>0.673</td>
</tr>
<tr>
<td>Education</td>
<td>0.800</td>
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</table>

After analyzing the reliability of our instrument, we analyzed the results of each of the elements of our hypothesis (table 2) based on the Likert type levels: 1= Strongly disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly agree, we thought that an adequate level for a globally competent employee should start at 4, and we tested our hypothesis for each indicator, we see the results for the Hypothesis: H₀: μ ≥ 4 (agree), H₁: μ ≤ 4. Our null hypothesis for each indicator was: H₀: μ =4 and our alternate hypothesis was that μ ≤ 4 at a 0.01 significance level.

The critical value for a 0.01 significance level, where the sample size equals 40 is t₀.01, n-1 = -2.43. The decision rule was: Accept H₀ if t > -2.43, reject otherwise. In table 2, most of the statements of our hypothesis related to intercultural global competencies were not supported. Only two of our 17 questions on global competency hypothesis were supported or accepted, which refers to the following: “Most employees have an understanding of cultural norms and expectations of his or her own culture” (Var 9), and “Most employees have the ability to work with people from other cultures and traditions” (Var 13).

Table 2. Hypothesis Testing for Global competencies in Hispanic Enterprises.

<table>
<thead>
<tr>
<th>Hypothesis: H₀: μ = 4 (agree), H¹: μ ≤ 4</th>
<th>t₀.01, n-1</th>
<th>-2.43</th>
</tr>
</thead>
<tbody>
<tr>
<td>Var</td>
<td>Description</td>
<td></td>
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<tr>
<td>KGlob06</td>
<td>Most employees have an understanding of the concept of “globalization”</td>
<td>3.15</td>
</tr>
</tbody>
</table>

141
Most employees have knowledge of current world events | 3.41 | 0.99 | -3.71 | not supported | 0.000

Most employees have an understanding of cultural norms and expectations of people from other cultures | 3.31 | 0.95 | -4.55 | not supported | 0.000

Most employees have an understanding of his or her own culture | 4.05 | 0.69 | 0.47 | accepted | 0.322

Most employees speak at least one other language in addition to English | 3.26 | 1.14 | -4.07 | not supported | 0.000

Most employees have successfully participated in project with people from other cultures and traditions | 3.46 | 1.07 | -3.14 | not supported | 0.002

Most employees have the ability to live outside his or her culture | 3.31 | 1.13 | -3.83 | not supported | 0.000

Most employees have the ability working with people from other cultures and traditions | 3.69 | 0.98 | -1.97 | accepted | 0.028

Most employees recognize that his or her own world view is not universal | 3.45 | 1.06 | -3.22 | not supported | 0.001

Most employees have a non-judgmental reaction to cultural differences of other cultures and traditions | 3.36 | 1.11 | -3.6 | not supported | 0.000

Most employees are willing to take risks in pursuit of cross-cultural learning and personal development | 3.41 | 0.99 | -3.71 | not supported | 0.000

Most employees interact regularly with at least one foreign business culture | 3.41 | 1.04 | -3.53 | not supported | 0.001

Most employees speak another language more than 25% of the time work | 3.13 | 1.24 | -4.39 | not supported | 0.000

Most employees have knowledge and experience gained from multiple short-term trips abroad to a variety of countries | 3.27 | 0.8 | -5.21 | not supported | 0.000

Most employees hold a Bachelor’s degree or its equivalent | 2.97 | 1.14 | -5.47 | not supported | 0.000

Do you think your employees have received formal education in “Global Competences” | 2.51 | 1.04 | -8.66 | not supported | 0.000

Do you think that in general, colleges and universities in the U.S. currently provide “Global Education” to their students | 2.97 | 0.93 | -6.74 | not supported | 0.000

Likert scale: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4= Agree, 5= Strongly Agree).

Discussion

It is interesting to analyze the results of each global competency:

With regard to knowledge: it is curious to see that the employees have knowledge of their own culture but not of other cultures, and that their knowledge of current world events is low. This is evidenced by the lack of understanding of the concept of globalization.
With regard to skills: even though employees have the ability to work with people from other cultures, the managers report that they have less successful participation in projects together, most of them do not speak a second language, and the managers indicate that they have problems living outside their own culture.

With regard to attitude: The respondents showed a good international attitude reflected in risk-taking in pursuit of cross-cultural learning development. They recognize their own world view is not universal, but some had a judgmental reaction to cultural differences between their own and other cultures and traditions.

With regard to international experiences: Though all respondents reported having taken multiple short-term trips, only a few engaged in cross-cultural business interactions, and not all of them spoke a foreign language at work.

With regard to international education: even though half of the respondents held a Bachelor’s degree, they needed additional international competencies to work effectively at the Hispanic enterprises where they were employed.

Finally our general results show that Hispanic business entrepreneurs, located on the U.S.-Mexico border, think their employees are missing a formal higher education in global competence to make them internationally competitive and they believe colleges and universities in the U.S. need to increase global education.

**Conclusion**

Our conclusion is that there is not enough evidence showing that employees of Hispanic-owned business have adequate levels of knowledge, skills, attitudes and experiences to be considered globally competent; even though some of them have international experiences and attitude, they need to increase their international competency in the area of knowledge, and especially international skills.

If the employees that we interviewed seem like the most likely individuals to be globally competent since they work for Hispanic enterprises in a predominantly Anglo country, on the border with Mexico, and since they almost necessarily have to speak Spanish and English, these results seem surprising in that the owners of these companies consider their employees to have such low levels of global competence.
Another lesson learned worth mentioning is that living on/near the border with a foot in two different worlds does not guarantee global competence. This adds important insight into the study of the nature of global competence and it strengthens the suggestion that universities need to add or increase the global component in their education in order to bolster students’ knowledge and international skills (the two areas most lacking in employees of Hispanic-owned business.

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