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Does Participation in International Master Dual Degree Programs Improve Students' Intercultural Competence?

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Authors' contributions

This work was carried out in collaboration between all authors. Authors GLZ and MGFJ designed the study, wrote the protocol and supervised the work, carried out the application of the instrument and performed the statistical analysis. Author GLZ wrote the first draft of the manuscript. Author PNP viewed and edited the manuscript. All authors read and approved the final manuscript.

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ABSTRACT

UPAEP University located in Puebla, Mexico and Oklahoma State University (OSU), in the United States have developed Master's and Ph.D. Dual Degree programs; providing students from both institutions the opportunity to study two master's degrees, in two years, in two different countries [1]. However, even with the opportunity to study in two countries, a couple of questions remain unanswered. One, are Master's Dual Degree students improving their global marketability and

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engagement, and second, are the students becoming interculturally competent as result of their participation in this experience? This study sought to directly answer the second question by assessing students' intercultural competence using the Intercultural Development Inventory (IDI), and indirectly answer the second question by analyzing the data collected. Results of the study place students' Perceived Orientation (PO) in the Acceptance stage of the continuum (117.91 on a scale of 145). The students believe they have an Intercultural mindset and are able to "recognize and appreciate patterns of cultural difference and commonalities in one's own and other cultures" [2. p. 4]. However, the study shows that on average, the students enrolled in the Master's Dual Degree program at UPAEP University-OSU have a Monocultural mindset. They are situated in the Polarization Stage of the Intercultural Development Continuum (82.04 on a scale of 145) measured by the Developmental Orientation (DO). This study concluded that students enrolled in the Master Dual Degree Program do not have an Intercultural mindset. They are not Inter culturally Competent. They are in a judgmental orientation that views cultural differences in term of "us" and "them" [2. p. 4]. They have no further development in their intercultural competence because of their participation in the program.

Keywords: Intercultural competence; master's dual degree Programs; internationalization; study abroad.

1. INTRODUCTION

Globalization entitles interaction among people from different cultures in diverse environments and scenarios, attracting more markets and encouraging companies to expand operations internationally [3]. Managers and employees need to adopt different management practices to deal with the global market's requirements, vendors, suppliers, and customers, to compete in a foreign environment [4,5].

Preparing professionals to effectively work with people from other cultures includes developing their Intercultural Competence (IC). Intercultural Competence (IC) has been defined as the ability to function effectively in another culture [6,7]. Intercultural Competence (IC) has been explained and discussed by numerous authors, Bennett's Developmental Model of Intercultural Sensitivity [8,9]. Intercultural Maturity Model [10], Intercultural Development Continuum [11-14], Intercultural Process Model [15], and Negotiating Reality [16,17]. These studies have developed different models using continuums, variables, and attributes related to Intercultural Competence (cultural awareness, adaptation, integration, empathy, disposition, and language); however, even when their explanations are different, they agree that intercultural competence is a lifelong commitment that includes the ability to see from others' perspectives.

Internationalization of academic programs, world-wide internships, dual graduate programs and

study abroad experiences are some examples of opportunities being offered by higher education institutions aiming to improve student's global marketability, intercultural competence and global engagement [4,18-21]. International dual graduate programs are an example of institutional efforts to improve students' marketability and international experience. UPAEP University located in Puebla, Mexico, and Oklahoma State University (OSU), located in the United States have developed Master's and Ph.D. Dual Degree programs, providing students from both institutions the opportunity to study two master degrees, in two years, in two different countries [1]. However, even though these programs give students the opportunity to study in two countries, a couple of questions remain unanswered. One, are Master's Dual Degree students' improving their global marketability and engagement? Second, are the students becoming interculturally competent as result of their participation in this experience?

This study sought to directly answer the second question by assessing Intercultural Competencies among Mexican students enrolled in an International Master's Dual Degree program at OSU during the spring 2014 semester using the Intercultural Development Inventory (IDI). This indirectly answers the second question by using the data collected with the IDI to design and deliver new and innovative strategies to enhance students' intercultural competence and improve their marketability and global engagement.

2. THEORETICAL FRAMEWORK

2.1 Master's Dual Degree Programs

UPAEP University, located in Puebla, Mexico, is a private institution founded in 1973. Currently this institution provides education for all levels, from elementary school through high school, bachelors through doctoral degrees, specialties, dual degrees, and executive programs. UPAEP University offers 40 Dual Degree graduate programs in partnership with Oklahoma State University [22-24]. Meanwhile, Oklahoma State University is a public Land Grant university situated in the township of Stillwater in the state of Oklahoma, United States. The institution, founded in 1890 and originally known as Oklahoma Agricultural and Mechanical College (Oklahoma A & M), is considered number 23 in a list of "Best Value Colleges" [25] according to FORBES and number 79 in the list of "Best Values in Public Education" by Kiplinger [26].

The Center for Interdisciplinary Postgraduate (CIP) at UPAEP University and Oklahoma State University (OSU) provide students from both institutions the opportunity to travel abroad, and interact with multicultural individuals in unfamiliar environments. These Master's Dual Degree programs allow students the opportunity to obtain the Master's degree of interest at OSU and a Master's degree at UPAEP in a related area.

For each degree, the student will have a "home" institution and a "host" institution at which the student studies abroad, taking courses in partial fulfillment of the "host" institution's degree requirements [24]. Students spend one year at the home institution, taking at least 21 American credit hours (30-56 Mexican credit hours) to spend the second year of the Master's program in the host university. In order to earn a degree, students must complete the degree requirements of each institution, including the writing of a thesis or the successful completion of a "capstone" course or a creative component [24].

2.2 Developmental Model of Intercultural Sensitivity (DMIS), Intercultural Development Continuum (IDC) and Intercultural Development Inventory (IDI)

The Developmental Model of Intercultural Sensitivity (DMIS) was developed by Bennett [8,9] to explain people's reactions and different ways of dealing with cultural differences. The

model identifies six stages that come from the evolution of experiences that people have once they become more interculturally competent. The first three stages (Denial, Defense, and Minimization) constitute what Bennett calls the ethnocentric level, referring to the way a person sees and perceives his own culture as central to reality. Opposite to ethnocentrism is the ethnorelativism where one's own culture is experienced in the context of other cultures and where the other three stages integrate at the heart of this level (Acceptance, Adaptation, and Integration). The sequence of experiences within the transition from ethnocentrism to ethno relativism became the stages of the DMIS. The DMIS was used as the theoretical framework to develop the Intercultural Development Inventory (IDI) [27]. Recent studies placed the results from the IDI along the Intercultural Development Continuum (IDC), an adapted theoretical framework that shows ranges from Monocultural to Intercultural mindsets. The IDC is a model of intercultural competence developed from the DMIS originally proposed by Bennett [8,9].

The IDI has been rigorously tested and has "cross-cultural generalizability, is both internationally and domestically diverse, and possesses strong content and constructs validity" [13] (p. 118). IDI is an instrument that can be answered online or using a paper-based form. The questionnaire can be answered in approximately 30 minutes and once it is completed, the instrument analyzes the individual responses and provides their orientation towards cultural differences.

3. METHODOLOGY

3.1 Instrumentation

This study used the on-line version of the Intercultural Development Inventory, version 3 (IDI, v3). IDI is a theory-based, statistically reliable, psychometric standardized, 50-item instrument, which measures intercultural competence [11,13,14,27]. The IDI provides information about how people react and respond to cultural differences and commonalities. IDI analytic structure generates an individual or group graphic profile of the responders' overall position on the Intercultural Developmental Continuum [11] (p. 247). The Intercultural Developmental Continuum identifies five core orientations, from Denial to Adaptation, and from Monocultural to Intercultural mindset; the IDI scale goes from 45-145.

The instrument measures group and/or individual Perceived Orientation (PO). Perceived Orientation, in this orientation where the individual or group places itself along the Intercultural Development Continuum. The Developmental Orientation (DO), which indicates the individual or group's primary orientation toward cultural differences and commonalities [2]. "IDI also identifies the Orientation Gap (OG), the -difference between the Perceived and the Developmental Orientation; Trailing Orientation (TO), orientations that are in "back" of the group Developmental Orientation [2], and the Leading Orientation (LO), orientations that are in "front" of the Developmental Orientation (DO)" [2] (p. 16).

Six contextual questions were added to the Intercultural Development Inventory (IDI), the contextual questions were:

1. Before I arrived in the United States, I received training and enough information to be successful living and interacting with people from other cultures.
2. I am aware that living in the United States is very important to developing my intercultural competence.
3. During the months I have lived in the United States, I have been able to clearly identify cultural differences.
4. During the months I have lived in the United States, I have been able to accept cultural differences.
5. Accepting cultural differences increases my leadership skills and my possibilities for finding a better job.
6. Am I sure that my culture is admired and respected by my peers?

3.2 Population

The target population consisted of 20 Mexican students enrolled in the Master's Dual Degree program at Oklahoma State University during the 2013 spring semester.

3.3 Research Design and Data Analysis

This study used a survey research design to assess students Intercultural Competence, using

the Intercultural Development Inventory (IDI). The sample procedure used was census sample. The data collected were analyzed using descriptive statistics.

4. RESULTS AND DISCUSSION

4.1 Demographic Information

Fourteen Master's Dual Degree students enrolled at Oklahoma State University during the 2013 spring semester answered the IDI (70% of the population). The study participants included 29% male and 71% female, all the students were between 22 and 30 years of age. Seventy two percent of the studied population has lived in another country from 7 months to 2 years. Eighty six percent of the students lived in North America (Mexico) during their formative years. Ninety three percent were not members of an ethnic minority group in their country of origin.

4.2 IDI Group Profile

The parameters that were discussed in the group profile were Perceived and Developmental Orientation. Group Perceived Orientation (PO) reflects where the group as a whole, placed itself along the Intercultural Development Continuum. Developmental Orientation (DO) indicated the groups' primary orientation toward cultural differences and commonalities along the continuum as assessed by the IDI. The DO reflects the perspective the group is most likely to use in those situations where cultural differences and commonalities need to be bridged" [2] (p. 15). Perceived Orientation (PO) and Developmental Orientations (DO) are indicated in Figs. 1 and 2.

The Orientation Gap between the group's Perceived and Developmental Orientation was 37.7 points. The Trailing Secondary Orientations are Denial and Disinterest in Cultural Differences. The Leading Orientations are Minimization through Acceptance.

4.3 Contextual Questions

The participants' answers to the contextual questions are presented in Table 1.

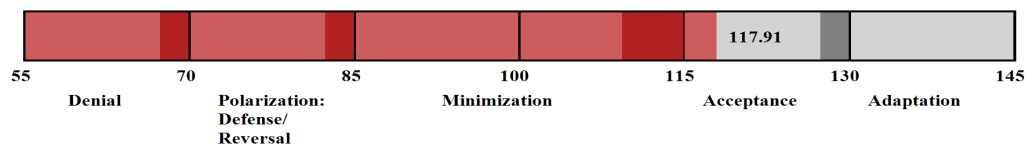


Fig. 1. Perceived Orientation (PO)

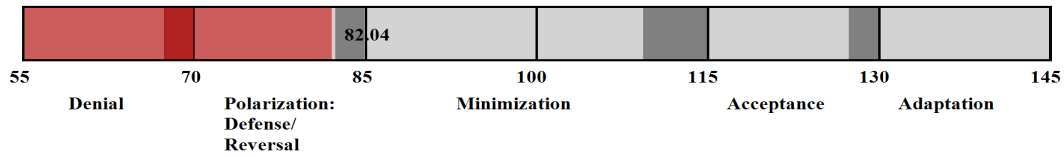


Fig. 2. Developmental Orientation (DO)

**Figures used with the authorization of Dr. Hammer*

Table 1. Contextual Questions*

Question	Complete Agree	Agree	Disagree	Complete Disagree
1. Before I arrived in the United States, I received training and enough information to be successful living and interacting with people from other cultures	0%	14%	50%	21%
2. I am aware that living in the United States is very important to developing my intercultural competence	64%	21%	0%	7%
3. During the months I have lived in the United States, I have been able to clearly identify cultural differences	57%	36%	0%	0%
4. During the months I have lived in the United States, I have been able to accept cultural differences	64%	29%	0%	0%
5. Accepting cultural differences increases my leadership skills and my possibilities for finding a better job	57%	36%	0%	0%
6. I am sure that my culture is admired and respected by my peers.	36%	43%	14%	0%

**The percentages presented in the table reflect the number of students who answered the questions (85% question number 1 and 93% from questions 2-6)*

4.4 Discussion

The present study assessed intercultural competence among the Mexican students enrolled in the Master’s Dual Degree program between UPAEP University and OSU one year after starting the program, using the Intercultural Development Inventory (IDI) [2,11-14]. Intercultural competence is defined as the ability to effectively work with people from different cultures [28], and “the capability to accurately understand and adapt behavior to cultural differences and commonalities” [2] (p. 3).

Results of the study place students’ Perceived Orientation (PO) in the Acceptance stage of the continuum (117.91 on a scale of 145), and possess an Intercultural mindset. The students believe they “recognize and appreciate patterns of cultural difference and commonalities in one’s own and other cultures” [2] (p. 4). However, results of the study also show that on average the students had, at the time of the study, a Monocultural mindset. Students were situated in

the Polarization Stage of the Intercultural Development Continuum (82.04 on a scale of 145), measured by the Developmental Orientation (DO). Monocultural mindset students are able to identify some cultural differences and commonalities; but through their own lenses of cultural values, use stereotypes to identify cultural differences (IDI Profile). Polarization is a judgmental orientation; people in this stage see the world as “us” and “them” (there are not a lot of commonalities between them and the “other” culture. This stage can take two forms, defense and reversal. Defense is when students are not able to critique their own culture but over critique other people’s values and practices; or reversal is when the students over critique people from their own culture [2].

The orientation gap [the difference between the students’ Perceived Orientation (PO) and the students’ Developmental Orientation (DO)] was 34.97 points. This number indicates a large and meaningful difference between what the students believe is their intercultural competence and their

real intercultural competence. The larger the gap, the more likely the students are “surprised” about their IDI Profile results; thus, the students enrolled in the Master’s Dual Degree program overestimated their intercultural competence [2].

Students’ denial of cultural differences was not resolved (trailing orientation). This unresolved situation should be addressed before the students start their year in a different country (in their home institution). Resolving students’ trailing orientation will help students move to the next stage on the continuum. Master’s Dual Degree students need to recognize cultural differences beyond the more observable differences such as food, skin, color, nationality, gender, etc.). Students’ leading orientation is minimization, meaning the students should stop judging their home and host culture and start discussing cultural commonalities [2].

The contextual questions indicated the lack of training and information before the students travel to the United States. The students were aware of the need to become interculturally competent, thus, identifying and accepting cultural differences. However, the results of the IDI evaluation indicated the students were not accepting but judgmental of cultural differences (Polarization).

5. CONCLUSION AND RECOMMENDATIONS

5.1 Conclusions

Based on the results we can conclude the following:

- **Conclusions 1**

Assessing intercultural competence using the Intercultural Development Inventory in Masters’ students is necessary to improve their intercultural competence. Institutions should support students’ comprehensive internationalization towards preparation of global-ready individuals. The assessment arises from the need to know the student’s original stage of intercultural competence when the students enroll in the program (normally one year before their international experience); thus designing a comprehensive approach to improving students’ intercultural competence, before and during the international experience. This assessment will guide students’ Intercultural Development Plan, where the goal should be to enhance their

academic experience, global marketability, and develop their personal intercultural competence. The students should also be training and receiving more information before their experience in the United States.

- **Conclusions 2**

Students Developmental Orientation (Polarization) shows that those students enrolled in the Master’s Dual Degree program possess a “cultural” chip on their shoulder, often engaging in conversations with host nationals that are comparative in nature [13] (p. 121). The students act as “cultural judges” and frame their interactions as “favorable or unfavorable”. The considerable gap shown between the Perceived Orientation and the Developmental Orientation is an opportunity for the students to improve their intercultural competence; thus needing to be analyzed and compared in future research. This information needs to be discussed with the students individually to create an Intercultural Development Plan (IDP) [2].

- **Conclusions 3**

Education abroad represents a great value for graduate students by providing several learning outcomes [29,30] that enhance students’ global marketability, global engagement and competitiveness, and intercultural competence [4,13,14,18-21]. However, students enrolled in the Master’s Dual Degree program did not develop their intercultural competence by evidencing a Monocultural mindset in the results. There might be cultural, social, and individual aspects that influence their international experience and affect their participation in the program. It is necessary for future studies to identify those issues and segment them according to individuals’ type or gender, letting students know about their results and their development through the program.

5.2 Recommendations

Although, there is no doubt about the importance of the Master’s Dual Degree program and the internationalization of the students for their academic and professional development (i.e. improve their global marketability and intercultural competence); the students enrolled in the Master’s Dual Degree program had a Monocultural mindset and were only in the second stage of the Intercultural Development Continuum (Polarization). The results suggested

regardless of the number of international experiences the students have, there is a need for comprehensive pre-departure and on-site training to improve their intercultural competence. It is also recommended that the students live and make an effort to interact with American students, mainly because students showed a lack of engagement and understanding of the new culture. The perception of seeing the adopted culture as superior or inferior limited students' desire to become interculturally competent; even though the internationalization derived from studying abroad improves the global marketability of the students but not their intercultural competence [12].

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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