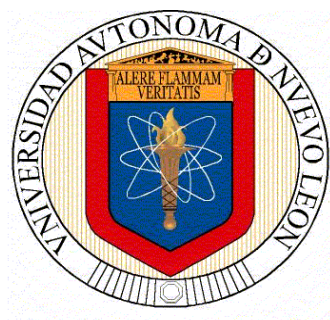


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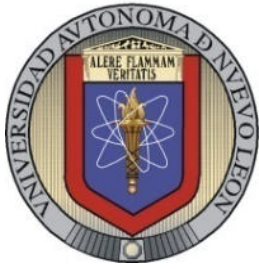
**TESIS**

**IMPACT OF INTERNATIONAL ACADEMIC MOBILITY IN INTERCULTURAL  
COMPETENCE ACQUIREMENT FOR GLOBAL EMPLOYMENT MARKET  
READINESS OF STUDENTS ENROLLED IN ENGINEERING PROGRAMS  
OF THE UNIVERSIDAD AUTÓNOMA DE NUEVO LEÓN**

**PRESENTADA POR  
ISSAC TOBIAS GUZMÁN MÁTAR**

**COMO REQUISITO PARCIAL PARA OBTENER EL GRADO DE  
DOCTOR EN FILOSOFÍA CON ORIENTACIÓN EN  
RELACIONES INTERNACIONALES, NEGOCIOS Y DIPLOMACIA**

**FEBRERO 2025**



UNIVERSIDAD AUTÓNOMA DE NUEVO LEÓN  
FACULTAD DE CIENCIAS POLÍTICAS Y  
RELACIONES INTERNACIONALES



THESIS

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NUEVO LEÓN”

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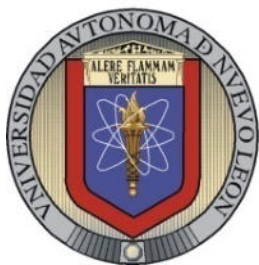
ISSAC TOBIAS GUZMÁN MÁTAR

TO OBTAIN THE DEGREE OF

DOCTOR IN PHILOSOPHY WITH AN ORIENTATION ON  
INTERNATIONAL RELATIONS, BUSINESS AND DIPLOMACY

THESIS DIRECTED BY  
DR. DAVID HORACIO GARCÍA WALDMAN

Monterrey, Nuevo León, México 11th of February 2025



UNIVERSIDAD AUTÓNOMA DE NUEVO LEÓN  
FACULTAD DE CIENCIAS POLÍTICAS Y RELACIONES INTERNACIONALES



DOCTORADO EN FILOSOFÍA CON ORIENTACIÓN EN RELACIONES INTERNACIONALES, DE  
NEGOCIOS Y DIPLOMACIA

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“IMPACT INTERNATIONAL ACADEMIC MOBILITY IN INTERCULTURAL COMPETENCE  
ACQUIREMENT FOR GLOBAL EMPLOYMENT MARKET READINESS OF STUDENTS ENROLLED IN  
ENGINEERING PROGRAMS OF THE UNIVERSIDAD AUTÓNOMA DE NUEVO LEÓN”

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## STATEMENT OF AUTHENTICITY

I declare under oath that this research was conducted under my own effort and knowledge. It has not been previously presented for any academic degree and does not belong to any other author, except for those whose ideas were used to conduct this research, which are correctly cited in the research and the references section.

Name: Issac T. Guzmán Mátar

Signature: \_\_\_\_\_

Date: 11/2/25

## DEDICATION

To my beloved daughter Sarah, your radiant presence fills my days with joy, and your unwavering support empowers me to strive for ever-greater achievements. You have patiently endured and embraced all the long hours and stress that comes with my work. Your warm hugs, kisses and bright smile greet me every time, instantly lifting my spirits and soothing my worries. You are a true source of strength in my life, and I will always be there for you.

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## Table of Contents

|  |           |
|--|-----------|
| <b>SECTION 1: METHODOLOGY</b>  | <b>1</b>  |
| <b>CHAPTER 1 METHODOLOGY</b>   | <b>1</b>  |
| 1.1 Introduction   | 1         |
| 1.2 Background   | 3         |
| 1.3 Statement of the Problem   | 8         |
| 1.3.1 Research Questions   | 12        |
| 1.4 Justification  | 13        |
| 1.5 General Objective  | 14        |
| 1.5.1 Specific Objectives  | 14        |
| 1.6 Hypothesis   | 15        |
| 1.7 Conceptual Framework   | 17        |
| 1.8 Research Model   | 21        |
| 1.9 Research Design  | 22        |
| 1.9.1 Mixed Method Modality  | 22        |
| 1.9.2 Dimension Strategy   | 25        |
| 1.9.3 Research Phase Development   | 26        |
| 1.9.4 Empirical Phase  | 28        |
| 1.10 Congruence Matrix   | 30        |
| <b>SECTION 2: THEORETICAL FRAMEWORK</b>  | <b>31</b> |
| <b>CHAPTER 2: INTERNATIONALIZATION</b>   | <b>31</b> |
| 2.1 Introduction   | 31        |
| 2.2 Importance of Internationalization of Higher Education Institutions                        | 33        |
| 2.3 Culture, Multiculturalism, and Interculturality  | 41        |
| 2.3.1 Culture  | 41        |
| 2.3.2 Multiculturalism   | 43        |
| 2.3.3 Interculturality   | 45        |
| 2.3.4 Cross-Cultural Competence, Intercultural Competences, and Cultural Intelligence          | 46        |
| 2.4 Development of Intercultural Competences & Contemporary Models of Intercultural Competence | 49        |
| 2.4.1 Compositional Models   | 50        |
| 2.4.1.1 Intercultural Competence Components Model  | 50        |
| 2.4.1.2 Facework-Based Model of Intercultural Competence                                       | 54        |
| 2.4.2.3 Pyramid Model of Intercultural Competence  | 57        |



|  |            |
|--|------------|
| 2.4.2.4 Developmental Model of Intercultural Sensitivity                               | 60         |
| 2.4.2 Role of Higher Education Institutions.   | 61         |
| 2.4.3 Academic Mobility  | 66         |
| 2.4.4 International General Collaboration Agreements                                   | 76         |
| 2.4.5 Cultural Shock and International Academic Mobility                               | 78         |
| 2.5 Intercultural Assessment   | 82         |
| <b>CHAPTER 3: INTERCULTURAL COMPETENCIES COMPONENTS MODEL</b>                          | <b>87</b>  |
| 3.1 Introduction   | 87         |
| 3.2 Attitude   | 88         |
| 3.2.1 Value Cultural Diversity (CD)  | 88         |
| 3.2.2 Respect of Cultures  | 90         |
| 3.2.3 Openness   | 91         |
| 3.2.4 Tolerance  | 93         |
| 3.2.5 Curiousness to Learn of Other Cultures.  | 95         |
| 3.2.6 Cultural Humility  | 97         |
| 3.3 Knowledge and Understanding  | 99         |
| 3.3.1 Internal Diversity and Heterogeneity of Cultural Groups                          | 100        |
| 3.3.2 Awareness of one's and others' Assumptions                                       | 101        |
| 3.3.3 Knowledge of Beliefs, Values and Practices                                       | 104        |
| 3.3.4 Communicative Awareness  | 106        |
| 3.4 Skills   | 108        |
| 3.4.1 Multiperspectivity   | 108        |
| 3.4.2 Empathy  | 111        |
| 3.4.3 Cognitive Flexibility  | 112        |
| 3.4.4 Behavioral Adaptation  | 114        |
| 3.4.5 Linguistic Skills  | 114        |
| <b>CHAPTER 4: GLOBAL EMPLOYABILITY</b>   | <b>116</b> |
| 4.1 Introduction   | 116        |
| 4.2 Employability and the Importance of Soft Skills for the Labor Market               | 118        |
| 4.2.1 The role of Higher Education Institutions in the Development of Soft-Skills      | 124        |
| 4.3 Demand for Intercultural Competence in the Global Labor Market                     | 128        |
| 4.4 Importance of Intercultural competence for Engineers in Multinational Corporations | 132        |
| <b>SECTION 3: QUALITATIVE AND QUANTITATIVE VALIDATION</b>                              | <b>136</b> |

|   |                |
|---|----------------|
| <b>CHAPTER 5: QUALITATIVE VALIDATION OF THE LITERATURE REVIEW ON THE IMPACT OF INTERNATIONAL ACADEMIC MOBILITY IN THE INTERCULTURAL COMPETENCE ACQUIREMENT FOR GLOBAL EMPLOYMENT MARKET READINESS</b> | <b>136</b>     |
| 5.1 Introduction  | 136            |
| 5.2 Methodology   | 139            |
| 5.3 Theoretical Approximation   | 146            |
| 5.3.1 Literature Review   | 149            |
| 5.3.2 Instrument Design   | 161            |
| 5.3.2.1 Instrument Validation   | 162            |
| 5.4 Data Recollection   | 164            |
| 5.4.1 Sample  | 164            |
| 5.4.2 Profile of Participants   | 166            |
| 5.4.2.1 Academic Participants   | 167            |
| 5.4.2.2 Employer Participants   | 168            |
| 5.4.3 Data Analysis of Interviews with Academic Experts   | 171            |
| 5.4.4 Data Analysis of Interviews with Employers  | 181            |
| 5.5 Research Questions  | 191            |
| 5.6 Hypothesis  | 194            |
| <br><b>CHAPTER 6: QUANTITATIVE VALIDATION OF INTERCULTURAL COMPETENCIES ACQUIRED IN ACADEMIC MOBILITY AT A FOREIGN UNIVERSITY</b>   | <br><b>197</b> |
| 6.1 Introduction  | 197            |
| 6.2 Variable Pertinence   | 198            |
| 6.3 Methodology   | 199            |
| 6.4 Population, Sample, and Participants  | 201            |
| 6.5 Pilot Instrument Design   | 206            |
| 6.5.1 Mobility – Non-Mobility Students & Graduate Instruments Validation by Experts   | 208            |
| 6.5.2 Pilot Instrument Application to Mobility  | 211            |
| 6.5.2.1 Factor Analysis and Reliability test  | 212            |
| 6.6 Final Instruments Application   | 224            |
| 6.6.1 Final Instrument Application for Mobility and Non-Mobility Students   | 224            |
| 6.7 Data Quality and Description  | 232            |
| 6.7.1 Mobility and Non-Mobility Student Data Quality and Description  | 232            |
| 6.7.1.1 Data Quality of the Final Instrument  | 232            |
| 6.7.1.2 Data Description of Descriptive Statistics  | 236            |
| 6.8 Hypothesis Test   | 255            |

|   |          |
|---|----------|
| <b>CHAPTER 7: RESULT ANALYSIS AND DISCUSSION</b>  | 259      |
| 7.1 Qualitative Results   | 259      |
| 7.1.1 Academic Expert's opinions on Dependent and Independent Construct   | 259      |
| 7.1.2 Employers' opinions on Dependent and Independent Variables  | 261      |
| 7.2 Quantitative Results  | 264      |
| 7.3 Qualitative, Quantitative, and Literature Review Triangulation  | 265      |
| 7.4 Hypothesis Confirmation   | 273      |
| <b>CHAPTER 8: CONCLUSIONS AND PROPOSALS</b>   | 275      |
| <b>REFERENCES</b>   | 279      |
| <b>APPENDIX</b>   | cccxxx   |
| APPENDIX I: Agreements Registered at the International Relations Department<br>of The Universidad Autónoma de Nuevo León with other<br>Institutions and Organisms | cccxxx   |
| APPENDIX II: Qualitative Interview Instrument (Academics)   | cccxxxix |
| APPENDIX III: Qualitative Interview Instrument (Employers)  | cccxlili |
| APPENDIX IV: Quantitative Instrument (Survey Applied to Students with and<br>without an International Mobility)   | cccxlvi  |
| APPENDIX V: FIME ANFEI Recognition  | ccclvii  |
| APPENDIX VI: Engineering Students who participated in Academic Mobility in a<br>Foreign University  | ccclviii |

## List of Tables

|  |     |
|--|-----|
| TABLE 1.3.1: GRADUATE AND UNDERGRADUATES ENGINEERING PROGRAMS OF UNIVERSIDAD AUTÓNOMA DE NUEVO LEÓN _____                    | 10  |
| TABLE 1.7.1: HISTORICAL STAGES OF GLOBALIZATION _____  | 18  |
| TABLE 1.9.1: MIXED METHOD MODALITY _____   | 24  |
| TABLE 1.9.2: MIXED-METHOD DIMENSION STRATEGY _____   | 26  |
| TABLE 1.9.4.1: EMPIRICAL APPLICATION OBJECTIVES AND INSTRUMENTS _____  | 29  |
| TABLE 2.2.1: LIST OF RANKING AGENCIES AND THEIR WEIGHTAGE FOR INTERNATIONALIZATION OF HIGHER EDUCATION _____                 | 36  |
| TABLE 2.2.2: INTERNATIONALIZATION AS A PERFORMANCE INDICATOR _____   | 37  |
| TABLE 2.2.3: PERFORMANCE INDICATORS FOR COMPILING QS WORLD UNIVERSITY RANKINGS _____   | 38  |
| TABLE 2.2.4: QS TOP ENGINEERING & TECHNOLOGY RANKING _____   | 38  |
| TABLE 2.4.1.1.1: LIST INTERCULTURAL COMPONENTS _____   | 52  |
| TABLE 2.4.2.1: INTERNATIONAL PERSPECTIVE INDICATORS THAT THE UNIVERSITY OF SOUTH AUSTRALIA EXPECTS FROM ITS GRADUATES. _____ | 66  |
| TABLE 2.4.3.1: DESTINATION OF MEXICAN STUDENTS STUDYING ABROAD. _____  | 73  |
| TABLE 2.4.3.2: INTERNATIONAL STUDENTS FROM THE UNIVERSIDAD AUTÓNOMA DE NUEVO LEÓN _____                                      | 74  |
| TABLE 2.4.3.3: TOP FIVE UNIVERSITIES IN THE WORLD IN GENERAL ENGINEERING 2023 _____  | 75  |
| TABLE 2.4.3.4: TOP FIVE UNIVERSITIES IN LATIN AMERICA IN GENERAL ENGINEERING 2023 _____                                      | 76  |
| TABLE 4.2.1: GRADUATES VS. EMPLOYERS SOFT-SKILL RANK ORDER _____   | 120 |
| TABLE 5.2.1: CROSS-CULTURAL/MULTICULTURAL COMPETENCES _____  | 143 |
| TABLE 5.2.2: GLOBAL EMPLOYABILITY _____  | 145 |
| TABLE 5.3.1.1: FACTOR LITERATURE REVIEW _____  | 150 |
| TABLE 5.3.1.2: FACTOR SELECTION AND DEFINITION _____   | 159 |
| TABLE 5.3.1.3: FACTORS AND DIMENSIONS _____  | 160 |
| TABLE 5.3.2.1: INTERVIEW STRUCTURE FOR ACADEMICS AND EMPLOYERS _____   | 162 |
| TABLE 5.4.3.1: ACADEMIC EXPERTS THAT PARTICIPATED IN A FACE TO FACE/ASYNCHRONOUS INTERVIEW ____                              | 172 |
| TABLE 5.4.4.1: EMPLOYER THAT PARTICIPATED IN A FACE TO FACE/ASYNCHRONOUS INTERVIEW _____                                     | 181 |

|  |     |
|--|-----|
| TABLE 6.4.1: STUDENTS PARTICIPATING IN INTERNATIONAL ACADEMIC MOBILITY FROM EACH SCHOOL THAT HOSTS AND ENGINEERING PROGRAM (2019 – 2024) | 202 |
| TABLE 6.4.2: ENGINEERING PROGRAMS PARTICIPATION IN ACADEMIC MOBILITY (2019 – 2024)   | 203 |
| TABLE 6.4.3: DESTINATION OF ENGINEERING STUDENTS (2019 – 2024)   | 204 |
| TABLE 6.5.1: EMPIRICALLY DERIVED PREDICTORS OF AN INTERCULTURALLY COMPETENT MANAGER  | 207 |
| TABLE 6.5.2.1.1: INSTRUMENT’S CRONBACH ALPHA RESULTS OF STUDENTS   | 213 |
| TABLE 6.5.2.1.2: INSTRUMENT’S KMO AND BARTLETT TEST OF STUDENTS  | 214 |
| TABLE 6.5.2.1.1.1: ATTITUDE CONSTRUCT DIMENSIONS CODE DESCRIPTION  | 214 |
| TABLE 6.5.2.1.1.2: ATTITUDE CONSTRUCT – COMMUNALITIES TABLE – STUDENTS WITH ACADEMIC MOBILITY  | 215 |
| TABLE 6.5.2.1.1.3: ATTITUDE CONSTRUCT – TOTAL VARIANCE EXPLAINED – STUDENTS WITH ACADEMIC MOBILITY                                       | 216 |
| TABLE 6.5.2.1.1.4: ATTITUDE CONSTRUCT – ROTATED COMPONENT MATRIX – STUDENTS WITH ACADEMIC MOBILITY                                       | 217 |
| TABLE 6.5.2.1.2.1: KNOWLEDGE AND UNDERSTANDING CONSTRUCT DIMENSIONS CODE DESCRIPTION   | 217 |
| TABLE 6.5.2.1.2.2: KNOWLEDGE AND UNDERSTANDING CONSTRUCT DIMENSIONS – COMMUNALITIES TABLE – STUDENTS WITH ACADEMIC MOBILITY              | 218 |
| TABLE 6.5.2.1.2.3: KNOWLEDGE AND UNDERSTANDING CONSTRUCT – TOTAL VARIANCE EXPLAINED – STUDENTS WITH ACADEMIC MOBILITY                    | 219 |
| TABLE 6.5.2.1.2.4: KNOWLEDGE AND UNDERSTANDING CONSTRUCT – ROTATED COMPONENT MATRIX – STUDENTS WITH ACADEMIC MOBILITY                    | 220 |
| TABLE 6.5.2.1.3.1: SKILLS CONSTRUCT DIMENSIONS CODE DESCRIPTION  | 221 |
| TABLE 6.5.2.1.3.2: SKILLS CONSTRUCT – COMMUNALITIES TABLE – STUDENTS WITH ACADEMIC MOBILITY  | 222 |
| TABLE 6.5.2.1.3.3: SKILLS CONSTRUCT – TOTAL VARIANCE EXPLAINED – STUDENTS WITH ACADEMIC MOBILITY   | 223 |
| TABLE 6.5.2.1.3.4: SKILLS CONSTRUCT – ROTATED COMPONENT MATRIX – STUDENTS WITH ACADEMIC MOBILITY   | 224 |
| TABLE 6.6.1.3: STUDENTS SAMPLE PARTICIPATION FROM EACH SCHOOL (2019 – 2024)  | 226 |
| TABLE 6.6.1.4: GENDER AND AGES OF PARTICIPATING STUDENTS SAMPLE  | 227 |

|   |     |
|---|-----|
| TABLE 6.6.1.5: STATE OF ORIGIN OF PARTICIPATING STUDENTS SAMPLE _____   | 227 |
| TABLE 6.6.1.6: LANGUAGES SPOKEN OF PARTICIPATING STUDENTS SAMPLE _____  | 228 |
| TABLE 6.6.1.7: PARTICIPATING STUDENTS SAMPLE THAT SPEAK TWO OR MORE LANGUAGES (EXCLUDING<br>NATIVE TONGUE) _____  | 229 |
| TABLE 6.6.1.8: EDUCATION OF PARTICIPATING STUDENTS SAMPLE PRIOR TO ENTERING UNDERGRADUATE<br>PROGRAM _____  | 230 |
| TABLE 6.6.1.9: MONTHLY HOUSEHOLD INCOME OF PARTICIPATING STUDENTS SAMPLE _____  | 231 |
| TABLE 6.6.1.10: FUNDING OF PARTICIPATING STUDENTS SAMPLE WITH ACADEMIC MOBILITY _____   | 232 |
| TABLE 6.7.1.2: STATISTIC DESCRIPTION OF THE VALUING CULTURAL DIVERSITY DIMENSION FROM THE<br>ATTITUDE CONSTRUCT _____   | 237 |
| TABLE 6.7.1.3: STATISTIC DESCRIPTION OF THE RESPECTING OTHER CULTURES DIMENSION FROM THE<br>ATTITUDE CONSTRUCT _____  | 238 |
| TABLE 6.7.1.4: STATISTIC DESCRIPTION OF THE OPENNESS DIMENSION FROM THE ATTITUDE CONSTRUCT ____   | 239 |
| TABLE 6.7.1.5: STATISTIC DESCRIPTION OF THE TOLERANCE DIMENSION FROM THE ATTITUDE CONSTRUCT _   | 240 |
| TABLE 6.7.1.6: STATISTIC DESCRIPTION OF THE CURIOUSNESS TO LEARN OF OTHER CULTURES DIMENSION<br>FROM THE ATTITUDE CONSTRUCT _____                                   | 241 |
| TABLE 6.7.1.7: STATISTIC DESCRIPTION OF THE CULTURAL HUMILITY DIMENSION FROM THE ATTITUDE<br>CONSTRUCT _____  | 242 |
| TABLE 6.7.1.8: STATISTIC DESCRIPTION OF THE INTERNAL DIVERSITY AND HETEROGENEITY OF CULTURAL<br>GROUPS DIMENSION OF THE KNOWLEDGE AND UNDERSTANDING CONSTRUCT _____ | 244 |
| TABLE 6.7.1.9: STATISTIC DESCRIPTION OF THE AWARENESS OF ONE'S AND OTHER'S ASSUMPTIONS<br>DIMENSION OF THE KNOWLEDGE AND UNDERSTANDING CONSTRUCT _____              | 245 |
| TABLE 6.7.1.10: STATISTIC DESCRIPTION OF THE KNOWLEDGE OF BELIEFS, VALUES AND PRACTICES<br>DIMENSION OF THE KNOWLEDGE AND UNDERSTANDING CONSTRUCT _____             | 246 |
| TABLE 6.7.1.11: STATISTIC DESCRIPTION OF THE COMMUNICATIVE AWARENESS DIMENSION OF THE<br>KNOWLEDGE AND UNDERSTANDING CONSTRUCT _____                                | 246 |
| TABLE 6.7.1.12: STATISTIC DESCRIPTION OF THE MULTIPERSPECTIVITY DIMENSION OF THE SKILLS<br>CONSTRUCT _____  | 248 |
| TABLE 6.7.1.13: STATISTIC DESCRIPTION OF THE EMPATHY DIMENSION OF THE SKILLS CONSTRUCT _____  | 249 |

|  |     |
|--|-----|
| TABLE 6.7.1.14: STATISTIC DESCRIPTION OF THE COGNITIVE FLEXIBILITY DIMENSION OF THE SKILLS       |     |
| CONSTRUCT _____  | 250 |
| TABLE 6.7.1.15: STATISTIC DESCRIPTION OF THE BEHAVIOR ADAPTATION DIMENSION OF THE SKILLS         |     |
| CONSTRUCT _____  | 251 |
| TABLE 6.7.1.16: STATISTIC DESCRIPTION OF THE LINGUISTIC SKILLS DIMENSION OF THE SKILLS CONSTRUCT | 252 |
| TABLE 6.7.1.17: GENERAL STATISTICS DESCRIPTION SUMMARY _____                                     | 253 |
| TABLE 6.7.2.1: ATTITUDE, KNOWLEDGE AND UNDERSTANDING GROUP DESCRIPTION AND HYPOTHESIS T-         |     |
| TEST _____   | 256 |
| TABLE 6.7.2.2: ATTITUDE, KNOWLEDGE AND UNDERSTANDING INDEPENDENT SAMPLE DESCRIPTION AND          |     |
| HYPOTHESIS T-TEST _____  | 257 |

## List of Figures

|  |     |
|--|-----|
| FIGURE 1.6.1: GRAPHIC REPRESENTATION OF THE HYPOTHESIS                     | 15  |
| FIGURE 1.6.2: GRAPHIC REPRESENTATION OF THE OPERATIVE HYPOTHESIS           | 16  |
| FIGURE 1.7.1: YOUTH UNEMPLOYMENT RATE OF 15-24 YEARS OLD                   | 19  |
| FIGURE 1.7.2: UNEMPLOYMENT RATE OF 25-64 YEARS OLD WITH TERTIARY EDUCATION | 20  |
| FIGURE 1.8.1: PHASES OF INVESTIGATION                                      | 21  |
| FIGURE 1.9.3.1: RESEARCH PHASE DIAGRAM                                     | 27  |
| FIGURE 2.4.1.1.1: INTERCULTURAL COMPETENCE COMPONENTS MODEL                | 51  |
| FIGURE 2.4.1.2.1: FACEWORK-BASED MODEL OF INTERCULTURAL COMPETENCE         | 55  |
| FIGURE 2.4.2.3.1: PYRAMID MODEL OF INTERCULTURAL COMPETENCE                | 58  |
| FIGURE 2.4.2.3.2: PROCESS MODEL OF INTERCULTURAL COMPETENCE                | 59  |
| FIGURE 2.4.2.4.1: DEVELOPMENT MODEL OF INTERCULTURAL SENSITIVITY           | 61  |
| FIGURE 2.5.1: QUADRANT ASSESSMENT FORMATS                                  | 83  |
| FIGURE 3.3.1.1: FOUR LAYERS OF DIVERSITY                                   | 101 |
| FIGURE 3.3.4.1: MINDFUL NON-VERBAL COMMUNICATION: FUNCTIONS AND PATTERNS.  | 107 |
| FIGURE 4.2.1: COMMON COMPETENCY EXPECTATIONS FOR 2024                      | 123 |
| FIGURE 5.2.1: QUALITATIVE METHODOLOGY PROCESS                              | 141 |
| FIGURE 5.4.1.1: INFORMATION POWER IN QUALITATIVE INTERVIEW STUDIES MODEL   | 165 |
| FIGURE 6.3.1: QUANTITATIVE METHODOLOGY PROCESS                             | 199 |
| FIGURE 6.3.1: COCHRAN'S SAMPLE SIZE FORMULA                                | 206 |
| FIGURE 6.7.1.1.1: BOXPLOT OF THE ATTITUDE CONSTRUCT                        | 233 |
| FIGURE 6.7.1.1.2: BOXPLOT OF THE KNOWLEDGE AND UNDERSTANDING CONSTRUCT     | 234 |
| FIGURE 6.7.1.1.3: BOXPLOT OF THE SKILLS CONSTRUCT                          | 235 |



## List of Acronyms

|       |   |
|-------|---|
| BASIC | Behavioral Assessment Scale for Intercultural Communication Effectiveness |
| BVP   | Beliefs, Values, and Practices  |
| CC    | Cross-Culturalism or Cross-Cultural                                       |
| CCAI  | Cross-Cultural Adaptation Inventory                                       |
| CCC   | Cross-Culturalism Competence  |
| CCSS  | Cross-Cultural Sensitivity Scale  |
| CCU   | Cultural Curiosity  |
| CD    | Cultural Diversity  |
| CGI   | Global Competencies Inventory   |
| CH    | Cultural Humility   |
| CK    | Cultural Knowledge  |
| CQ    | Cultural Intelligence   |
| CQS   | Culture Intelligence Scale  |
| DMIS  | Developmental Model of Intercultural Sensitivity                          |
| FIME  | Facultad de Ingeniería Mecánica y Eléctrica                               |
| HEI   | Higher Education Institutions   |
| IAM   | International Academic Mobility   |
| IC    | Interculturalism  |
| ICAPS | Intercultural Adjustment Potential Scale                                  |
| ICOCS | Intercultural Communication Competence scale                              |
| ICC   | Intercultural Competence  |
| ICSI  | Intercultural Sensitivity Inventory                                       |
| IDI   | Intercultural Development Inventory                                       |
| IM    | International Management  |
| ISS   | Intercultural Sensitivity Scale   |
| MC    | Multiculturalism  |
| MCC   | Multicultural Competence  |
| MNC   | Multinational Company   |
| MNE   | Multinational Enterprises   |

|          |   |
|----------|---|
| MPQ      | Multicultural Personality Questionnaire                               |
| PCV      | Peace Corps Volunteer   |
| SCAS     | Sociocultural Adaptation Scale  |
| SEE      | Scale of Ethnocultural Empathy  |
| SEM      | Structural Equation Modeling  |
| TMIC     | Test to Measure Intercultural Competence                              |
| TMIC-SA  | Test to Measure Intercultural Competence – Self-Appraisal             |
| TMIC-SJT | Test to Measure Intercultural Competence – Situational Judgement Test |
| UANL     | Universidad Autónoma de Nuevo León                                    |

## **Abstract**

The interconnectedness and interdependence among nations worldwide, propelled by economic forces, technological progress, market integration, population mobility, and other globalization-driven phenomena, underscores the imperative to comprehend and appreciate diverse cultures.

International academic mobility is a vital element in cultivating collaborative relationships among higher education institutions globally. It entails the relocation of individuals participating in the educational process, such as students, faculty members, or researchers, to another higher education institution for a predetermined period, whether for the purposes of study, teaching, or research.

This four-phase mixed-methods study aimed to analyze data gathered from a group of academic and industry experts, as well as the application of a quantitative statistical instrument to students from engineering programs at the Universidad Autónoma de Nuevo León. The sample included students who had participated in international academic mobility programs at foreign universities within the past five years, as well as a comparison group of students who did not have the opportunity for international experience.

This dissertation aimed to analyze the impact of intercultural competence on engineering students' preparedness to integrate into the global workforce, under the assumption that students have developed or enhanced their intercultural competence through a study abroad experience in a different country.

The study will significantly inform the development of future objectives for the academic departments at the Universidad Autónoma de Nuevo León, particularly its six engineering schools, which collectively offer twenty-five undergraduate and over twenty-five postgraduate programs, with a combined student enrollment of 3,091.

The study integrated the information provided by employers and academic experts and the existing literature. This data was then compared to the survey results focused on the

acquisition of intercultural competence among students, including those who had studied abroad and a sample of those who had not, from various engineering programs at the Universidad Autónoma de Nuevo León.

The findings of the study indicated that the components of Intercultural Competence, comprising Attitude, Knowledge and Understanding, and Skills, exhibited significant differences between individuals who experienced short-term international immersion and those who did not have that opportunity. Specifically, those who participated in short-term international immersion programs demonstrated greater development across the key domains of intercultural competence. Employers in the global market assert that cultivating extensive cultural proficiency enables smooth collaboration, fosters the establishment of professional networks, and consequently supports the success of international business initiatives. Furthermore, a harmonious blend of positive disposition, extensive understanding, and practical capabilities significantly enhances a graduate's employability prospects within multinational organizations.

## **SECTION 1: METHODOLOGY**

### **CHAPTER 1 METHODOLOGY**

#### **1.1 Introduction**

This investigation started with an in-depth secondhand literature review, using a variety of secondary sources handpicked from indexed journals, specialized books, and databases. The goal of this research was to analyze the impact that being part of an international mobility program has on the acquirement of intercultural competence of engineering students of the Universidad Autónoma de Nuevo León, as well as the global job market readiness of such students.

In today's global economy, virtual global teams are becoming more prominent. These teams bring together researchers from different parts of the world who work across various time zones and cultures. It is essential for engineers to effectively collaborate with individuals from diverse backgrounds, underscoring their importance in the field. The globalization of services enables cost-effective collaboration and access to expertise from around the world, making advanced engineering designs and services such as electronic design, practical research, financial accounting, aerospace engineering, technical advisory work, etcetera at lower costs outside developed countries (National Academy of Engineering, 2004).

Engineers require a wide range of skills to enter and thrive in the international professional environment. Like many other careers, engineers need to possess strong abilities in cross-cultural communication as an essential aspect of attaining global competence. They should demonstrate flexibility, tolerance, a good understanding of diverse global locations, cultural awareness and acceptance of diversity. It is also important to be multilingual and have an appreciation for the differences in engineering cultures (Deardorff, 2009).

The evolving nature of business practices demands educators to evaluate the necessary adjustments needed at the university level in order to adequately equip engineers for a significantly transformed professional environment (Deardorff, 2009). Higher Education Institutions must adapt their university curricula to adequately prepare engineers for the increasingly transformed professional environment (Ragusa, 2011). Today's world economy and the growing significance of international cooperation require engineers to adjust to new challenges and prospects in order to succeed in today's professional environment (Ortiz-Marcos et al., 2021).

The literature reviewed emphasizes the need for engineering education to evolve in response to the globalized professional context. As the world becomes increasingly interconnected, engineering graduates must be equipped to address the novel challenges posed by globalization. Engineering students should comprehend the significance of leadership and innovation in navigating the social, cultural, political, and economic systems that characterize the global economy (Jackson et al., 2016).

There is a concerning tendency for global engineering to prioritize North American or European perspectives, rather than embracing a more inclusive range of diverse cultural viewpoints and approaches from around the world. This narrow focus can constrain the ability of engineers to fully comprehend and address the unique challenges and needs of communities and contexts beyond the Western sphere. As a global profession, engineering must strive to be more culturally inclusive, drawing upon a wide array of perspectives and local expertise to develop holistic and contextually relevant solutions (Johnston, 2001).

Engineering educators must adapt curricula to infuse global perspectives and develop competencies that are essential for success in the transformed professional landscape (National Academy of Engineering, 2004). These competencies include a deep understanding of diverse global contexts, adaptability and openness to different cultural norms, proficiency in multiple languages, and an appreciation for the variations in engineering practices across the world (Ortiz-Marcos et al., 2021).

## 1.2 Background

This investigation started with in-depth research of thesis dissertations and journal articles on the subject. As a result of this process, preceding dissertations conducted by Ania Peczalska (2021), Alison Binger (2018), Eric R. Terzuolo (2016), Yuanyuan Wang (2013), Vera Chapman (2011) and an article by Fabian Wolff and Christoph Borzikowzky (2018) were found. The previously mentioned research studies were done in the United States of America by doctoral candidates from the Indiana University, Walden University, The George Washington University, The University of Pittsburgh and the University of Mississippi; with the sole purpose of filling the scientific literature void of the impact that cross-cultural competence and academic mobility has on the professional development and the global labor market readiness.

The research developed by Ania Peczalska (2021) was done by the usage of a form of Structural Equation Modeling (SEM) path analysis, which is a technique that can simultaneously measure hypothesized variances, co-variances, and means of data through the model's preset paths (Kaplan, 2004). The study utilized data from a report in 2017 collected through an annually applied survey of students enrolled in four-year colleges and universities, with the purpose of measuring their participation in a diverse number of programs and activities imparted by institutions, called the National Survey of Student Engagement (2017). The sample used by Ania Peczalska (2021) was a group of Chinese International Students and domestic students asking them the frequency of discussions with people that had the following characteristics:

- People from a race or ethnicity other than your own
- People from an economic background other than your own
- People with religious beliefs other than your own
- People with political views other than your own (Peczalska, 2021, p. 77)

The previous will measure the frequency and quality of these discussions with diverse others which are commonly associated with understanding diversity. The results showed that culturally engaging coursework had the strongest positive impact on interactive experience

factors; the study also revealed that diversity support and quality interactions have a positive impact on understanding diversity.

Alison Binger (2018) conducted a study on the impact that intercultural transformation had on a group of Peace Corps Volunteers (PCV) at American public schools. The data was collected through interviews with the participants, through exploratory qualitative research due to it having less than twelve entries. The data analyzed showed that PCVs who had a two-year service were impacted and their cultural awareness developed. Binger's research revealed that international experiences enhance teacher preparation, as they increase the probability of engaging students. Furthermore, long-term international immersion was found to facilitate a deeper understanding of the complexities inherent in foreign cultures. The study participants were significantly impacted, influencing their pedagogical approaches.

The study conducted by Eric R. Terzuolo (2016) employed statistical analysis, an online effect calculator developed by Paul Ellis of Hong Kong Polytechnic University, and mean comparisons using an analysis of variance. The primary aim was to investigate whether students who participated in a study abroad program exhibited a significant change in their understanding and approach to cultural differences, compared to their counterparts who remained on their home campus for the same duration. Data was gathered through the analysis of pre- and post-test changes in the intercultural development inventory, focusing on developmental orientation and cultural disengagement. The research considered the impact of two sets of factors when examining study abroad experiences:

- Demographic traits and experiences that students bring with them when studying abroad.
- Specific characteristics of study abroad programs in which the students participate.

The findings revealed that participants who engaged in an international experience demonstrated increased intercultural mindedness and reduced conflicts with their cultures of origin. Additionally, the characteristics of the study abroad program did not significantly



impact the changes in pre- and post-intercultural Development Inventory scores for the experimental group members.

Yuanyuan Wang's study (2013) examined the impact of student participation in a certification program offered by the Asian Studies Center at the University of Pittsburgh, analyzing their perceived development of global competency and skills for international careers. Using multiple regression analysis, the investigation sought to determine the relationship between increased global competency (dependent variable) and factors such as courses taken in the certificate program, center activity participation, and international experience (independent variables). The findings indicate that both international experiences and coursework in the program were significant variables contributing to students' perceptions of enhanced global competency and improved skills for international careers, with international experience exerting a greater influence than the coursework.

In a qualitative study employing reflective analysis, Vera Chapman (2011) investigated whether studying abroad would facilitate personal and professional development within the complex global community. The participants were students at a four-year public university in the southeastern United States who had engaged in academic mobility during their university studies. Data were collected through interviews with students after they returned from the foreign institution. The findings indicate that the international experience informed the participants' career decision-making, although it did not necessarily enhance their professional identity. The research also revealed that career development is a multifaceted process.

An article by Fabian Wolff and Christoph Borzikowzky (2018) examined the impact of international experiences, specifically educational stays of at least 3 months, on the development of Intercultural Competence and its various facets. The study surveyed 440 participants residing in Germany at the time. The researchers hypothesized that the individuals would cultivate the six Intercultural Competence (ICC) facets based on the Onion Model by Deborah Schnabel et al. (2014): Sensitivity in Communication (putting oneself in someone else's shoes to understand them), Information Seeking (gathering information about other cultures and foreign countries), Socializing (establishing and maintaining contact with

people from other cultures), Goal Setting (having clear goals and implementing them), Mediation of Interest (mediating between parties to obtain the most benefit), and Cultural Identity Reflection (reflecting on one's cultural character). The findings revealed that the aspect showing the greatest increase was Cultural Identity Reflection, while Communication Sensitivity and Socializing also exhibited growth.

Migration has permanently transformed human work and lifestyle, leading to ongoing interactions between individuals from diverse cultural and background – which in turn produces changes in both the immigrants and the host populations (Redfield et al., 1936). The changes created by this contact are referred to as “acculturation process” defined by Berry (2005) as *“the dual process of cultural and psychological change that takes place as a result of contact between two or more cultural groups and their individual members”* (p. 698)

Undoubtedly, the way companies and organizations currently engage with their target markets and partners has undergone significant changes over time. This transformation can be attributed to the phenomenon of globalization, which has facilitated the interaction of individuals from diverse national backgrounds. Consequently, modern corporations have embraced new approaches, leading to the emergence of new requirements and job roles that equip them with the necessary knowledge and qualifications to successfully execute their international operations.

Aspiring job candidates must possess the required profile and qualifications for the new positions, which go beyond the technical skills that students and graduates have developed during their higher education studies to be considered for the available openings. Employers place significant emphasis on cognitive abilities such as problem-solving, communication, teamwork, and cross-cultural competency when evaluating candidates during the hiring process.

As a graduate anticipates entering the workforce, it is imperative for them to evaluate their level of employability. Consequently, an individual self-assessment regarding their preparedness for the labor market must be conducted to determine if their skills and

qualifications align with the available job opportunities. Furthermore, graduates should reflect on the extent to which they possess the soft skills that are highly valued by employers.

Some of these abilities may be acquired or developed during distinct stages of one's academic career, while others may be gained through social interaction, such as the development of leadership, teamwork, and communication skills. Overseas studies can also provide students with valuable opportunities to learn other sets of skills, including interculturality, cross-cultural competence, cultural intelligence (CQ), and problem-solving, often due to the independence and challenges of being away from their homes and comfort zones. Additionally, there are perspectives that suggest a gap within universities regarding the provision of interpersonal and other soft skills training for their students, leading to the belief that they do not emphasize these skills as heavily as technical proficiencies. This study further aims to identify the most essential soft skills required by modern employers for job applicants.

### **1.3 Statement of the Problem**

The existence of interconnectedness and co-dependency of nations across the globe, driven by economic factors, technological advancements, market integration, migration, and other globalization-related phenomena; underscores the necessity of understanding and appreciating diverse cultures. Contemporary business operational models have revealed a gap between the soft skills, specifically intercultural competence comprising Attitude, Knowledge, Understanding, and Skills, that modern industry employers demand, and the emphasis placed on these competencies by graduates and higher education institutions.

The dynamic nature of culture enables it to evolve or be reinterpreted by the people who belong to it, leading to new perspectives on existing challenges (Ezcámez, 1994). The global labor market offers a diverse range of opportunities, and multinational corporations seek employees with intercultural competence due to the competitive nature of international markets (Deardorff, 2009); it can be reasonably concluded that individuals with an understanding of interculturalism possess a significant advantage over those lacking this competency in the realm of soft skills.

According to Chapman (2011), when an individual has a deep experience in a foreign culture, they gain a better comprehension of their own cultural context, a greater facility in adaptation, and a broader range of perspectives and approaches for task completion. One of the fundamental purposes of culture is facilitating the resolution of needs and issues through well-grounded dialogue founded on principles, attitudes, and customs (López Sáenz, 2015). Personnel with a global mindset and cross-cultural competencies are highly valuable for managers navigating the process of developing or transforming their organizations into global entities to achieve their objectives (Lovvorn & Chen, 2011). Ang et al. (2007) define cultural intelligence as "an individual's capability to function and manage effectively in culturally diverse settings" (p. 336); which closely aligns with Schmidt and Hunter's (2003) conceptualization of intelligence as "the ability to grasp and reason correctly with abstractions and solve problems" (p. 3).

Academic mobility is a crucial component for fostering international collaboration among higher education institutions (HEI). It involves the transfer of individuals engaged in the educational process, such as students, faculty, or researchers, to another higher education institution for a specified duration, whether for studying, teaching, or conducting research (Khramova et al., 2013). Studying abroad is widely regarded as an important component of a comprehensive international education, as it facilitates global connectivity and adaptability within the mobile workforce, while also bestowing academic prestige upon the host institution (Voroshilova, 2015). Developing intercultural competencies is not always simple when being in a foreign country, students encounter diverse challenges when they arrive in the country where they will be staying abroad, such as high levels of stress, the lack of social support, the perception of discrimination, and the language barrier (Zhang J. &, 2011).

This investigation pretends to identify the different intercultural components acquired through academic mobility in a foreign country and to examine if there is an impact on global labor market readiness of the returnee engineering student.

**Table 1.3.1: Graduate and Undergraduates Engineering Programs of Universidad Autónoma de Nuevo León**

| School                      | Under-Graduate Programs  | Post-Graduate Programs   | Undergraduate Students<br>(Aug.-Dec. 2021) | Postgraduate Students<br>(Aug.-Dec. 2021) | Total |
|-----------------------------|--|--|--|---|-------|
| School of Agriculture       | Bachelor of Agricultural Engineering<br>Bachelor of Engineering in Agricultural Business<br>Bachelor of Engineering in Biotechnology<br>Bachelor of Engineering in Food Industries | Master of Science with Orientation in Biosystems Engineering<br>Master of Science with an Orientation in Engineering in Food Industries  | 1,342                                      | 57  | 1,399 |
| School of Earth Science     | Geologist Engineer<br>Geophysical Engineer<br>Mineralogist Geologist Engineer<br>Petroleum Engineer  |  | 375  | 9   | 384   |
| School of Forest Science    | Engineer in Natural Resource Management<br>Forestry Engineer   |  | 148  | 43  | 191   |
| School of Chemical Science  | Industrial Management Engineer<br>Bachelor of Chemical Engineering<br>Environmental Engineer   |  | 6,547                                      | 423                                       | 6,970 |
| School of Civil Engineering | Civil Engineering  | Doctorate in Engineering with an Orientation in Environmental Engineering<br>Master of Science with an Orientation in Environmental Engineering<br>Master of Science with an Orientation in Structural Engineering | 2,287                                      | 130                                       | 2,417 |

| School  | Under-Graduate Programs   | Post-Graduate Programs  | Undergraduate Students<br>(Aug.-Dec. 2021) | Postgraduate Students<br>(Aug.-Dec. 2021) | Total  |
|---|---|---|--|---|--------|
| School of Mechanical and Electrical Engineering | Aeronautical Engineer<br>Artificial Intelligence Engineer<br>Biomedical Engineer<br>Electromobility Engineer<br>Electronics and Automatization Engineer<br>Electronics and Communications Engineer<br>Manufacture Engineer<br>Materials Engineer<br>Mechanical and Electrical Engineer<br>Mechanical and Management Engineer<br>Mechatronics Engineer<br>Software Technology Engineer<br>System Management Engineer | Doctorate in Systems Engineering<br>Doctorate in Materials Engineering<br>Doctorate in Electrical Engineering<br>Doctorate in Engineering with Information Technology Orientation<br>Doctorate in Aeronautical Engineering Sciences<br>Master in Organization Management with a focus on: <ul style="list-style-type: none"> <li>Production and Quality</li> <li>Industrial Relations</li> <li>Finance</li> <li>International Trade</li> <li>Technological Innovation</li> <li>Direction of Training Processes</li> </ul> Master of Science in Electrical Engineering<br>Master of Science in Engineering with Materials Orientation<br>Master of Engineering Sciences with a Systems Orientation<br>Master of Engineering with an orientation of: <ul style="list-style-type: none"> <li>Electrical</li> <li>Mechanical</li> <li>Mechatronics</li> <li>Manufacturing</li> <li>Telecommunications</li> <li>Information Technologies</li> </ul> Master in Logistics and Supply Chain<br>Master of Engineering Sciences with orientation in Thermal and Renewable Energies<br>Master of Aeronautical Engineering with an orientation of: <ul style="list-style-type: none"> <li>Materials</li> <li>Structures</li> <li>Flight Dynamics</li> </ul> Master of Science in Automotive Engineering<br>Master of Science in Engineering with a Focus on Nanotechnology<br>Master of Science in Engineering with an Orientation in Energy Technology | 21,010                                     | 720                                       | 21,730 |
|   |   |   | 31,709                                     | 1,382                                     | 33,091 |

Source: Adapted from Universidad Autónoma de Nuevo León's Rectors' Activity Report 2021 (Universidad Autónoma de Nuevo León, 2021)

### 1.3.1 Research Questions

What are the intercultural competency components that an engineering student from the Universidad Autónoma de Nuevo León may acquire on his or her academic mobility in a foreign country, and how do they impact their employability level for the global job market?

- How does having academic mobility impact the life of an engineering student?
- What intercultural components were acquired by engineering students through their international academic mobility?
- What impact does having multicultural competence have on an engineering student's acquirement of employment in a global company?



## **1.4 Justification**

As it can be reviewed from research on the background section of this document, all the information concerning cross-cultural competencies acquired on academic mobility programs derive from investigations done outside of Mexico. These investigations focus on the acquirement of cultural intelligence (CQ) competencies through abroad stays. Only one of the dissertations correlates the impact that CQ has for international careers, focusing only on skill development courses at their home university –not by the acquisition through international academic mobility. In Mexico, there is a shortage of information regarding intercultural competencies and other CQ skills that are acquired through participation in an international academic mobility program and the impact that it has on the returnee student's employment readiness for a global market.

The investigation will importantly contribute to the definition of future goals of the academic departments of the Universidad Autónoma de Nuevo León, especially for the university's six engineering schools that combined offer twenty-five different undergraduate and over twenty-five postgraduate programs, having jointly 3,091 matriculated students. The results will facilitate the creation of a model that explains global labor market readiness based on intercultural competencies, acquired during international academic mobility, which in turn will help public educational policymakers, decision-makers at the engineering schools mentioned previously, and the university in general due to the application possibility in other fields of study, to create their academic programs with an international focus, to successfully train their students on cognitive skills and not just focus on technical skills; resulting in the generation of a more complete graduate with an improved global market readiness that meets the demands of employers in an international job market – helping companies find personnel that will fill the requirements for their vacancies.

The outcome of more competitive students will have a positive cultural and economic impact on society derived from their potential international experiences and the know-how that will be brought back to the home country of the graduates that were once hired abroad by international companies.

## **1.5 General Objective**

The General objective of this investigation is to analyze the impact attitude, knowledge and understanding, and skills acquired through academic mobility at a foreign university have on the global labor market readiness of an engineering student from the Universidad Autónoma de Nuevo León; with the sole purpose of providing the information needed by decision makers to mold their academic programs regarding the cognitive skills that modern companies need, as well as promote the importance of having an international experience to students.

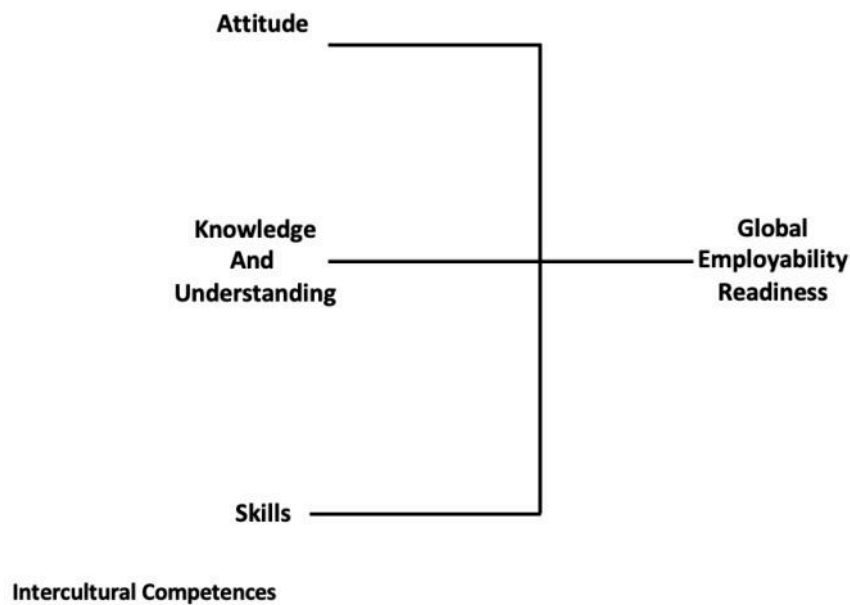
### **1.5.1 Specific Objectives**

1. Examine the impact of international academic mobility on the life of an engineering student from Universidad Autónoma de Nuevo León
2. Identify the intercultural competencies acquired by engineering students of the Universidad Autónoma de Nuevo León through their academic mobility in a foreign university.
3. Identify what global companies expect concerning intercultural competences from their employees.
4. Analyze the impact that Attitude has on the readiness for employment in global companies or institutions of engineering students of the Universidad Autónoma de Nuevo León.
5. Analyze the impact that Knowledge and Understanding has on the readiness for employment in global companies or institutions of engineering students of the Universidad Autónoma de Nuevo León.
6. Analyze the impact that Intercultural Skills have on the readiness for employment in global companies or institutions of engineering students of the Universidad Autónoma de Nuevo León.

## 1.6 Hypothesis

Attitude, knowledge and understanding, and skills acquired through academic mobility at a foreign university impact the global labor market employability of students in engineering programs at the Universidad Autónoma de Nuevo León.

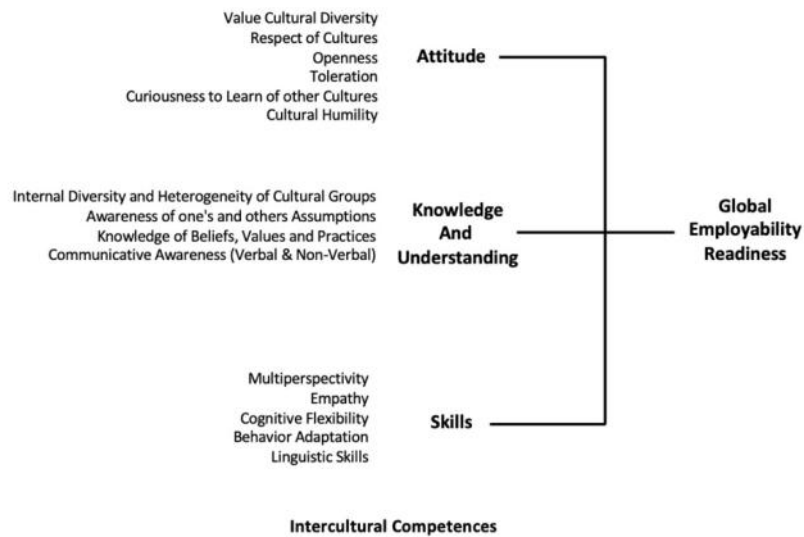
**Figure 1.6.1: Graphic Representation of the Hypothesis**



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Sources: Adapted from Barret, Byram, Lázár, Mompoin-Gaillard, & Philippou (2014). *Developing Intercultural Competence through Education*. Council of Europe. Deardorff, Darla (2011b) *Promoting understanding and development of intercultural dialogue and peace: A comparative analysis and global perspective of regional studies on intercultural competence*. UNESCO (2013) *Intercultural competencies: Conceptual and operational framework*. Spitzberg, Brian & Changnon, Gabrielle (2009) *Conceptualizing Intercultural Competence*. Hamilton, M. F., Richardson, B. J., & Shuford, B. (1998) *Promoting multicultural education: A holistic approach*.

**Figure 1.6.2: Graphic Representation of the Operative Hypothesis**




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Sources: Adapted from Barret, Byram, Lázár, Mompoin-Gaillard, & Philippou (2014). *Developing Intercultural Competence through Education*. Council of Europe. Deardorff, Darla (2011b) *Promoting understanding and development of intercultural dialogue and peace: A comparative analysis and global perspective of regional studies on intercultural competence*. UNESCO (2013) *Intercultural competencies: Conceptual and operational framework*. Spitzberg, Brian & Changnon, Gabrielle (2009) *Conceptualizing Intercultural Competence*. Hamilton, M. F., Richardson, B. J., & Shuford, B. (1998) *Promoting multicultural education: A holistic approach*.

This research will demonstrate the hypothesis through its qualitative and quantitative components. The quantitative section will establish that students with international academic mobility exhibit greater intercultural competence compared to those without such experiences <sup>h1</sup>. Additionally, the qualitative portion of the study will provide evidence of the skills and qualities that employers seek in engineering graduates, highlighting the significance of intercultural competence for performance in a global corporate environment <sup>h2</sup>.

## 1.7 Conceptual Framework

The interconnectivity between global markets and the economy due to globalization infers the need for individuals to be able to operate with people who have different personalities in diverse countries with distinct settings. Al Rodhan & G. Stoudmann state that “globalization is a process that encompasses the causes, course, and consequences of transnational and transcultural integration of human and non-human activities” (Al-Rodhan & Stoudmann, 2006, p. 2).

The term “Globality” is vague, when people first hear this idea, they immediately think of the XXI century when the newest phase of capitalism appeared, but the largest globalization action occurred in the XIV century conducted by the Spanish Empire (Franquet Bernis, 2021). Empires such as the Spanish and English empires spanned all over the world taking goods and customs from one region to the next. There are four historical stages for this process; Archaic, Pre-Modern, Modern, and “Newest” Globalization; the newest can be traced back to the 1970’s but it started becoming a mainstream agenda in the 1990’s with the emergence of the internet (Zinkina et al., 2019). Table 1.7.1

Corporations have been involved in international trade for well over a century, either by importing-exporting goods or by taking it a step forward through investments in foreign countries by building their own production lines and distribution centers. Paolo Gerbaudo (2022) sums it up essentially with the term externalization; to achieve a more rapid and flexible production and distribution system, through practices such as offshoring, outsourcing, and export-focused economic policy. It is not easy for all companies to achieve the process due to a lack of resources, knowledge, obstacles to trade in a foreign market, and cultural differences among others (Nguyen & Le, 2019) – especially for small and medium enterprises (SME’s).

**Table 1.7.1: Historical Stages of Globalization**

| Historical Stages of Globalization |                         |  |
|------------------------------------|-------------------------|--|
| Archaic Globalization              | 5,000-10,000 years ago. | According to Paul Hopper (2007), this manifests in the form of migration of people, the existence of empires, the creation and spreading of religions, and transregional trade networks (Hopper, 2007, p. 14).   |
| Pre-Modern Globalization           | 500 years ago.          | The vast majority of regions of the planet are linked into one global network through the flow of goods, capital, cultural symbols, artifacts, ideas, knowledge, and technologies (Zinkina et al., 2019, p. 14).   |
| Modern Globalization               | Until 1918              | This period influenced social life, politics (global diffusion of the modern state model, its management structures and institutions), economics (global diffusion of industrial production, fundamental industrial technologies and new technological regimes, global movement of financial capital), and the social sphere and culture (intensified global migration, diffusion of ideas and standards) (Zinkina et al., 2019, p. 14). |
| The age of "newest" globalization  | Now                     | Aspects such as the increase in international (cross-border) economic activity, the growing interrelatedness and interdependence of national economies, the expansion of global markets, or the increasing international mobility of goods, can be regarded as a resumption of the Golden Age of globalization (Zinkina et al., 2019, p. 14).  |

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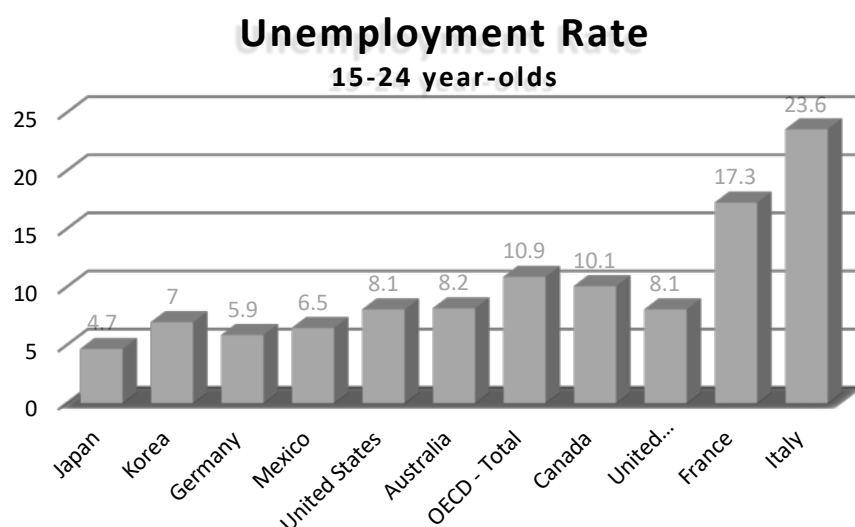
*Source: Adapted from Zinkina, J., Christian, D., Grinin, L., Ilyin, I., Andreev, A., Aleshkovski, I., et al. (2019). A Big History of Globalization: The Emergence of a Global World System. (C. Chase-Dun, B. K. Gills, L. E. Grinin, & A. V. Korotayev, Eds.) Cham, Switzerland: Springer.*

International firms require a certain set of abilities or skills from their employees to facilitate the way they do business in foreign countries and the performance of their overseas operations. This is no easy task, 50% of globally surveyed employers report that they were not able to find candidates with the desired skill set, and the same survey states that 80% of the unemployed jobseekers failed to secure a job (World Bank Group, 2015).

The term unemployed refers to people without a job but are currently seeking employment and are ready to start working. Depicted on Figure 1.7.1. the Organization for Economic Co-operation and Development (2023a) informs that there are 17.2 million unemployed youths

ranging from the age of 15 to 24, which means that 12.8% of all the youth in the world are unemployed.

**Figure 1.7.1: Youth Unemployment Rate of 15-24 years old**

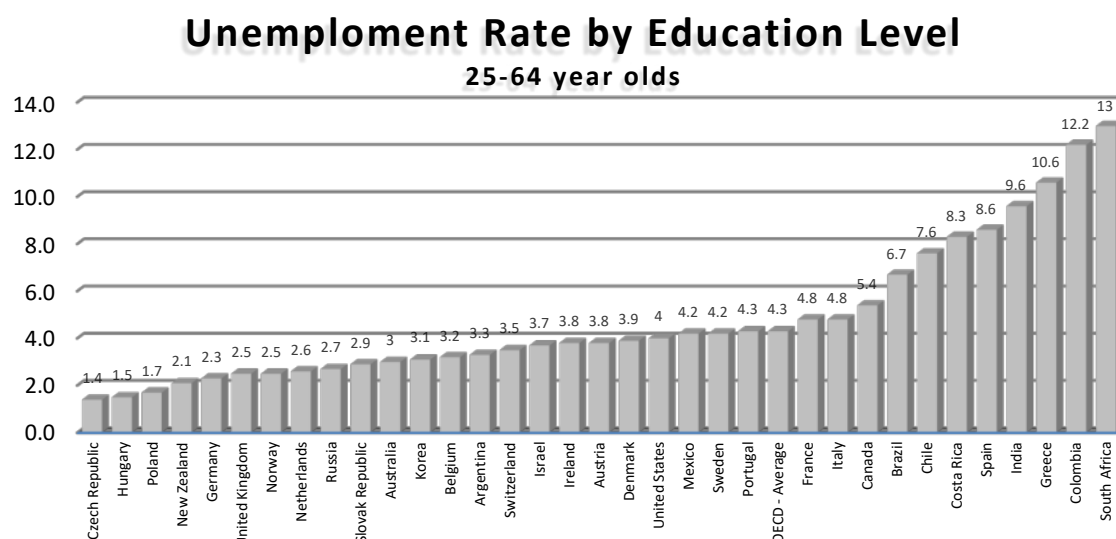


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*Source: Labor Market Statistics: OECD (Unemployment Rate by Age Group, 2023a) 2018-2022*

Figure 1.7.2 shows the percentage rate of unemployment of individuals with tertiary education between the ages of 25 to 64 is 4.4% of the total labor force in the world. It can be inferred that having a tertiary education is not enough and certain abilities are important for employers. Due to the creation of new positions derived from the needs of modern corporations, different skills and qualifications are needed to meet the new job description (Pitan, 2017).

**Figure 1.7.2: Unemployment Rate of 25-64 years old with tertiary education**



Source: Labor Market Statistics: OECD (Unemployment Rates by Education Level, 2023b) 2018-2022

The global employment landscape has been influenced by the presence of sizable industries operating across numerous, if not all, countries worldwide. According to the World Economic Forum (2016) the most in-demand occupations or specialties (that did not exist five or ten years ago) such as data analysts, organizational specialists, and engineering specialties including materials, bio-chemicals, nanotech, and robotics; nowadays have a powerful impact due to globalization. In this new business environment, governments and individuals are increasing their ability to anticipate and prepare for any changes regarding employment, future skill requirements, and job content; to seize all opportunities that are presented to them.

Organizations necessitate contemporary systems that can assist their employees in adapting and upgrading their capabilities, emphasizing the recruitment of individuals possessing strong communication skills, proficiency in information research, competence in office productivity software, and the capacity to adapt to evolving labor market demands. The International Labor Organization (2015) shares that two in five employers have difficulties finding and hiring the correct individuals to fill these vacancies.

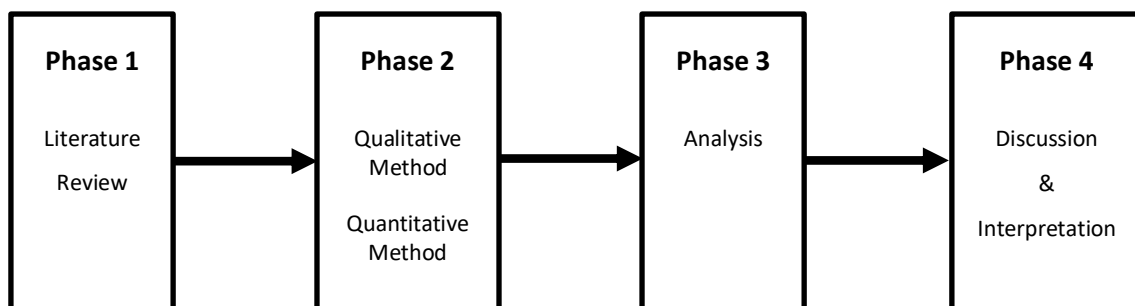


## 1.8 Research Model

The purpose of this four-phase simultaneous mixed investigation was to analyze the information gathered from a group of academic and industry experts. As well as the application of a quantitative statistical instrument to a group of students from the engineering programs offered by the Universidad Autónoma de Nuevo Leon (Table 1.3.3), who have been a part of an international academic mobility in a foreign university in the past five years and a sample of students that did not have the opportunity to have an international experience. According to Hernández-Sampieri, a mixed methodology represents a systematic empirical process of gathering both quantitative and qualitative data to be integrated and examined to have a better understanding of the problem (Hernández-Sampieri et al., 2014). The use of this method allowed to use as evidence the numeric, verbal, and textual data gathered in the process (Creswell & Guetterman, 2019).

This investigation will be of a non-experimental, transactional, correlational, exploratory, and descriptive character; with a geographical limit of students from engineering programs at the Universidad Autónoma de Nuevo León through qualitative and quantitative techniques.

**Figure 1.8.1: Phases of Investigation**



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Source: Own work

## **1.9 Research Design**

The investigation research design used in the present dissertation is that of convergent mixed-method research. Creswell & Creswell (2018) state that the use of mixed methods allows the researcher to obtain data through descriptive explanations from the main actors of the problem and hard numbers from surveys, to be cross-referenced and bring a validated insight to the investigator. The authors also believe that using a convergent mixed methods approach provides different types of data that are detailed by participants in qualitative and quantitative studies (Creswell & Creswell, 2018). A simultaneous triangulation, when qualitative and quantitative research methods are employed concurrently, is accepted when there is minimal interaction between the two datasets during the data collection phase; however, the findings from the different methods complement each other at the conclusion of the study (Morse, 1991). To comply with the objectives and answer the research questions and the complexity of this investigation, there will be simultaneous mixed research, applying both qualitative and quantitative instruments in parallel.

### **1.9.1 Mixed Method Modality**

The essence and main objective of this dissertation is to analyze the impact that intercultural competence (IC) has on engineering students and their readiness to incorporate into the global labor market; under the assumption that the students have acquired or enhanced their intercultural competence during an abroad stay in a different country. The goal can only be reached if the point of view of the main actors in the phenomenon is considered to be able to have a full conclusion.

The main actors considered to bring forth the information needed to approve or disapprove the hypothesis are academics, personnel from global Corporations, and lastly, engineering students from the Universidad Autónoma de Nuevo León who have had the chance to be enrolled in an academic mobility program.

There is an existence of different approaches to how information gathered by mixed-method research can be scrutinized. This investigation employed complementarity and triangulation

as the analytical modalities to examine the variables encompassed within our hypothesis, as depicted in Table 1.9.1.

Green, Caracelli & Graham (1989) explain that complementarity is used for enhancing the validity of constructs and research outcomes and involves mitigating or maximizing the heterogeneity of irrelevant sources of variance, particularly related to inherent method bias. This also includes addressing biases stemming from inquirer bias, bias in substantive theory, and biases within the inquiry context.

“to measure overlapping but also different facets of a phenomenon, yielding an enriched, elaborated understanding of that phenomenon”... elaboration, enhancement, illustration, clarification of the results from one method with the results from the other method” (Green et al., 1989, pp. 258-259).

This modality will involve crossing the information brought forth by academics and employers to be compared and complemented between them and the available published theory. Higher learning Institutions develop their academic programs based on what the industry demands in each study field; this study is under the assumption that intercultural competence and other soft skills are not always given the importance that they should. Employers for international companies will deliver data concerning the importance for a student or graduate to possess the ability to successfully interact with individuals or groups of individuals with different cultural backgrounds. The main objective of crossing the information gathered from academics and global employers is to compare the viewpoints on the importance of intercultural competence for the readiness of students for the global labor market.

**Table 1.9.1: Mixed Method Modality**

| Modality        | Application   |
|-----------------|---|
| Complementarity | The data brought forth by both methods will help understand the information gathered.   |
| Triangulation   | Data will be compared between both studies to analyze and differentiate what each sample believes intercultural competence is and its importance. |

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*Source: Adapted from Green, Caracelli & Graham "Toward a conceptual framework for mixed-method evaluation designs." (1989)*

Triangulation, as defined by Campbell & Fiske (1959), Denzin (1978), and discussed by Mathison (1988), Webb, Campbell, Schwartz, & Sechrest (2000), involves employing multiple methods to investigate the same phenomenon, aiming to counteract biases and enhance the validity of inquiry results. The underlying premise is that reliance on a single method may lead to biased and limited findings, but employing multiple methods with differing biases can strengthen validity when their results converge or corroborate each other.

According to Carter et al. (2014), triangulation in qualitative research involves the employment of various research methods or data sources to acquire a thorough comprehension of the research problem; or to obtain validity by merging the information from different sources. In their article "The use of triangulation in qualitative research" the authors mention four different types of triangulation, *method, investigator, theory, and data*. Data triangulation is the type that will be used in this research through the comparison of the information acquired through the qualitative section and the quantitative.

The approach of triangulation involves the use of multiple data collection methods to improve the validity, reliability, and credibility of research findings. This approach prioritizes the qualitative method, which serves as the foundation, while supplementing it with quantitative

techniques. The process is inductive, where the theory is first developed through qualitative analysis and then further supported by quantitative methods (Moon, 2019).

After interconnecting the information transferred by the employers and academic experts, it will be compared with the data obtained in the survey focused on the acquisition of ICC applied to students from different engineering programs of the Universidad Autónoma de Nuevo León who have had the opportunity to study in a foreign university and a sample those who did not study abroad.

#### 1.9.2 Dimension Strategy

The different elements that describe the strategy used in the design of the research can be seen in Table 1.9.2. The qualitative and quantitative instruments will be applied simultaneously and will be equally as important due to their complementarity. When utilizing a concurrent implementation of both qualitative and quantitative research methods, the primary emphasis is on the qualitative approach, supplemented by quantitative techniques (QUAL+quant). This approach is driven by an inductive process, where the theory is developed through qualitative analysis and then further supported by quantitative methods (Morse, 1991). The research will bring forth comparable bi-data acquired by each one of the methods.

**Table 1.9.2: Mixed-Method Dimension Strategy**

| Element               | Possibility   |
|-----------------------|---|
| Temporality           | Simultaneous  |
| Priority Angle        | QUALITATIVE+Quantitative  |
| Function              | Contrast & compare results.<br>Integrate the angles of analysis or the results. |
| Phase of Intervention | Analysis<br>Interpretation  |
| Data                  | Bi-Data   |

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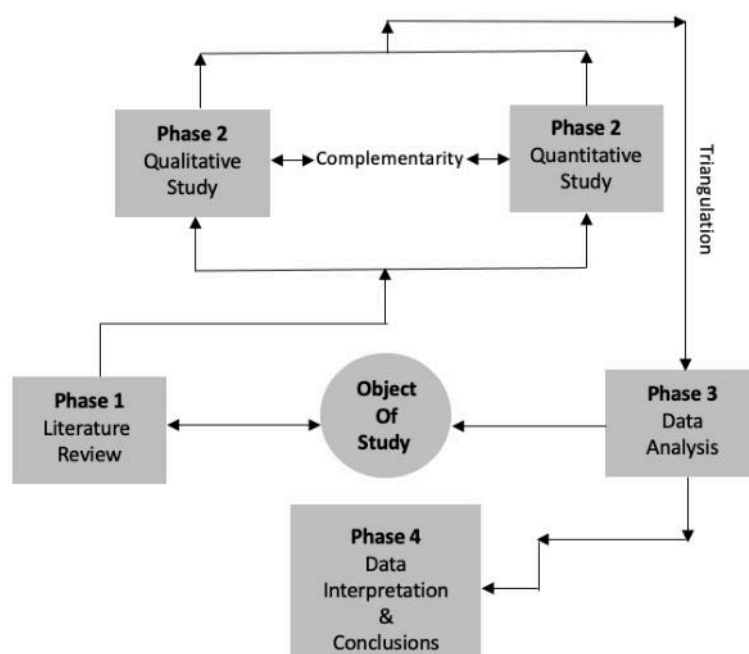
Source: Adapted from Bryman's *"Integrating quantitative and qualitative research: how is it done?"* (2006) & Núñez Moscoso's *"Los Métodos Mixtos en la Investigación en Educación: Hacia un uso Reflexivo"* (2017).

The function of the research is to contrast and compare the results of both methods and integrate them. Consequently, a joint analysis and interpretation will be conducted, to provide the information needed for a discussion between the results and the literature review; and the arrival to conclusions.

### 1.9.3 Research Phase Development

After identifying the object of study for this research, *the importance of intercultural competence, acquirement of ICC in academic abroad stays, and its impact on the global labor market readiness of engineering students*, it was concluded that the investigation will be conducted through a four-phase process, as shown in Figure 1.9.3.1. This process will facilitate compliance with the study's objectives by revising the existing literature and collecting the data generated through mixed methods; both needed to reach its goal.

**Figure 1.9.3.1: Research Phase Diagram**



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Source: Own work based on Núñez Moscoso's "Los Métodos Mixtos en la Investigación en Educación: Hacia un uso Reflexivo" (2017).

The process will begin with *phase one*, with a thorough literature review of the knowledge available, obtained from handpicked specialized books, indexed journals, databases, and dissertations who have previously researched the phenomenon that dates from the classics up to 2023. The phase will help confirm the variables presented in the hypothesis and will bring forth others that might have not been considered.

*Phase two*, as shown in Figure 1.9.1.1, is constructed by two sections: the qualitative and the quantitative section of the study. In the qualitative part of the investigation, a simultaneous application of a semi-structured interview will be applied to academics who will provide data concerning the importance it is for students to acquire ICC and why it will help graduates be more well-rounded and ready for what the industry and employers need of their potential employees. Also, the instrument will be applied to global employers from international companies whose point of view is highly important and has to be taken into consideration, this group will provide the most accurate firsthand information regarding the importance of ICC

for international corporations. The interviews will be conducted face-to-face and asynchronously, depending on the agenda of the interviewees. The use of email communication for question dissemination enabled the researcher to overcome potential software incompatibility issues. Furthermore, asynchronous communication allows participants to respond at their convenience, potentially leading to more thoughtful and considered responses Cadman & Adriaenssens (1999).

In the quantitative section, a digital survey will be applied in the same instance to engineering students, who have studied abroad in a foreign country, as depicted in Table 1.3.3.

The information output of this phase will complement each other due to the different points of view of the participants, providing a wider spectrum to triangulate the data for more perceptiveness in later phases of the investigation. After the information provided in the phase has been triangulated, the next can begin.

During *phase three* the data obtained on the previous phase will be analyzed and merged. First, the analysis of the information received in the qualitative will be done by coding the data. Secondly, there will be a statistical analysis of the quantitative database. Thirdly, the two databases will be integrated by merging the results of both research methods, through a side-by-side comparison.

In *phase four* the data will be interpreted and compared with the literature review phase, resulting in a discussion between the research results and validating it with the state-of-the-art knowledge. After the discussion of the findings, the conclusion of the research and future lines of investigation will be outlined.

#### 1.9.4 Empirical Phase

As previously mentioned, the instruments that will be used in this investigation will be applied simultaneously. The empirical gathering of data can be seen in Table 1.9.4.1. The semi-structured interview script will be applied to academics, with the primary objective of gathering information on the variables that compose intercultural competence, and their point



of view on their importance for global labor market readiness. The semi-structured interview will be conducted with academics to gather data on the components of intercultural competence and their perspective on its significance for global workforce preparedness. In parallel, the same interview protocol will be applied to employers from companies operating in countries other than their own, to obtain first-hand insights into industry needs regarding intercultural competence.

Concurrently, online surveys will be sent to students who have had the opportunity of academic mobility in the past five years in a foreign higher learning institution, with the intention of receiving data on their intercultural competence level and experience; targeting data on their use of ICC.

**Table 1.9.4.1: Empirical Application Objectives and Instruments**

| Face-to-face/Asynchronous Interviews<br>(Qualitative) |   |   | Online Surveys<br>(Quantitative)      |   |   |
|---|---|---|---------------------------------------|---|---|
|   | Objective   | Instrument  |                                       | Objective   | Instrument  |
| <b>Academics</b>                                      | Gather data on their view concerning intercultural competence and student readiness for the global employment market.                 | Semi-Structured interviews with academic experts.               | <b>Academic mobility Students</b>     | Gather data on intercultural competency acquirement during their stay abroad.     | Online survey to students that have participated in academic mobility.    |
|   |   |   |                                       |   |   |
| <b>Employers</b>                                      | Gather information on their point of view concerning intercultural competence and their expectancy on this matter of their employees. | Semi-Structured interviews with employers from global companies | <b>Non-Academic mobility Students</b> | Gather data on intercultural competency acquirement during their academic career. | Online survey to students that haven't participated in academic mobility. |
|   |   |   |                                       |   |   |

*Source: Adapted Núñez Moscoso's (2017, p. 645).*

## 1.10 Congruence Matrix

| Research Problem   | Research Questions   | General Objective  | Specific Objective  | Theoretical Framework  | Hypothesis  | Variables   | Method  | Measurement Instrument   |
|--|--|--|---|--|---|---|---|--|
| A gap existence between what the modern industry employers demand regarding soft skills, specifically the intercultural competence, and the importance graduates and HEIs give them. This investigation pretends to identify the different multicultural competencies acquired through academic mobility in a foreign country and to examine if there is an impact on the global labor market readiness of the returnee engineering student. | What are the cross-cultural competencies that an engineering student from the Universidad Autónoma de Nuevo León may acquire on his or her academic mobility in a foreign country, and how do they impact their employability level for the global job market? | Analyze the impact attitude, knowledge and understanding, and skills acquired through academic mobility at a foreign university have on the global labor market readiness of an engineering student from the Universidad Autónoma de Nuevo León. | 1. Examine the impact of international academic mobility on the life of an engineering student from Universidad Autónoma de Nuevo León<br>2. identify the cross-cultural competencies acquired by engineering students of the Universidad Autónoma de Nuevo León through their academic mobility in a foreign university.<br>3. Analyze the impact that cross-cultural competence has on the acquirement of employment in global companies or institutions on engineering students of the Universidad Autónoma de Nuevo León.<br>4. Determine which concepts are impacted by cross-culturalism and academic mobility of engineering students at the Universidad Autónoma de Nuevo León. | <p>INTERCULTURAL COMPETENCE COMPONENTS MODEL</p> <p>Attitude</p> <ul style="list-style-type: none"> <li>-Value Cultural Diversity</li> <li>-Respect of Cultures</li> <li>-Openness</li> <li>-Toleration</li> <li>-Curiousness to Learn of other Cultures</li> <li>-Cultural Humility</li> </ul> <p>Knowledge and Understanding</p> <ul style="list-style-type: none"> <li>- Internal Diversity and Heterogeneity of Cultural Groups</li> <li>- Awareness of one's and others Assumptions</li> <li>- Knowledge of Beliefs, Values and Practices</li> <li>- Communicative Awareness (Verbal &amp; Non-Verbal)</li> </ul> <p>Skills</p> <ul style="list-style-type: none"> <li>- Multiperspectivity</li> <li>- Empathy</li> <li>- Cognitive Flexibility</li> <li>- Behavioral Adaptation</li> <li>- Linguistic Skills</li> </ul> <p>GLOBAL EMPLOYABILITY</p> <p>Importance of Soft Skills for Labor Market Readiness</p> <p>Demand for Cross-Cultural Skills/Multicultural</p> <p>Global Labor Market Readiness</p> | <p>Attitude, knowledge and understanding, and skills acquired through academic mobility at a foreign university impact the global labor market employability of students in engineering programs at the Universidad Autónoma de Nuevo León.</p> | <p>X=</p> <ul style="list-style-type: none"> <li>• Attitude</li> <li>• Knowledge and Understanding</li> <li>• Skills</li> </ul> <p>Y=</p> <ul style="list-style-type: none"> <li>• Global Labor Market Readiness</li> </ul> | <p>Mixed Method (Interviews with experts and Surveys)</p> | <p>For the Qualitative instrument: A deep semi-structured interview and asynchronous iinterview allows the acquirement of data directly by explaining how he or she recalls a specific situation.</p> <p>For the Quantitative instrument: Surveys to retrieve the data from our selected sample.</p> |

## **SECTION 2: THEORETICAL FRAMEWORK**

### **CHAPTER 2: INTERNATIONALIZATION**

#### **2.1 Introduction**

There exist many advantages and disadvantages of exchange programs, the most important ones from the student's perspective are their preparation for graduate school or the labor market, they can choose from diverse courses at the host institution, which makes them more tolerant or adaptable to other cultures, on the other side lack of financial support, administrative difficulties such as visa requirements and cultural challenges.

From the universities' perspective, some potential benefits include enhancing international cooperation between nations, students serving as representatives for their home institution, and revenue generation depending on the agreement with the partner higher education institution (HEI). However, there may also be some drawbacks.

Internationalization in higher education is a significant focus with motivations including international recognition and attracting foreign students and faculty. However, misguided expectations can lead to inefficient use of resources. Integrating international students into campus life is crucial for meaningful impact beyond academic programs. Collaboration agreements with foreign universities are valuable but require effective utilization and communication. Prioritizing scientific collaborations and impactful research outcomes enhances an institution's global standing more than mere output quantity.

Achieving true internationalization is challenging due to varying levels of institutions, unique needs, and barriers. It requires ongoing attention to meet global standards and industry demands but offers benefits such as economic impact, collaboration opportunities, increased tuition profits, globally recognized education, and university ranking improvements.

Researchers have focused on the development and performance of individuals in different cultural environments, exploring the relationship between Cross-Cultural Competence, Intercultural Competence, and Cultural Intelligence. CCC involves acknowledging diversity to

operate in distinct cultural settings. In Mexico, cross-culturalization has become important due to educational internationalization efforts and the impact of the Covid-19 pandemic leading to a focus on developing cross-cultural skills. Higher Education is also placing importance on cross-culturalism for university graduates under internationalization.

Higher education institutions play a crucial role in developing students' intercultural competence through strategies such as study abroad programs, international collaborations, faculty training on cultural understanding, and integrating intercultural perspectives into the curriculum. These efforts significantly impact students' ability to engage with diverse cultures and languages effectively. Studying abroad or interacting in diverse educational settings can enhance academic learning by exposing students to fresh concepts, methodologies, and modes of reasoning while promoting empathy, openness to new ideas, and deeper insights into oneself and others. Immersion in a foreign country is considered an effective way to develop intercultural competence and prepare for life or work in different cultural environments. The assessment can focus on discrete skills or broader abilities that require synthesis.

## **2.2 Importance of Internationalization of Higher Education Institutions**

For some time now, internationalization has emerged as a prominent concern in higher education. It is often driven by unrealistic expectations or the simple desire to emulate other institutions' activities in this arena. However, one must wonder why institutions would not wish to engage with the "internationalization trend," as it permeates various realms, including enterprises, countries, trade, cultures, and education itself. Yet, as some scholars, including J. Knight, have noted, these may be mere myths or misguided rationales, whose primary outcome is the wasteful expenditure of financial resources and the inefficient utilization of the university's human capital. Knight points out these miscalculated hopes of achievement in her article "Five Myths about Internationalization" (Knight, 2011).

Numerous endeavors have been undertaken over the years by a significant number of organizations in the pursuit to establish themselves as a recognized global participant in the educational sector. Whether a Higher Education Institution aims to be prominently known among prospective international and domestic students and faculty, or seeks to secure placement on key ranking lists, these efforts signify a commitment to delivering high-quality educational services. Both objectives hold considerable importance for an HEI, but prioritizing the latter ultimately leads to achieving the former. Through internationalization efforts, higher education institutions are able to draw in a diverse array of students and faculty from across the globe (De Wit, 2011).

The issue lies in the fact that extensive initiatives are often not properly directed. Each university department pursues its own internal interests rather than aligning with the institution's vision set by the governing body during planning. This is highlighted in the 5th Global Survey of Internationalization of Higher Education by the International Association of Universities, where 90 percent of institutions mention internationalization in their mission/strategic plan (Marinoni, 2019).

Academic programs and Higher Education Institutions cannot achieve an international approach solely by increasing the number of international students on campus. Embracing

and engaging these students in internal activities, such as research, sports, and other extracurricular pursuits is essential to foster a sense of belonging and fulfillment, enabling them to share their experiences upon returning home. Internationalizing higher education institutions goes beyond simply recruiting international students and holds immense importance in the twenty-first century (Zayachuk, 2021).

Another concept that resonates with board members is the belief that increasing collaboration agreements with foreign universities will enhance the institution's "international" standing. While having numerous agreements with top-ranked institutions is valuable, failing to effectively utilize and communicate about these partnerships will result in missed opportunities for the HEI. To solidify its position within the global education market, HEIs should not solely focus on academic mobility programs; instead, they must prioritize scientific collaborations and emphasize published research, particularly impactful contributions. The emphasis should shift towards generating outcomes rather than mere outputs – pursuing research with genuine potential to advance the field (Geuna, 2015).

Having a global perspective is a common objective for universities striving to distinguish themselves. Achieving the goal of becoming a truly international institution is challenging and varies depending on each academic institution's level of internationalization, specific needs, and the influence of their location. Each higher education institution must develop a tailored plan and implement it effectively. It is an ongoing process that demands careful consideration of what the international market deems as "standard" or "State-of-the-Art" (De Wit & Altbach, 2021). In the case of engineering schools, they must consistently revise their curricula, study plans, laboratories, etc., similar to other academic programs. The critical distinction for an engineering school lies in ensuring that updates align with technological requirements set by the job market (Kajale & Shaikh, 2022).

The smooth operation of this continuous process will allow the HEI to access numerous advantages in the global education sector. These benefits encompass a positive impact on local and national economies, increased collaboration between their researchers and other institutions, higher profit margins from tuition fees, and most significantly – providing their

students with an internationally respected education that meets the requirements of today's industry (Fielden et al., 2007).

There has been a trend being set by the global educational market in recent years, to be an “international” higher education institution (HEI). There are a series of reasons that drive universities to submit to this “standardization”, benefits that will be acquired throughout the internationalization process. There is a need for decision-makers to view education as a service, meaning HEIs are service providers. As in any business, whether its product is tangible or intangible, the possession of a marketable commodity is utterly important. After it is understood that HEIs are providers, it can be agreed on the existence of a necessity to be transformed into a recognizable, prestigious, and desired brand. Branding can be defined as a process of building an image for a specific targeted group, with the objective of being linked and identified to said group (Karens et al., 2016). A top benefit of successfully achieving internationalization is global and local recognition and taking advantage of this awareness to increase the number of students from different cultures (Cattaneo et al., 2016).

Achieving global recognition can position the higher education institution (HEI) as a contender for prominent university rankings, granting it the legitimacy markers it requires, such as prestige and reputation. This, in turn, can make the HEI a more viable candidate for securing public or private funding (Suchman, 1995; Bitektine, 2011). Private higher education institutions often prioritize financial gains, suggesting an economic perspective may drive their motivations (Teixeira et al., 2014). The financial viability of higher education institutions relies on revenue streams from student tuition as well as investments from private and public entities. Consequently, for these institutions to remain attractive to their stakeholders, they must maintain a strong position in university rankings. This lends credibility and legitimacy to the degrees conferred, fulfilling the expectations of industry and the wider employment market (Rodionov, 2014). Table 2.2.1 provides an overview of some prominent ranking agencies and the weightings they assign to various criteria, such as teaching and learning, as well as research output, as performance indicators for the internationalization of higher education (Kumar & Aithal, 2020).

**Table 2.2.1: List of ranking agencies and their weightage for Internationalization of Higher Education**

| Ranking Agencies  | Weightage for Teaching Learning | Weighted for Research Output | Weightage for Internationalization |
|---|---------------------------------|------------------------------|------------------------------------|
| Times Higher Education Ranking model, UK                          | 30%                             | 60%                          | 7.50%                              |
| QS World University Ranking model, UK                             | 40%                             | 20%                          | 10%                                |
| Round University Ranking, Russia                                  | 40%                             | 40%                          | 10%                                |
| U.S. News & World Report's Best Global Universities Ranking (USA) | -                               | 90%                          | 10%                                |
| Global University Ranking Russia                                  | 20%                             | 20%                          | 10%                                |

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*Source: Adapted from Kumar & Aithal (2020). Internationalization of Higher Education: A Stakeholder Approach. Scholedge International Journal of Business Policy & Governance ISSN 2394-3351, Vol.07, Issue 06 (2020), Pg. 84-93. DOI: 10.19085/sijbpg070601*

The performance indicators used by global university ranking agencies to evaluate higher education's contribution to internationalization are detailed in Table 2.2.2. The QS World University Ranking, one of the prominent ranking systems, was established in 2004 and has since become a prominent benchmark that many universities aspire to achieve recognition from.



**Table 2.2.2: Internationalization as a performance indicator**

| Ranking Agencies  | Weightage for Internationalization | Performance Indicators & Weightage  |
|---|------------------------------------|---|
| Times Higher Education Ranking model, UK                          | 7.50%                              | <ul style="list-style-type: none"> <li>• Percentage of international students: 2.5%</li> <li>• Percentage of international staff: 2.5%</li> <li>• International collaboration: 2.5%</li> </ul>  |
| QS World University Ranking model, UK                             | 10%                                | <ul style="list-style-type: none"> <li>• International Faculty</li> <li>• International Student Ratio</li> </ul>  |
| Round University Ranking, Russia                                  | 10%                                | <ul style="list-style-type: none"> <li>• Share of International staff in percentile (2%)</li> <li>• Share of International students in percentile (2%)</li> <li>• Share of International co-authored papers (2%)</li> <li>• Reputation outside the region (country/continent) (2%)</li> <li>• Institutions internationalization level (2%)</li> </ul> |
| U.S. News & World Report's Best Global Universities Ranking (USA) | 10%                                | <ul style="list-style-type: none"> <li>• International collaboration-relative to country.</li> <li>• International collaborative publications</li> </ul>  |
| Global University Ranking Russia                                  | 10%                                | <p>International Activities like:</p> <ul style="list-style-type: none"> <li>• Membership of a university in the international academic communities</li> <li>• Number of foreign students from an aggregate number of students</li> </ul>   |

*Source: Adapted from Kumar & Aithal (2020). Internationalization of Higher Education: A Stakeholder Approach. Scholedge International Journal of Business Policy & Governance ISSN 2394-3351, Vol.07, Issue 06 (2020), Pg. 84-93. DOI: 10.19085/sijbpg070601*

A key objective for higher education institutions aiming to expand their international reach is to align their efforts with the performance metrics utilized by ranking organizations as the foundation for their institutional assessments. The specific indicators employed by the QS company in formulating their ranking system are outlined in Table 2.2.3 (O, 2016).

**Table 2.2.3: Performance indicators for compiling QS World University Rankings**

| Indicator                   | Weight |
|-----------------------------|--------|
| Academic reputation         | 40%    |
| Employer reputation         | 10%    |
| Faculty/Student Ratio       | 20%    |
| Citations per faculty       | 20%    |
| International faculty ratio | 5%     |
| International student Ratio | 5%     |

---

*Source: Adapted from O, C., & Written by Craig O. As Head of Content. (2022, February 14). QS World University Rankings*

The QS rankings enable higher education institutions to be recognized and showcased on ranking lists (Table 2.2.4) based on their performance across specific academic disciplines. This is especially beneficial for universities that have thriving programs in certain fields or that offer a restricted range of academic programs. The QS rankings allow these institutions to accentuate their strengths and enhance their visibility within the broader higher education domain (QS World University Rankings, 2021b).

**Table 2.2.4: QS Top Engineering & Technology Ranking**

| Rank | University   | Overall Score |
|------|--|---------------|
| 1    | Massachusetts Institute of Technology (MIT)<br><i>Cambridge, United States</i>   | 97.3          |
| 2    | Stanford University<br><i>Stanford, United States</i>                            | 96            |
| 3    | University of Cambridge<br><i>Cambridge, United Kingdom</i>                      | 93.4          |
| 4    | ETH Zurich – Swiss Federal Institute of Technology<br><i>Zurich, Switzerland</i> | 93.2          |
| 4    | Nanyang Technological University, Singapore (NTU)<br><i>Singapore, Singapore</i> | 93.2          |

| Rank | University  | Overall Score |
|------|---|---------------|
| 6    | University of Oxford<br><i>Oxford, United Kingdom</i>                     | 92.5          |
| 7    | University of California, Berkley (UCB)<br><i>Berkeley, United States</i> | 92.4          |
| 8    | Imperial College London<br><i>London, United Kingdom</i>                  | 92.1          |
| 9    | National University of Singapore (NUS)<br><i>Singapore, Singapore</i>     | 91.9          |
| 10   | Tsinghua University<br><i>Beijing, China (Mainland)</i>                   | 91.5          |

---

*Source: Adapted from QS World University Rankings for Engineering & Technology (2021a).*

Internationalization is critical not only for HEIs, but also for all stakeholders, including current and prospective students. Education plays a pivotal role in providing access to fundamental necessities such as food, healthcare, and security. It serves as a foundation for addressing socioeconomic disparities and enhancing quality of life, while simultaneously contributing to societal advancement (Memon, 2007). Advancement or regression in any industry inevitably impacts the local and national economy. When a local higher education institution effectively implements its internationalization strategy and achieves prestigious rankings, it tends to produce substantial economic advantages for the surrounding region. These advantages can include increased investment and funding for the institution, leading to expanded research capabilities, cutting-edge facilities, and the attraction of top-tier faculty and students. This, in turn, generates a skilled workforce, spurs innovation, and attracts high-tech companies to the local area, ultimately driving economic growth and prosperity for the entire community (Johnson K. A., 2014).

Many government officials prioritize attracting direct foreign investment to their respective regions. The establishment of international companies within a city or state can spur economic growth across various industries, such as real estate, consumer products, transportation, education institutions, etc. This not only provides the necessary capital for accessing new technologies, but also generates employment opportunities (Borensztein et al., 1998).

Global organizations continually seek strategies to reduce operational expenses, such as minimizing labor costs, trade tariffs, or shipping fees by relocating their operations to be closer to their intended markets. This allows them to optimize their supply chain and logistics, leading to cost savings that can be reinvested into other areas of the business to drive growth and profitability.

Multinational corporations often relocate their manufacturing operations to developing nations, such as Mexico, where the cost of manual labor is significantly lower than in industrialized, first-world countries. This strategic geographic placement allows these firms to be in close proximity to major consumer markets, like the United States, thereby optimizing their supply chain and logistics to achieve cost savings that can be reinvested to drive growth and profitability (Waldkirch, 2008). Organizations must ascertain that their workforce possesses the requisite qualifications to manufacture their products.

When a prestigious university is situated in the local area, enterprises can leverage the pool of highly skilled graduates from these institutions. Furthermore, they may partner with the higher education institution to develop a customized training curriculum catered to their particular requirements. Access to these resources will equip the organization with the competitive advantage they envisioned when initiating operations in the region (Juškevičienė et al., 2022).

The presence of international incoming students generates significant economic benefits for the host region. These students require various goods and services, such as food, housing, clothing, and leisure activities, which contribute to the local economy's growth. In fact, the economic impact of international students is so substantial that in 2019-2020, the United States experienced a decline of \$1.8 billion and the loss of more than 42,000 jobs that were either created or supported by the spending of these students (Williams June, 2020).

## 2.3 Culture, Multiculturalism, and Interculturality

### 2.3.1 Culture

All cultures have developed creation myths and religious beliefs to explain their origins and beginnings. In addition to understanding their ancestral roots, these societies also had to adapt and evolve new technologies, tools, and communication methods to ensure their survival as a species. The recognition of familial bonds led to the establishment of defined spaces, dwellings, and communities bound by shared ancestry, language, and the fulfillment of fundamental needs, myths, and technological advancements. This process can be broadly characterized as the emergence of culture (D'Ambrosio, 2020).

Nieves Loja (2020) and Marco Sanz (2020) argue that during the 19th and 20th centuries, culture gained significance through the promotion of a participatory culture that could encompass ancestral knowledge, lifestyles, and traditions. This participatory culture was shared with all members of society, including their ways of acting, feeling, and thinking, forming a complex system of instructions. It is crucial to analyze the epistemological parameters of the knowledge acquired by specific groups to facilitate the development of this participatory culture. Furthermore, Nieves states that some authors believed it necessary to redefine the concept of culture from its origins, focusing on the information, such as cultural blending, immense diversity, and peripheral status, that has persisted over time.

Culture gives an overwhelming feeling that on many occasions is not chosen, but spontaneously assumed; a call of what a generation expects an individual to be, but always returning to the sources or “treasures” to recover lost values; sources of knowledge that were historically constructed with their traditions by the group’s rationality. *“Culture is something that is seen, palpable, felt, and kept attached to the skin”* (Sanz, 2020, p. 244). Equal cultures do not exist, just some dominate others because of the cultural, gender asymmetry, and socio-economic context. (Nieves Loja, 2020).

Culture is a dynamic process that transmits knowledge, norms, language, symbols, and values to successive generations. It is important to recognize that cultures are not uniform, as evidenced by the diverse manifestations of European, Pakistani, Western, and other cultural forms. Culture serves as a symbolic mode of communication between older and newer generations, fostering unity and shaping the arts, beliefs, customs, knowledge, morals, and laws that define a society (Kapur, 2020).

Academics have extensively discussed the evolving nature of culture as globalization trends towards a more homogenized global culture. This is driven by the transformative effects of heightened interconnectivity between nations, which has reshaped cultural practices and lifestyles worldwide. While some argue that globalization homogenizes cultures, others contend that it also facilitates the exchange and blending of diverse cultural elements, leading to the emergence of hybrid cultural forms. The scholarly debate surrounding the impacts of globalization on cultural diversity remains an active area of inquiry (Briceño Linares, 2020). Globalization has profoundly transformed various facets of human life, and it is argued to foster the diversification and fragmentation of the world's cultures.

Cross-culturalism (CC) has facilitated the internationalization of culture. It is characterized by the interrelationships between diverse communities, cultures, and individuals, aimed at fostering stable coexistence through shared values, equality, human rights, non-discrimination, and respect for fundamental rights and diversity. Establishing CC frameworks can lead to the differentiation of cultures by creating dynamic spaces of mutual learning. Various CC models have been developed to identify and assess global abilities and competencies, including cultural intelligence, global leadership, intercultural competence, intercultural sensitivity, and multicultural personality (Carballal & Pinillos, 2020).

### 2.3.2 Multiculturalism

The concept of multiculturalism (MC) has been defined in various ways by different scholars, but a common understanding is that it is a descriptive and objective phenomenon present within cultures. Multiculturalism acknowledges and celebrates the diversity of cultural identities and traditions within a society. A country can be considered multicultural when it has diverse ethnic, linguistic, and religious groups residing within its borders.

Multiculturalism is a movement that aims to promote the cultural advancement of these groups, ensuring respect, equal opportunities, and the preservation of unique cultural identities and practices for each culture. By embracing multiculturalism, societies can foster greater understanding, cross-cultural exchange, and social cohesion among their diverse populations.

According to the Ibero-American General Secretariat (2020), the concept of multiculturalism emerged and gained prominence during the 1960s and 1970s in countries such as Australia, Canada, the United Kingdom, and the United States. Multiculturalism is viewed as a model of public policy, and it has been implemented in various nations, including Australia, the United Kingdom, and Sweden.

In the last decade, MC has gained importance, turning it into a social construction concept in a globalized and internationalized world, thanks to ethnic, migratory, and urban studies (Aravena Domich & Ramírez Giraldo, 2020). This concept has a vital role in equal learning opportunities for university students, which consists of giving interactions of similar language proficiency levels to establish multicultural relationships beyond boundaries (Carol & Ramírez, 2020).

According to Díaz Romero (2021), multiculturalism enables university students and their educational programs to enhance their social and multicultural competencies in pursuit of a global linguistic environment. This facilitates students' engagement with the diversity and plurality of universal ideas, principles, and values, regardless of their origin or location. As a

result, there is a need for English language proficiency, which universities can cultivate as a valuable soft skill to position their students for success in their professional and productive endeavors.

MC is considered by Aixelà-Cabré (2022) a political and philosophical paradigm that defends the idea of the accommodation-recognition-respect degree by societal institutions facing the ethnocultural minority groups' identities and practices.

Ivenicki (2021) and Vakil (2021) argue that multiculturalism in universities encourages teachers to enhance their role as pedagogues. This involves valuing cultural diversity (CD) and promoting inclusive perspectives in learning and teaching. As a result, distinct approaches to adult multicultural education have emerged. One such approach is the ideology of empowering student identities to support CD. This is achieved by interiorizing and internationalizing higher education in multicultural countries, as well as promoting events that foster humanistic values and acceptance of all people. The development of MC is directly influenced by factors such as globalization, human capital, educational attainment, personal interests, personality traits, self-actualization, and social engagement. These factors contribute to the prominence of multicultural values, which are essential for shaping an individual's personality and worldview in today's globalized context.

In higher education, MC is developed through understanding the concepts of culture, pluriculturalism, identity formation, and cultural construction, all of which align with multiculturalism as a socially constructed concept in our globalized and internationalized world (Aravena Domich & Ramírez Giraldo, 2020). Ibero-American General Secretariat (Zarlenga & Lucesole, 2020) mentions that diversity is associated with multicultural societies for its acquirement and ethnic and national differences. Comboni Salinas and Juárez Núñez (2020) point out that multiculturalism needs to be incorporated not to isolate any individual or any culture.



### 2.3.3 Interculturality

Interculturality, as its concept implies, is the interrelationship that exists between communities, cultures, and peoples seeking a stable coexistence based on human rights, equality, non-discrimination, respect for fundamental rights and diversity, and common values. To create and foster such coexistence in spaces of dynamic encounter, interculturalism (IC) is established, which seeks to build mutual learning that differentiates cultures while maintaining the similarities between them (United Nations General Assembly, 1948). This concept encourages coexistence strategies and integration policies to value diversity and positive interaction, developing relationships of learning, cooperation, and preventive regulation of mutual conflict.

A person finds himself in an intercultural situation when, *“the distance between the participants is significant enough to have an effect on interaction/communication that is noticeable to at least one of the parties”*. (Spencer-Oatey & Franklin, 2009, p. 3).

Interculturality encompasses the need for individuals and communities to embrace shared values and norms, while also fostering inclusivity towards diversity within the social and educational framework of the host society (Spencer-Oatey & Franklin, 2009). In a modern society, individuals are not confined to their own cultural identities, but rather have a sense of belonging to multiple cultures and communities. This understanding of culture goes beyond mere tolerance of differences and requires active engagement and empathy towards other cultures. Interculturality is important because it promotes mutual understanding, respect, and cooperation between individuals and communities from different cultural backgrounds (Youl Hong, 2023).

One of the challenges of globalization is that societies have become more diverse and interconnected, the concept of interculturality becomes increasingly relevant. It helps to challenge stereotypes, prejudices, and discriminatory attitudes resulting from a lack of knowledge or understanding of other culture and foster social cohesion by promoting dialogue and mutual learning (Spencer-Oatey & Franklin, 2009). It recognizes the value in both

assimilation and cultural diversity, highlighting the need for individuals to integrate into the host society while also embracing and celebrating their own cultural heritage (Bennett J. M., 2015).

Intercultural interaction also holds a significant role in the academic setting. It fosters an inclusive and fair learning environment that ensures all students feel valued and supported. This contributes to improving students' understanding of different cultures and their capacity for effective communication and cooperation with people from diverse backgrounds. Through the promotion of intercultural education, educational institutions can equip students to succeed in a globalized and varied world. Moreover, interculturality cultivates critical thinking abilities and encourages students to scrutinize their own presumptions and prejudices. Additionally, it nurtures the development of intercultural skills, which are vital in today's interconnected society, providing students with the necessary tools to navigate and appreciate cultural differences (Gupta, 2022; Ramos, 2023).

#### 2.3.4 Cross-Cultural Competence, Intercultural Competences, and Cultural Intelligence

Many researchers have recently paid attention to the way an individual can adequately develop and act in different cultural environments (Bernardo & Presbitero, 2017). After reviewing the differences between the concepts of Culture, Multiculturalism, and Interculturality; it can be seen that these terms have a relationship since Cross-Cultural Competence (CCC).

According to Ming Li (2020) CCC divides into two constructs: Intercultural Competence and Cultural Intelligence, both have the same objective; the understanding of why certain individuals are more effective when interacting with different cultures.

*Cross-cultural competence* is the ability to operate in distinct cultural settings by acknowledging and respecting diversity (Magala, 2005). *Intercultural Competence*, as described by Hammer, Bennet & Wiseman (2003), is having a set of skills that will allow you to act in an interculturally appropriate way. Peterson (2004) says that *Cultural Intelligence* is the ability to engage and accordingly use the set of skills (Multicultural competencies) that will

allow an individual to act accordingly in other cultures. It is noted that there is a way to connect and act between different cultural backgrounds. Graduates must possess the capabilities to function effectively and adapt within the ever-changing global context, demonstrating cultural awareness, empathy, and the ability to communicate and collaborate across diverse cultural boundaries (Dessler, 2020).

In Mexico, the educational system's internationalization and policy strengthening have led to an increased emphasis on cross-culturalization. This has resulted in the provision of education and integration of indigenous groups, consolidating bilingual education and interculturality. During the current COVID-19 pandemic, the cross-cultural movement has been compelled to focus on "internationalization at home". Universities are actively developing cross-cultural skills through their various activities and strategies, enabling both students and faculty to evolve in this area without the need for participating in traditional academic mobility programs. This shift has allowed for greater accessibility and inclusion, as individuals can now gain valuable cross-cultural experiences and competencies within their local environments (Nigra, 2020).

It is mentioned by the Ibero-American General Secretariat (Zarlenga & Lucesole, 2020), that alongside MC, cross-culturalism is taking an important place in Higher Education for university graduates under internationalization. Cross-culturalism in Higher Education is acquired by dynamic relations that occur within different cultural groups under equal conditions, having as the central point the cultures.

As conceptualized by Earley and Ang (2003), intercultural intelligence refers to an individual's capacity to effectively navigate and adapt to diverse cultural contexts where people exhibit varying behavioral and cognitive patterns. This form of intelligence facilitates the understanding of why some individuals achieve greater success when operating within international settings (Thomas et al., 2015).

Authors Earley et al (2006) & Li (2020) explain that *intercultural Intelligence* (CQ) is composed of four dimensions, Metacognitive, cognitive, motivational, and behavioral. The

*Metacognitive CQ* is the process in which a person acquires cultural knowledge; *cognitive CQ* is the individual's understanding of the culture by learning the difference between his own and the foreign culture; *motivational CQ* is the drive to learn, experience, and interact with other cultures; *behavioral CQ* is the individuals' ability to act accordingly, verbally and non-verbally, when presented with an international interaction through the proper use of the cognitive knowledge acquired. The authors believe that CQ is correlated to what is called the "Big Five" personality factors, *openness, agreeableness, extraversion, conscientiousness, and neuroticism* (Earley et al., 2006) (Li et al., 2016) (Li M. , 2020).

ICC is defined by Johnson, Lenartowicz, and Apud as *"an individual's effectiveness in drawing upon a set of knowledge, skills, and personal attributes to work successfully with people from different national cultural backgrounds at home or abroad"* (Johnson et al., 2006, p. 530).

Deardorff (2011a) provides support for the previous argument by asserting that intercultural competency involves effectively and appropriately engaging in intercultural situations, incorporating an understanding and respect for cultural diversity. This is developed through a combination of attitudes, knowledge, and skills that allow individuals to communicate and interact with people from diverse cultural backgrounds. The pinnacle expression of intercultural competence is demonstrated through adept behavior and communication within intercultural environments.

As Freeman et al (2009) and Deardorff (2004) (2006) mention, intercultural competence is a dynamic, ongoing, and self-reflective learning process that strengthens itself through the acquirement of an education and through the interaction with people that have different cultural backgrounds, which in turn give the individual more tools to interact and communicate effectively and appropriately across cultures.

Cui and Van Den Berg (1991) use the term intercultural effectiveness, and they define it as the overall evaluation of an individual's capacity for successful cross-cultural communication, encompassing social engagement, cultural sensitivity, interpersonal abilities, and personal characteristics.

After doing the research on Cross-Cultural Competence, Cultural Intelligence and Intercultural competence, intercultural effectiveness, a conclusion can be drawn as all three terms have very similar definitions. The ability to use a wide array of knowledge and skills navigate efficiently and appropriately within different cultures (Hammer et al., 2003; Peterson, 2004; Magala, 2005). The term varies depending on the author that is explaining the phenomenon. As discussed earlier, the concept of *intercultural competence* has been referred to using a variety of terms, including global competence, international competence, transcultural competence, multicultural competence, cross-cultural adaptation, cross-cultural adjustment, intercultural sensitivity, and communicative competence, among others (Fantini A. E., 2009). For the purpose of this investigation, the used term will be Intercultural Competence (ICC).

## **2.4 Development of Intercultural Competences & Contemporary Models of Intercultural Competence**

Following the aftermath of World War II, the scientific community became increasingly interested in the concept of intercultural competence, driven by the need to cultivate effective individuals within governmental international programs like the Peace Corps. In this regard, M.B. Smith's (1966) research on a group of Peace Corps teachers in Ghana uncovered a series of personality qualities or traits that were integral to their effectiveness, including interpersonal openness, empathy, and interpersonal sensitivity; also identifying:

“a pattern defined on its good side by qualities of warranted self-confidence, commitment, energy, responsibility, autonomy, flexibility, and hopeful realism together with other skills and attitudes more specifically appropriate to the role of Peace Corps teacher” (Smith, 1966, p. 558).

Harris (1977) identified a series of twenty-four variables that distinguish the successful volunteers from the rest within the Peace Corps; the author included items that have an impact on intercultural competence such as adaptability, cultural sensitivity, realism of goals, agreement and compromises, proficiency with language, initiative, reliability, patience and

tolerance, self-reliance, responsibility, inner strength, perseverance, cooperatives, friendliness, maturity, argumentativeness, courteousness.

Spitzberg and Changnon's (2009) chapter "Conceptualizing Intercultural Competence" outlines five distinct types of intercultural models. The first, *Compositional Models*, presents a collection of hypothetical traits or qualities without a specified relationship among them. The second, the *Co-orientational Model*, shares commonalities with other models and focuses more on a particular criterion. The third, the *Developmental Model*, incorporates the time dimension by stipulating a progressive stage in which a competence is assumed to emerge. The fourth, *Adaptational Models*, consider multiple interactions and emphasize an interdependence within reciprocal actions. The fifth, the *Causal Process Model*, typically depicts a pathway leading to an outcome that indicates a specific competence (Spitzberg & Changnon, 2009).

Given the focus of this dissertation on identifying intercultural competencies and examining their acquisition during international academic mobility, the primary emphasis will be on compositional models. This will involve an in-depth investigation of the intercultural components that constitute the Competence Components Model developed by Hamilton, Richardson, and Shuford (1998), particularly those aspects that demonstrate an impact on preparation for the global labor market.

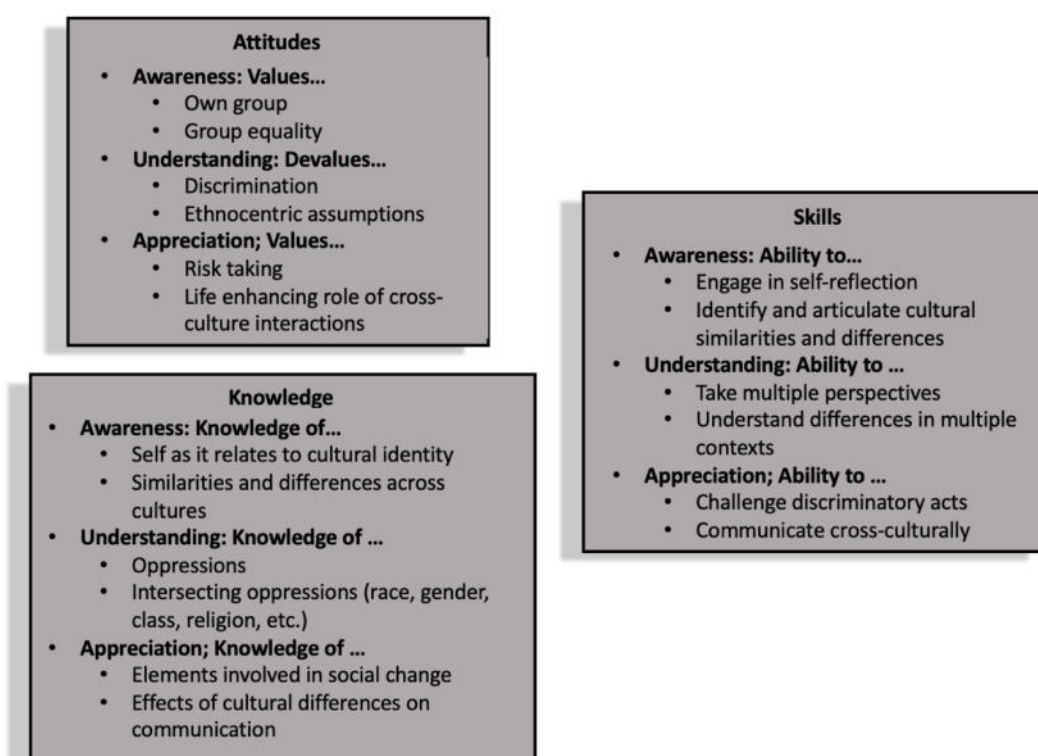
#### 2.4.1 Compositional Models

##### 2.4.1.1 Intercultural Competence Components Model

Intercultural competence consists of three main dimensions according to Hamilton, Richardson, and Shuford (1998) shown in Figure 2.4.1.1.1., *attitude* which includes the valuing of diversity, respect towards people and other cultures, willingness to empathize, etc.; *knowledge*, understanding diversity of cultural groups, understanding of own's and other people assumptions, preconceptions, prejudices, etc.; *skills*, multi-perspectivity, interpreting other cultural practices and beliefs, behavior adaptability, linguistic skills, etc. Barret et.al (2014) includes another component, *actions*, such as seeking opportunities to engage or

cooperate with other people from different backgrounds, challenging stereotypes and prejudices, cultural mediation, etc. A more entailed description of the components included in each of the dimensions mentioned above is listed in Table 2.4.1.1.1.

**Figure 2.4.1.1.1: Intercultural Competence Components Model**




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Source: Adapted from Hamilton, Richardson, and Shuford (1998) *Promoting multicultural education: A holistic approach*.

**Table 2.4.1.1.1: List Intercultural Components**

|                             |  |
|-----------------------------|--|
| Attitude                    | <ul style="list-style-type: none"> <li>• Appreciate the richness of cultural diversity and the plurality of perspectives and practices.</li> <li>• Respect for people with different cultural affiliations.</li> <li>• Openness to, curious about, and willingness to learn from and about people with different cultural orientations and perspectives.</li> <li>• Willingness to empathize with people from different cultural affiliations.</li> <li>• Willingness to question that which is usually taken for granted as 'normal' according to the previously acquired knowledge and experience.</li> <li>• Toleration towards ambiguity and uncertainty.</li> <li>• Willing to seek out opportunities to engage and cooperate with individuals who have different cultural orientations and perspectives.</li> </ul>  |
| Knowledge and Understanding | <ul style="list-style-type: none"> <li>• Acknowledging the inherent diversity and variability present within all cultural groups</li> <li>• Developing an awareness and deeper comprehension of one's own as well as others' underlying assumptions, preconceptions, stereotypes, biases, and both explicit and implicit forms of discrimination.</li> <li>• Acknowledging the ways in which one's linguistic and cultural identities inform one's perspectives and experiences of the world and engagement with individuals from diverse backgrounds.</li> <li>• Developing communicative competence entails recognizing that individuals from diverse linguistic and cultural backgrounds may articulate shared concepts in unique ways or convey novel ideas that are challenging to access through one's own language. Additionally, it requires acknowledging that people from differing cultural affiliations may adhere to distinct verbal and nonverbal communicative norms that hold inherent significance from their respective perspectives.</li> <li>• Knowledge of the beliefs, values, practices, discourses, and products that may be used by individuals with a particular cultural orientation.</li> <li>• Understanding of processes of cultural, societal, and individual interaction, and the socially constructed nature of knowledge.</li> </ul> |
| Skills                      | <ul style="list-style-type: none"> <li>• Multiperspectivity - the capacity to move away from one's own viewpoint and to consider alternative perspectives in addition to one's own.</li> <li>• Competencies in investigating and comprehending information regarding diverse cultural identities and viewpoints.</li> </ul>  |



|         |  |
|---------|--|
|         | <ul style="list-style-type: none"> <li>• Abilities to academically analyze and comprehend other cultural practices, beliefs, and values, and contextualize them in relation to one's own.</li> <li>• Empathy – the capacity to comprehend and react empathetically to others' perspectives, convictions, values, and emotional states.</li> <li>• Cognitive flexibility – the capacity to adjust and modify one's thought processes based on the specific situation or context.</li> <li>• Abilities to rigorously examine and render well-considered judgments regarding cultural beliefs, values, practices, discourses, and artifacts, including those associated with one's cultural affiliations, and the capacity to articulate one's perspectives in an academic manner.</li> <li>• The capacity to adjust one's conduct to fit new cultural contexts - for example, refraining from verbal and nonverbal behaviors that may be perceived as disrespectful by individuals with divergent cultural affiliations.</li> <li>• Abilities to utilize linguistic, sociolinguistic, and discourse-level skills, including competencies in navigating and resolving communicative disruptions.</li> <li>• The ability to employ multilingual competencies to navigate the communicative requirements of an intercultural exchange, including utilizing proficiency in multiple languages or language varieties, or leveraging familiarity with one language to comprehend another.</li> <li>• The capacity to facilitate and mediate intercultural exchanges, involving proficiencies in translation, interpretation, and elucidation.</li> </ul> |
| Actions | <ul style="list-style-type: none"> <li>• Seeking opportunities to engage with people who have different cultural orientations and perspectives from one's own.</li> <li>• Interacting and communicating appropriately, effectively, and respectfully with people who have different cultural affiliations from one's own.</li> <li>• Cooperating with individuals who have different cultural orientations on shared activities and ventures, discussing differences in views and perspectives, and constructing common views and perspectives.</li> <li>• Challenging attitudes and behaviors (including speech and writing) that contravene human rights and take action to defend and protect the dignity and human rights of people regardless of their cultural affiliations.</li> <li>• Intervening and expressing opposition when there are expressions of prejudice or acts of discrimination against individuals or groups.</li> <li>• Challenging cultural stereotypes and prejudices.</li> </ul>  |

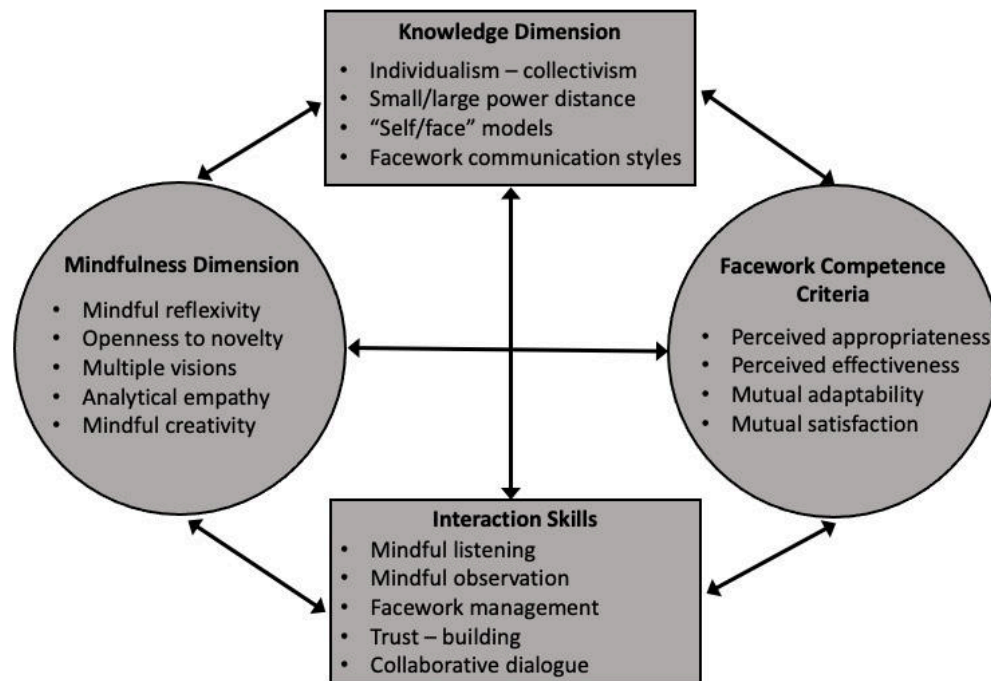
|  |   |
|--|---|
|  | <ul style="list-style-type: none"> <li>• Encouraging positive attitudes towards the contributions to society made by individuals irrespective of their cultural affiliations.</li> <li>• Mediating in situations of cultural conflict.</li> </ul> |
|--|---|

*Source: Adapted from Howard-Hamilton, M. F.; Richardson, B. J.; Shuford, B. (1998). Promoting multicultural education: A holistic approach. Barret, Byram, Lázár, Mompont-Gaillard, & Philippou (2014). Developing Intercultural Competence through Education. Council of Europe.*

#### 2.4.1.2 Facework–Based Model of Intercultural Competence

Stella Ting-Toomey and Kurogi Atsuko (1998) developed the Facework model of Intercultural Competence (Figure 2.4.1.2.1), which they presented in their publication "Facework Competence in Intercultural Conflict: An Updated Face-Negotiation Theory". The authors define "*Face*" as the favorable social perceptions that individuals have of a person. It is considered a dynamic concept, as it can change positively or negatively due to the uncertainty of social situations – it represents the image a person projects to others. "*Facework*" refers to the communicative efforts used to balance one's own "social dignity" and support or undermine the "social dignity" of others.

**Figure 2.4.1.2.1: Facework–Based Model of Intercultural Competence**



Source: Adapted from Ting-Toomey, Stella; Kurogi, Atsuko (1998) *Facework Competence in Intercultural Conflict - An Updated Face-Negotiation Theory*.

For Facework Competence to be achieved, knowledge, mindfulness, and communication skills must reach an optimal amalgamation point of controlling the individual’s or other’s “Face-related” concerns, acts that may be complicating the appearance of a person in an interpersonal situation (Ting-Toomey, 1997). The skills mentioned earlier relate to a culture’s tendency to accentuate the “I” or “We” – whether it focuses on groups or individuals – and are present in everyday interactions. This does not mean a culture must be one or the other; both mindsets can be present within the same group of individuals. However, there is a societal expectation in this regard (Ting-Toomey, 1988; Hofstede G. , 1991; Luhtanen & Crocker, 1992; Ting-Toomey, 2015).

The *knowledge dimension* comprises the information that individuals acquire through the learning process or personal experiences, providing an in-depth understanding of a phenomenon. The key concepts related to intercultural facework competence include

individualism and collectivism, power distance, self and face contrast, and facework communication style. To fully develop intercultural facework competence, one must consider the perspectives and beliefs of others (Ting-Toomey & Kurogi, 1998).

The *mindfulness dimension* requires one to reflect on one's culture and accustomed premises when viewing a conflict, and simultaneously observe one's ethnocentric evaluations in a constructive manner (Ting-Toomey & Kurogi, 1998). Thich (1991) describes mindfulness as an individual caring for their own cognition, assumptions, and emotions, while also considering the cognition, assumptions, and emotions of others through the use of the five senses. Ting-Toomey (1994) declares that one needs to learn how to view unknown behavior from a new context to be mindful of intercultural Facework differences, which requires having mental flexibility by reassessing one's and the world's assumptions. This flexibility fosters empathy, as Bennet (1993) comments on further.

Empathy [...] describes an attempt to understand by imagining or comprehending the other's perspective. Empathy is ethnorelative in that it demands a shift in frame of reference; it is based on an assumption of difference, and implies respect for that difference and a readiness to give up temporarily one's own worldview in order to imaginatively participate in the other's (Bennett J. M., 1993, p. 53).

According to Ting-Toomey and Kurogi (1998), when individuals in conflict resist engaging with one another, there can be no satisfactory resolution to an intercultural dispute. Rather, the parties involved must cooperate and reframe the issue constructively. It is essential to attentively listen to the counterpart's communication, as it will embody their personal identity and potentially hold socio-historical relevance.

*Interaction skills* are the abilities that help individuals communicate in a pertinent and effective manner, as well as adapt to the presented circumstances (Ting-Toomey, 1997). In the context of facework management, individuals utilize skills to enhance one's self-face or other-face through the strategic use of culturally appropriate messages that support identity. The

judicious application of this sensitive information by the participants can foster trust, facilitating a smooth conflict resolution process.

Alternatively, the misuse of such information may drive the parties apart, making the path to a resolution more challenging (Ting-Toomey & Kurogi, 1998). According to Fischer and Brown, individuals should strive to be "trustworthy," which entails understanding the cultural preferences of others regarding the concept of trust. However, they caution against being "wholly trusting," as trust inherently involves an element of risk. They also mention that trust is, *"The single most important element of a good working relationship"* (Fisher & Brown, p. 107)

*Intercultural Facework Competence*, according to Ting-Toomey (1994; 1997), is achieved when knowledge, mindfulness, and communication skills are optimally consolidated to manage identity-related facework issues from the involved parties' perspectives. This competence is evaluated through four criteria: appropriateness, effectiveness, adaptability, and interaction satisfaction. Ting-Toomey and Kurogi (1998) define Intercultural Facework Competence as:

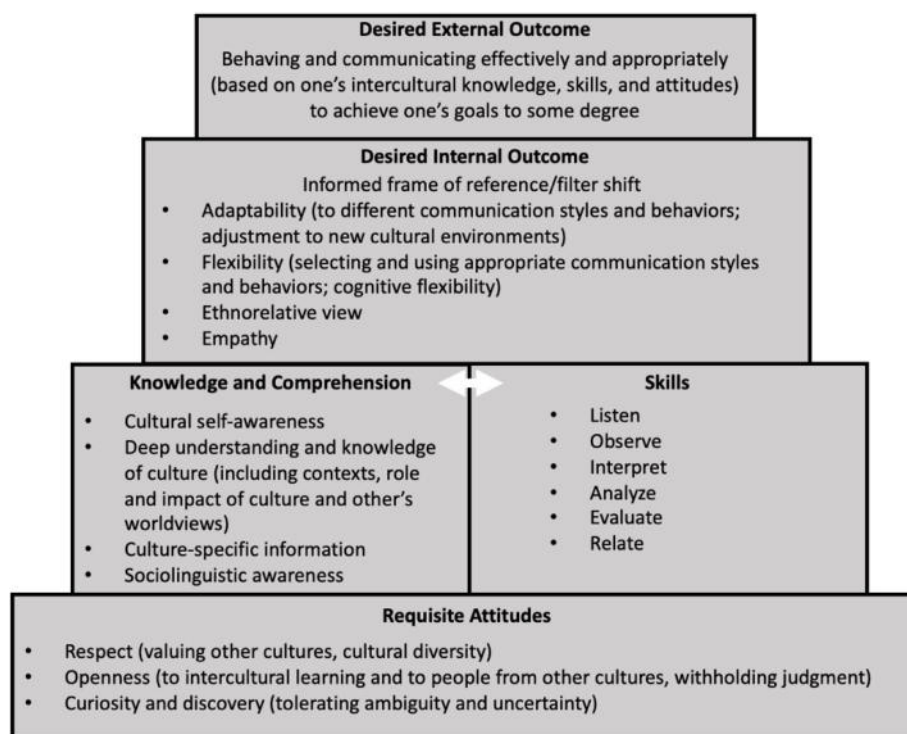
The process of how two cultural individuals uphold the impressions of appropriate and effective behaviors in a problematic, interpersonal situation. Intercultural facework (and hence, conflict competence) relies heavily on the perceptions of the disagreeing parties in evaluating each other's performance (Ting-Toomey & Kurogi, 1998, p. 210).

#### 2.4.2.3 Pyramid Model of Intercultural Competence

Through the application of the Delphi method, in (2006), Deardorff aided by the participation of intercultural experts, consensually defined intercultural competence and its components. The Pyramid Model of Intercultural Competence (Figure 2.4.2.3.1) was one of the two models that resulted from the research's data, in which the lower levels reinforce the higher levels. Like other models, the Pyramid Model, also takes into consideration motivation (attitude requisites), cognitive knowledge (knowledge and comprehension), and skills; but giving it a unique element by incorporating an internal and external desired outcome; representing the foundational elements and ordering of said elements to achieve the desired external outcomes

(effective and appropriate communication and behavior in intercultural circumstances, (Deardorff, 2006) (2009).

**Figure 2.4.2.3.1: Pyramid Model of Intercultural Competence**




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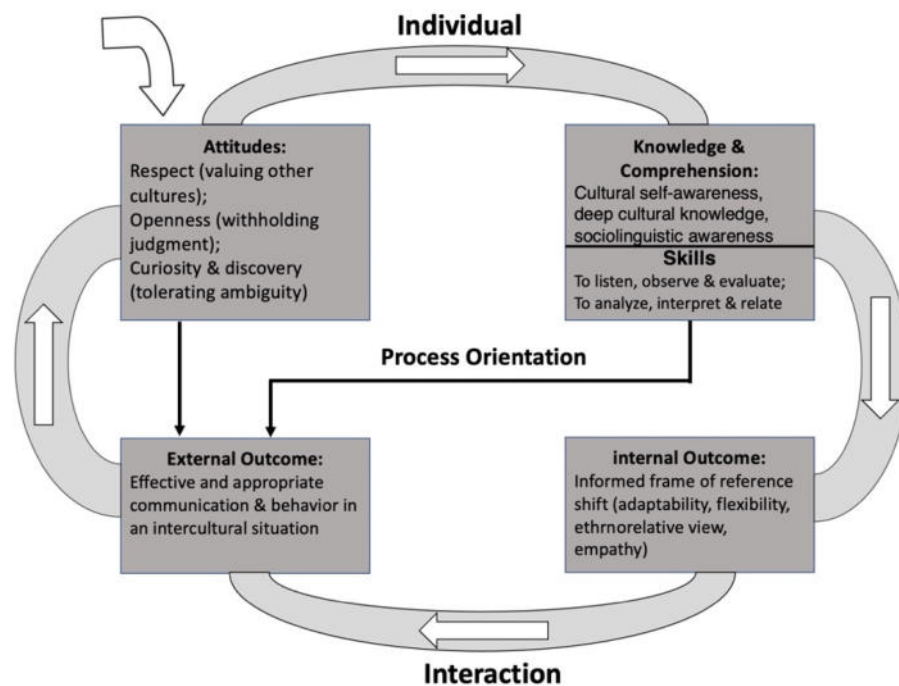
*Source: Adapted from Darla K. Deardorff (2006) Identification and Assessment of Intercultural Competence as a Student Outcome of Internationalization*

According to Deardorff (2006), the achievement of intercultural competence necessitates engaging in learning and developing specific skills across various levels. The more components an individual has acquired and developed, the greater their chance of achieving a higher degree of external outcome. Intercultural competence can never be fully achieved, as mentioned by the author, as it is an ongoing process with continuous areas for improvement. The author emphasizes that an individual's attitude is crucial, as it motivates them to acquire further knowledge. Other authors such as Okoyama, Furuto, and Edmonson support the importance of attitude in the acquirement of IC, through the following comment:

what may be most important is [...] to maintain culturally competent attitudes as we continue to attain new knowledge and skills while building new relationships. Awareness, the valuing of all cultures, and a willingness to make changes are underlying attitudes that support everything that can be taught or learned. (Okayama et al., 2001, p. 97).

The same elements mentioned on the pyramid (Figure 2.4.2.3.1) can also be seen in Figure 2.4.2.3.2 but showing the complex ongoing process of intercultural competence acquirement.

**Figure 2.4.2.3.2: Process Model of Intercultural Competence**



Source: Adapted from Deardorff, "The identification and assessment of intercultural competence as a student outcome of international education at institutions of higher education in the United States" (2004, p. 198) Note: Begin with attitudes; move from individual level (attitudes) to interaction level (outcomes). The degree of intercultural competence depends on the degree of attitudes, knowledge/comprehension, and skills achieved.

For Darla Deardorff (2004;2006) intercultural competence is an ongoing process and full achievement is not possible since many areas have a constant need for improvement. She

states the initial step is the *attitude* toward developing ICC; this step includes respect, openness, and curiosity among others. Then individually the person acquires *knowledge & comprehension and skills*; some of which are cultural self-awareness, cultural knowledge (CK), and skills to listen, observe, analyze, etc. This will turn into an *internal outcome*; adaptability, flexibility, empathy, etc.

After an interaction process, an *external outcome* will be developed; which includes appropriate and effective communication and behavior in different cultural situations. After the process is completed there will be a personal evaluation that will give the individual the attitude to acquire new knowledge to improve the areas that didn't fully satisfy their needs – restarting the process. The Process Model of Intercultural Competence can be seen in Figure 2.4.2.3.2.

#### 2.4.2.4 Developmental Model of Intercultural Sensitivity

Milton Bennett proposed his structure “Developmental Model of Intercultural Sensitivity” (DMIS) (Bennett M. , 2017) in which he talks about six stages for the intercultural competence acquisition of individuals in both academic and corporate settings through observation. Intercultural sensitivity is the ability to discriminate and experience relevant cultural differences. The stages are divided into two sections, ethnocentrism, in which the person centralizes in his or her own culture; and ethnorelativism, in which the point of view is putting his or her own culture in context with the foreign one (Fig. 2.4.2.4.1).

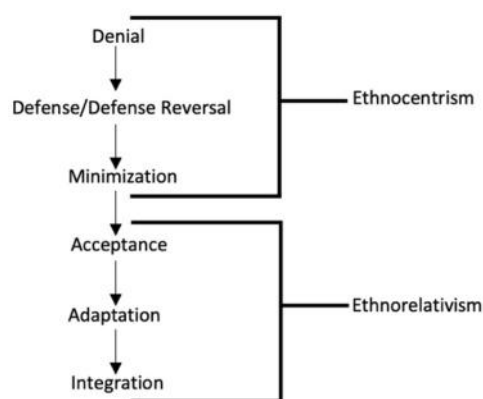
The stages described by Bennet are *denial*, this is when people who have no experience working or socializing with people from other cultures are forced into a cultural change, an example could be when the individual uses the term refugee or foreigner instead of differentiating by their country or culture; *defense*, in this stage people criticize and compare other cultures to their own and can give superiority to either one; *minimization*, the differences and comparisons are set a side and the person tends to focus more on the similarities between, generating tolerance; *acceptance*, people become aware of themselves and others in a cultural context and want to learn more about other cultures, their judgment



now is not passed on their own culture; *adaptation*, the individual has the feeling of appropriateness which guidelines the generation of “authentic behavior” in the alternative culture; and *integration*, it allows the movement in and out of different cultural views, meaning easiness to act or function as needed on a certain moment, and can function as a cross cultural mediator.

Bennet’s assumption of this model is that the more the individual learns and differentiates his or her own culture from others, adding more experiences from different cultures, the person becomes more complex, and increases his or her intercultural relations competence (Bennett M. , 1986; 2013; 2017; Hammer et al., 2003).

**Figure 2.4.2.4.1: Development Model of Intercultural Sensitivity**




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Source: Adapted from Bennett, M. J. (1993). *Towards ethnorelativism: A developmental model of intercultural sensitivity*. In R.M. Paige (Ed.), *Education for the intercultural experience* (pp. 21–71). Yarmouth, ME: Intercultural Press.

#### 2.4.2 Role of Higher Education Institutions.

Higher education institutions play a critical role in shaping the intercultural competence of students in today's globalized world. As the world becomes more interconnected, effective navigation and communication across cultures are crucial.

According to the report "Global Horizons for UK Students: A Guide for Universities" commissioned by the Council for Industry and Higher Education in the UK and funded by the Department of Innovation, Universities and Skills, Fielden et al. (2007) stated, that individuals frequently engage with people from diverse cultural backgrounds in today's interconnected world. Developing ICC enables students to effectively function and succeed in multicultural environments, enhancing their communication skills such as adapting communication styles, interpreting non-verbal cues, and overcoming language barriers. Proficient communication is vital for establishing connections and addressing conflicts across cultures.

As part of ICC, recognizing cultural differences and norms can help students address potential conflicts and misunderstandings that may arise within diverse settings. Intercultural competence fosters tolerance, respect, and efficient conflict resolution strategies. The authors also suggest that graduate employers prioritize candidates who have practical experience of residing and working in diverse cultural environments, aligning with universities' growing emphasis on fostering global citizenship (Fielden et al., 2007).

Study abroad programs, international collaborations, intercultural activities, and courses with global perspectives are strategic approaches that HEIs can implement to enhance students' intercultural skills. Training for faculty and staff in understanding cultural nuances and effective teaching strategies is also important for creating an inclusive learning atmosphere that promotes intercultural competence. This competence is increasingly essential as graduates are expected to work and collaborate across cultural boundaries, enhancing their professional and personal development (Pagliari, 2022).

Several studies have highlighted the importance of higher education institutions in nurturing intercultural competence. Guillén-Yparrea & Ramírez-Montoya (2023) mention that HEIs act as a platform for students to engage with diverse cultures, languages, and perspectives, preparing them to become global citizens. By integrating intercultural perspectives into the curriculum, offering study abroad programs, encouraging international student exchanges, and facilitating cultural activities on campus, higher education institutions help students develop a more nuanced understanding of the world. Such educational experiences contribute

to the students' ability to navigate different cultural contexts, challenge their own preconceived notions, and adapt to various cultural settings (Guillén-Yparrea & Ramírez-Montoya, 2023).

Existing research, such as the work by Rahman (2018), has demonstrated that study abroad programs can significantly enhance students' intercultural competence. However, higher education institutions can also cultivate global competence through on-campus internationalization initiatives, as exemplified by a study conducted by Mahoney et al. (2022). Their research investigated the development of global competence within a virtual classroom setting, where they adapted study abroad programs to an online format. The researchers examined how academic leaders modified their program delivery to create an experiential, intercultural learning environment in an online context.

Guillén-Yparrea & Ramírez-Montoya (2023) conducted an in-depth literature review on intercultural competencies in higher education, and after analyzing the data in 325 articles, they propose some strategies to be taken in consideration by HEIs for promoting intercultural competence among students and professionals:

- Promoting professional collaboration through the encouragement of intercultural interactions and experiences.
- Creating interactive learning opportunities in digital settings to enhance the development of intercultural skills through collaborative efforts.
- Highlighting the significance of intercultural communication competence within cross-cultural collaborations.
- Stressing the value of effective interaction and understanding in diverse, multicultural settings.
- Exploring themes related to interculturality, education, and fostering intercultural competencies for achieving shared goals through collaboration.
- Identifying elements that foster engagement among students from different cultural backgrounds while delving into global-level collaborative learning and cooperation initiatives.

Universities can further support their students in acquiring the requisite skills for global employment by incorporating an international focus into the curriculum. Internationalizing the curriculum is commonly seen as significant according to de Wit & Leask who state *“the incorporation of international, intercultural, and/or global dimensions into the content of the curriculum as well as the learning outcomes, assessment tasks, teaching methods, and support services of a program of study”* (De Wit & Leask, 2015, p. 11).

De Wit and Leask propose that the internationalization of the curriculum can be achieved through various means. This includes incorporating global perspectives, such as a variety of viewpoints, case studies, and illustrations from different regions to offer a comprehensive understanding of the topic; fostering intercultural communication and collaboration among students from diverse backgrounds through discussions and assignments; emphasizing how learning other languages can improve communication abilities and foster cultural appreciation; training faculty to integrate global perspectives into their teaching and scholarly pursuits; engaging in cooperative initiatives with global institutions or professionals to incorporate international perspectives into the curriculum; integrating global challenges & issues to help students understand the interconnected nature of the world; utilizing technology to connect students worldwide for virtual partnerships & conversations (De Wit & Leask, 2015).

The influx of international students into higher education institutions significantly contributes to the development of ICC among students. Numerous studies have shown that interactions with international students can improve cultural awareness, empathy, and communication skills among domestic students. These interactions offer valuable opportunities for students to gain insights into diverse cultures in interactive ways, leading to the acquisition of intercultural skills. Additionally, engaging with international students inside and outside of the classroom can help students become more comfortable interacting with individuals from diverse backgrounds, contributing to their overall growth in global, international, and intercultural competencies (Deardorff, 2009; Lee et al., 2012).

Students have the opportunity to engage in a range of international activities on campus, which can contribute to their acquisition of global, international, and intercultural skills. These activities may include study abroad programs, international student organizations, cultural events, and language exchange programs. Enrolling in global/international academic coursework is another activity students may inquire in, taking courses with a global or international focus can provide students with opportunities to learn about different cultures, global issues, and perspectives. Also, attending classes with a worldwide or global emphasis offers students the chance to gain insights into diverse cultures, international challenges, and varying viewpoints. Participating in events with an international focus is a great way to expand students' comprehension of global issues and encourage cross-cultural education. Another way is by participating in cultural clubs, language exchange initiatives, or associations for international students offers students the opportunity to engage with a variety of cultures and viewpoints (Pope & Mueller, 2005; Mayhew & Grunwald, 2006; Altbach & Knight, 2007; Lee et al., 2012; Soria & Troisi, 2013).

Institutions are increasingly prioritizing the preparation of students for a globalized environment, leading to an increased focus on developing intercultural competence. Educators acknowledge the significance of nurturing students as global individuals who can actively participate in and make meaningful contributions to the international community. To ensure that all students engage in meaningful intercultural learning, universities implement strategies and programs that promote intercultural interactions among students. After HEIs have employed various approaches to foster intercultural proficiency in their students. As a result, they anticipate specific criteria from their graduates that showcase the significance of intercultural competence in an international environment (Deardorff & Jones, 2012).

Table 2.4.2.1 illustrates several of the intercultural competencies that University of South Australia graduates are anticipated to possess.

**Table 2.4.2.1: International perspective indicators that the University of South Australia expects from its graduates.**

- Exhibit the capacity to think from a global viewpoint and consider matters from diverse perspectives.
- Demonstrate consciousness of their own cultural background and outlooks as well as those of other cultures.
- Identify intercultural issues pertinent to their professional endeavors.
- Appreciate the significance of multicultural diversity for professional practice and civic engagement.
- Recognize the complex and interrelated factors that shape understandings of culture and cultural relationships.
- Value linguistic and cultural diversity.
- Display awareness of the ramifications of local choices and actions on international communities, as well as the impact of international decisions and actions on local communities.

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*Source: Adapted from Deardorff & Jones (2012). Intercultural Competence: An Emerging Focus in International Higher Education. In The SAGE Handbook of International Higher Education p293. The University of South Australia (n.d.). Indicators of Graduate Qualities.*

If a higher education institution has a defined list of ICC abilities, such as those shown in table 2.4.2.1, and its students have proficiently developed these abilities, it indicates that its graduates are prepared to succeed in an interconnected global economy. The role of higher education institutions in the development of intercultural competence is crucial for preparing students to thrive in a globalized labor market due to the search by employers for graduates who possess robust intercultural competencies to excel in diverse work settings and cooperate efficiently with global counterparts (Deardorff & Jones, 2012).

### 2.4.3 Academic Mobility

There is a wide array of reasons that incentivize human resources to move to different regions and countries. In his book "Move: The forces Uprooting Us" (2021), Parag Khanna, says that the personal and professional lives of people are linked to movement; the movement of people, money, goods and data. The author says that a people should not link themselves to a specific geographical region due to its *nature*, such as natural resources, water and minerals; *politics*, the borders that separate nations; and *economics* like infrastructure and industry. A country's or "State's" position in power changes across time due to the movements mentioned

previously as he mentions in his text *“states are more like porous containers shaped by the flows of people and resources within and across them”* (Khanna, 2021, p. 2). Graduates and people in general must be ready to culturally adapt to these changes of scenery and having a prior experience will help on the matter.

According to the author it is time to "Move" to a different part of the world when some of the following reasons (Khanna, 2021, p. 2):

- Climatic: in the future many of the coastal cities will-be flooded due to the rise of the sea level. There will be droughts. People will go to the south in winter and to the north in the summer.
- Economic: people will move to where there is employment.
- Technological: artificial intelligence and the automatization of companies will replace humans

It was natural that when globalization (economic activity, interconnection, and interdependence, the spread of products, technology, information, employment, etc.) started to be a must in the ways that global companies operate, Higher Education Institutions would also apply this concept to their agenda. By inserting various tactics that have allowed the HEIs to expand on a global level, one of the most widely used strategies is international academic mobility (IAM) of students, professors, and researchers; to build and strengthen academic and scientific networks through collaboration with HEIs from different countries. This IAM contributes to strengthening the knowledge that students and professors have (Quiroz Schulz & Médor, 2022).

IAM contributes to the educational goods and services' development in world markets and the potential of Higher Education. Their models and programs are considered very diverse but have the common of being used by universities to diversify the educational services markets. (Makarova et al., 2021).

International academic mobility is the possibility of a student or professor to visit and interact at a HEI in a different country for a determined time, an activity that is highly linked to the

integration of a global dimension into HEI to better the quality of research and education (De Wit et al., 2015).

IAM delivers new professional opportunities for those students, professors, or researchers who are motivated to seek cultural exchange, specialized courses, international contact, better research investment grants, etc. Not only does the individual profit from this experience, but its origin HEI also benefits thanks to a wide network of contacts, enriched academic productivity, greater experience, and more knowledge to share on his return (Mascarenhas et al., 2021).

Studying in another country or encountering a variety of perspectives in educational settings has the potential to enhance students' academic learning through exposure to fresh concepts, methodologies, and modes of reasoning. This can result in improved analytical thinking and originality. Being fully involved in diverse cultures supports individual development by broadening students' outlooks, fostering empathy, and encouraging openness to new ideas. It enables individuals to gain deeper insights into both themselves and others (Fielden et al., 2007).

This initiative is focused on providing students a better understanding of what and how is the world, providing them the academic and personal skills that will help them develop in a globalized world. IAM improves the intercultural competence of the students too, taking the aforementioned competencies enhancement as their ultimate goal. (Herencia Grillo & Hernández de la Torre, 2020).

Mitchell, Tracy-Ventura, & Huensch (2020) noted that studying abroad is widely regarded as a particularly meaningful opportunity for an individual to develop linguistic, personal, and sociocultural competencies.

When a student is afforded the chance to engage in international academic mobility at a prestigious university, they gain access to numerous benefits that may not be accessible at their home institution. These advantages include learning from accomplished professors in a specialized field, utilizing cutting-edge technologies, infrastructure, and laboratories,



experiencing innovative and effective pedagogical approaches, and cultivating professional networks. The overall environment in which they will conduct their daily academic activities (Kedziora et al., 2017).

There's been a wide array of studies giving importance to this matter, such as the one made by Deardorff and Jones (2012) who lists students and professors with international experience to have "intercultural competence", "cross-cultural capabilities", intercultural sensitivity" and "cultural fluency".

According to Rodríguez-Izquierdo (2022), immersion in a foreign country is one of the most effective methods to develop global and multicultural competencies in citizens. This is because such immersion is a crucial skill in complex, diverse societies, enabling effective communication, coexistence, and mutual respect among people of varying cultural backgrounds.

International experiences allow the obtention of fundamental knowledge, skills, and behaviors such as language skills, values, and beliefs needed to live or work in different cultural environments (Gudykunst & Ting-Toomey, 1998).

Mendenhall & Oddou (1985), state that having an international experience will be highly influential on the attitudes and behaviors presented by an individual towards foreign colleagues; through the development of intercultural sensitivity during the experience.

Intercultural competence is a continually evolving and interactive process that involves self-reflection, enabling individuals to develop the necessary attitudes, skills, and knowledge for successful communication and interaction in diverse cultural settings (Freeman et al., 2009).

Operating effectively across cultures is not just about having knowledge of a particular culture, but also involves challenging our values, assumptions, and stereotypes (Jones, 2011). The experience is not just studying at a university abroad, it is living the culture and embracing it; mobility will open the students' minds, give them the awareness of other ways in which to

view life and the challenges it throws at them; it makes them question the mindset their culture embedded into their brains.

There is no single correct approach; rather, diverse perspectives can yield the optimal outcome. When international students return to their home institutions, their transformed mindsets will prompt them to have higher expectations of their education. This, in turn, will compel professors to enhance their knowledge and teaching methodologies (Valls-Figuera et al., 2023).

International experience is also a key factor influencing student employability. Given the interconnected and multicultural nature of the modern world, employers require a workforce that can adapt and operate effectively across different global contexts. This has motivated higher education institutions to internationalize their educational strategies, with the aim of cultivating global professionals capable of meeting the demands of an increasingly globalized society (Koris et al., 2017).

Employers, global accreditation organizations, and government-level agencies, such as the United Nations Educational, Scientific and Cultural Organization, encourage HEIs in the preparation of global students and becoming accredited by global accrediting organizations. During the past half-century, there has been a knowledge economy due to the increasing technology and science-based set of economic relations, thus requiring higher levels of knowledge, skills, and refined international relations (UNESCO, 2013; Akella, 2017; De Wit & Altbach, 2021).

As mentioned earlier, internationalization should be integrated throughout the higher education institution, including students, faculty, and staff. The faculty and researchers have a particularly significant and crucial role in this process, as it would be challenging for the institution to promote internationalization to students if the core personnel do not demonstrate these practices themselves (Pope & Mueller, 2005; Mayhew & Grunwald, 2006; Altbach & Knight, 2007; Deardorff, 2009; Deardorff & Jones, 2012; Lee et al., 2012; Soria & Troisi, 2013; De Wit & Leask, 2015; Guillén-Yparrea & Ramírez-Montoya, 2023).

When faculty members engage in international mobility, it initiates the formation of a global network through the connections they establish during their visits abroad. These connections can lead to collaborations with other faculty on research, publications, joint doctoral programs, double degree initiatives, seminars, and the like. In this way, the faculty become the primary and direct agents responsible for driving the teaching and research functions of the institution forward (Xu, 2017). Establishing interpersonal connections can facilitate the development of agreements between institutions. Notably, agreements championed by individual professors not only align with the strategic goals of the higher education institution's leadership, but also have increased likelihood of practical implementation. This is significant given that numerous signed agreements often remain dormant and underutilized.

A survey of scholars from 16 countries across 34 academic disciplines, known as "GlobalSci," compared the research productivity and impact of scientists without international experience to those who had been on international research assignments. The study found that the researchers with international experience had established more extensive global research collaboration networks and produced scholarly works with greater influence (Fernandez-Zubieta et al., 2015).

Faculty and researchers who have returned from international experiences can aid in the internationalization of the academic curriculum at HEIs. Incorporating their global perspectives and insights into course content can significantly enhance intercultural learning for students (Haigh, 2014). This approach incorporates diverse perspectives from colleagues to ensure currency, address present and future industry needs, and cultivate a globally oriented mindset among students.

Key discoveries have been made concerning the influence of faculty-led short-term study abroad programs on students' global competency. These programs have been identified as high-impact pedagogical practices that enhance students' global competence, which is crucial for their employability in international corporations. Short-term abroad stays provide students with the essential stimuli, difficulties, and chances for significant interpersonal and

intercultural education to occur. Research indicates that short, faculty-led overseas study programs have the potential to improve global competencies in college and postgraduate learners. These initiatives introduce students to different cultures, languages, and perspectives, enabling them to cultivate a more profound comprehension and admiration for diversity. Educational elements like pre- and post-program sessions as well as interactions with local experts have been found to significantly improve students' global competence. Participating in research initiatives during brief study abroad programs has been demonstrated to enhance students' scholastic achievement, research abilities, global perspective, comprehension of societal structures, self-assurance, and interpersonal interaction (Vogt, 1976; Vande Berg et al., 2009; Pedersen, 2010; Ruth et al., 2019; Fisher et al., 2022; Bell et al., 2023).

The Universidad Autónoma de Nuevo León (UANL) offers study abroad and research opportunities for its students and faculty members through the Academic Exchange Department (UANL). These potential participants can choose from a wide range of universities and research institutions in various countries that have established agreements with UANL, allowing them to enroll in courses or undertake research visits (UANL, Centro de Internacionalización, 2022). The destination countries where Mexican students spend an academic abroad experience are shown in Table 2.4.3.1. (UNESCO, 2023).

**Table 2.4.3.1: Destination of Mexican students studying abroad.**

| Destination of Mexican Students Studying Abroad |                |  |                |
|---|----------------|--|----------------|
| Country   | Q. of Students | Country                                | Q. of Students |
| United States                                   | 14,475         | Russian Federation                     | 63             |
| Spain   | 3,511          | Guatemala                              | 54             |
| Germany   | 3,447          | Estonia                                | 44             |
| Canada  | 2,760          | Panama Republic                        | 40             |
| France  | 2,258          | Costa Rica                             | 36             |
| United Kingdom                                  | 1,868          | Honduras                               | 32             |
| Argentina                                       | 879            | El Salvador                            | 29             |
| Australia                                       | 872            | Turkey                                 | 27             |
| Italy   | 393            | Croatia                                | 23             |
| Switzerland                                     | 330            | South Africa                           | 18             |
| Colombia  | 329            | China, Hong Kong                       | 17             |
| Japan   | 315            | India                                  | 13             |
| Brazil  | 209            | Iceland                                | 13             |
| Austria   | 205            | Malta                                  | 13             |
| Sweden  | 191            | Ukraine                                | 13             |
| Chile   | 176            | Luxemburg                              | 11             |
| Finland   | 172            | Romania                                | 11             |
| Belgium   | 168            | Slovenia                               | 10             |
| Hungary   | 133            | Latvia                                 | 9              |
| Denmark   | 126            | Cuba                                   | 8              |
| Norway  | 108            | Greece                                 | 7              |
| Portugal  | 104            | Lithuania                              | 7              |
| Korea, Rep.                                     | 95             | Qatar                                  | 7              |
| New Zealand                                     | 91             | Liechtenstein                          | 6              |
| Ireland   | 88             | Thailand                               | 6              |
| Czechia   | 76             |  |                |
| Poland  | 68             |  |                |
| Ecuador   | 66             |  |                |
| Students Abroad                                 |                |  |                |
| Total number of mobile students abroad          | 34,781         | Total number of mobile students hosted | 43,458         |
| % of total mobile students                      | 0.50%          | % of total mobile students             | 0.70%          |
| Outbound mobility ratio                         | 0.7            | Inbound mobility rate                  | 0.9            |

Source: Adapted from UNESCO. (2023.). UNESCO Institute for Statistics. Retrieved July 12, 2023, from Global Flow of Tertiary-Level Students: <http://uis.unesco.org/en/uis-student-flow#slideoutmenu>

There is a series of requirements that all applicants must meet and some specific exigencies that some HEIs establish (UANL, Universidad Autónoma de Nuevo León, 2022). The number of students and professors who participated in the academic mobility program or had a research stay in a foreign university is shown in Table 2.4.3.2.

**Table 2.4.3.2: International Students from the Universidad Autónoma de Nuevo León**

| Program  | 2022       | 2021       | 2020       | 2019       | 2018       | 2017       | 2016         |
|--|------------|------------|------------|------------|------------|------------|--------------|
| Rotation   | 48         | 48         | 73         | 146        | 153        | 115        | 170          |
| Complete Post-graduate   | -          | -          | 1          | -          | 9          | 5          | 65           |
| Academic Mobility (Pre-Postgraduate)   | 268        | 52         | 0          | 346        | 526        | 618        | 702          |
| Double Degree  | 317        | -          | -          | -          | 11         | 28         | -            |
| Research Stays (Post-graduate)   | 28         | 26         | 89         | 67         | 52         | 52         | 40           |
| Other (Joint Guardianship, Internships, Courses, Language, Workshops, Presentations)                                   | 67         | 35         | 278        | 80         | 92         | 101        | 132          |
| <b>TOTAL</b>   | <b>728</b> | <b>161</b> | <b>628</b> | <b>661</b> | <b>853</b> | <b>938</b> | <b>1,109</b> |
| Total Full-Time Equivalent (FTE) Students  | 206,753    | 215,035    | 214,342    | 206,640    | 202,039    | 197,381    | 190,169      |
| Pre-Graduate Students  | 128,748    | 131,791    | 127,568    | 118,178    | 112,082    | 106,617    | 102,463      |
| Postgraduate Students  | 5,442      | 4,315      | 4,450      | 4,411      | 4,259      | 5,064      | 5,244        |
| Total Enrolled Students (pre/postgraduate)   | 132,823    | 136,106    | 132,021    | 122,589    | 116,341    | 111,681    | 107,707      |
| Percentage of pre-graduate students with an International Experience (academic mobility & Double Degree)               | .45%       | .04%       | 0%         | .29%       | .48%       | .61%       | .69%         |
| Percentage of post-graduate students with International Experience (complete post-graduate, research stays and others) | 1.75%      | 1.41%      | 8.27%      | 3.33%      | 3.59%      | 3.12%      | 4.52%        |
| Percentage of students with International Experience (pre/post-graduate)   | .55%       | .11%       | .48%       | .54%       | .73%       | .84%       | 1.03%        |

\*FTE (Full- Time Equivalent)

Source: Adapted from Universidad Autónoma de Nuevo León's Rectors' Annual Activity Report (2016) (2017) (2018) (2019) (2020) (2021) (2022). Academic Mobility Department of the Universidad Autónoma de Nuevo León (2021)

Taking into consideration and removing the “pandemic phenomenon” years, table 2.4.3.2 shows very low percentages of those who have had an opportunity to have an abroad stay, displaying an area of opportunity that needs to be targeted by the HEI.

There are several organizations that rank universities based on different aspects, one that is included in their methodology is international outlook. Two of this organization are QS World University Rankings and Times Higher Education. The methodologies employed by both of this organizations solely focus on the international outlook metric. This metric is constructed from the share of international students, the share of international staff, and the extent of international collaboration. In terms of the proportion of international students, the ranking systems consider students from other nations enrolled at the university, but do not account for students from the university who have gained international experience through mobility programs.

**Table 2.4.3.3: Top Five Universities in the World in General Engineering 2023**

| Times Higher Education Top five Universities in the World in General Engineering 2023 |                                       |                |                  |                        |                                      |
|---|---------------------------------------|----------------|------------------|------------------------|--------------------------------------|
| Rank  | University                            | Country        | No. FTE Students | International Students | Percentage of International Students |
| 1   | University of Oxford                  | United Kingdom | 21,750           | N/A                    | 42%                                  |
| 2   | Stanford University                   | United States  | 14,517           | N/A                    | 23%                                  |
| 3   | Massachusetts Institute of Technology | United States  | 11,085           | N/A                    | 33%                                  |
| 4   | Harvard University                    | United States  | 20,050           | N/A                    | 25%                                  |
| 5   | University of Cambridge               | United Kingdom | 20,565           | N/A                    | 38%                                  |

\*FTE (Full- Time Equivalent)

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Source: Times Higher Education (2023a) “World University Rankings 2023”

As shown in Table 2.4.3.3, the world's top five ranked institutions in general engineering can be observed. The data presented in this table further indicates that the percentage of international students at these universities is considerably higher than what is reported for the top five universities in Latin America, as depicted in Table 2.4.3.4.

**Table 2.4.3.4: Top Five Universities in Latin America in General Engineering 2023**

| Times Higher Education Top five Universities in Latin America in General Engineering 2023 |   |         |                  |                       |                                      |
|---|---|---------|------------------|-----------------------|--------------------------------------|
| Rank  | University                                  | Country | No. FTE Students | International Outlook | Percentage of International Students |
| 1   | Pontificia Universidad Católica de Chile    | Chile   | 30,448           | 84.2                  | 3%                                   |
| 2   | University of São Paulo                     | Brazil  | 83,182           | 50.6                  | 2%                                   |
| 3   | University of Campinas                      | Brazil  | 32, 252          | 53.4                  | 3%                                   |
| 4   | Monterrey Institute of Technology           | Mexico  | 16,693           | 86.1                  | 12%                                  |
| 5   | Universidade Federal de São Paulo (UNIFESP) | Brazil  | 19,803           | 35                    | 1%                                   |

\*FTE (Full- Time Equivalent)

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*Source: Times Higher Education (2023b) "Latin America University Rankings 2023". Note: The international outlook score is composed of the proportion of international students and international staff, and international collaboration.*

#### 2.4.4 International General Collaboration Agreements

Agreements between two universities allow the universities to partake in a wide array of activities with one another, such as joint research, publications, congresses, and one of the most important ones is academic mobility (UANL, 2024). They allow students to spend one or two semesters in the other institution, giving them courses and useful equipment and facilities that they do not have in their home institution seeking benefits.



These collaboration agreements not only provide students with the opportunity to immerse themselves in a different academic and cultural environment but also promote global understanding and cooperation between universities, fostering international collaboration and knowledge exchange. As a result, students gain valuable skills and experiences that make them more competitive in the global job market (Fielden et al., 2007)

According to Atalar (2020) partnerships between universities can offer significant benefits to both students and faculty such as *Student Exchange and Mobility* initiatives. Programs like Erasmus facilitate the movement of students across universities, enabling them to study in foreign settings, immerse themselves in diverse cultural milieus, and expand their perspectives; *Faculty Exchange Programs* can derive advantages from taking sabbatical leave and participating in teaching or research roles at different academic institutions. This provides them with the opportunity to broaden their global perspective and potentially establish lasting research partnerships; *Double Degree Programs*, Students have the opportunity to join or pursue dual degree programs, obtaining credentials from more than one institution. This enhances their academic journey and improves their employment opportunities.

The European Union Social Fund Through the Operational Programme "Administrative Capacity Development" (European Union, 2013) state that collaborative agreements and partnerships also aid in *Knowledge and Research Exchange*, partnerships may result in collaborative research initiatives and scholarly publications, expanding the range of research activities and bolstering the academic standing of the institutions; *Improved Curriculum and Teaching*, experiencing various teaching methods and educational programs can enhance the academic resources of an establishment and offer a wider range of learning experiences for students; *International Recognition and Branding*, students and faculty gain from affiliations with institutions that possess a robust international standing and alliances, enhancing the university's reputation and visibility.

These agreements also contribute to the overall reputation and standing of the universities involved, as they demonstrate a commitment to internationalization and collaboration. Moreover, these collaborations can lead to joint research projects and publications, allowing

faculty members from both institutions to share their expertise and contribute to advancements in their respective fields (De Wit & Altbach, 2021).

Furthermore, international general collaboration agreements between universities can lead to the establishment of double degree programs. Double degree programs involve two higher education institutions, typically from different countries, collaborating to develop an integrated curriculum. Students have the chance to pursue studies at both institutions and, upon finishing their program, they will be awarded a degree certificate from each. These initiatives have been driven by the aim to enable graduates to access employment opportunities in foreign countries, promote student movement between educational institutions, facilitate collaboration between academic organizations, exchange knowledge, and connect content materials, teaching approaches, and cultural aspects across diverse educational settings (Borsetto & Saccon, 2023).

Overall, international general collaboration agreements between universities have numerous benefits for students, faculty members, and the institutions themselves. They promote cultural exchange, enhance academic programs, increase competitiveness in the job market, foster research collaborations, contribute to the reputation of the universities, and provide opportunities for students and faculty to engage in global learning experiences.

(FULL LIST OF AGREEMENTS REGISTERED AT THE INTERNATIONAL RELATIONS DEPARTMENT OF THE UNIVERSIDAD AUTÓNOMA DE NUEVO LEÓN IN THE APPENDIX I)

#### 2.4.5 Cultural Shock and International Academic Mobility

In today's globalized world, international exchange programs have become increasingly popular and beneficial for students seeking to broaden their horizons and gain intercultural competence. These programs offer a unique opportunity for students to immerse themselves in a different culture, learn new languages, and develop valuable skills that can enhance their personal and professional growth (Reiter, 2023).

However, it is important to acknowledge that along with the numerous benefits, international exchange programs also come with their own set of challenges, specifically in the form of cultural shock (Prasetyaningrum, 2023).

The author Oberg (1954), states that a person is not born with the culture in which he or she is born, the individual develops his capacity to understand that culture, and use it in the best way to interact; becoming a form to get what he or she needs within that known secure cultural space. Oberg defines “cultural shock” as *“precipitated by the anxiety that results from losing all our familiar signs and symbols of social intercourse. These signs or cues include the thousand and one ways in which we orient ourselves to the situations of daily life”* (Oberg & quoted in Davidson, 2009, p. 1). This situation arises when an individual moves from their country of origin to another country with an unknown culture. Oberg was the first to use the term in 1954 to describe the angst felt by the individual as the outcome of an individual losing all of its cultural familiarity .

The experience of cultural shock can vary from person to person, but it often includes feelings of confusion, frustration, and even homesickness. Research has shown that culture shock is contextually based and can greatly impact the adjustment and overall well-being of individuals in international exchange programs (Gan & Kang, 2022)

Every student who studies in a university abroad is going to eventually experience some cultural shock, and it will depend on a different series of elements such as; prior intercultural experiences of the individual; knowledge of the host culture; its linguist ability; personality; cultural similarities with its home culture; the geography and weather of the receiving culture; the persons situation in its new surroundings (Alvez López & de la Peña Portero, 2013)

Alves López and de la Peña (2013) recommended to inform them of strategies to adapt to the culture in which they will be immersed, so they can better tolerate and facilitate these cultural changes. Some of the actions the authors propose to help students overcome their cultural anxiety are; to observe, listen, and learn; refrain from stereotypes; respect the culture; connect

with the host culture; analyze the situation before emitting a judgment; and enjoy the experience.

Cultural shock can have a significant impact on international exchange students. It can lead to feelings of strain, loss, rejection, confusion, surprise, anxiety, and ineffectiveness. These negative emotions can make the university environment unbearable for students who may not have the psychological resilience to cope with such situations. Moreover, cultural shock can also affect the intercultural adjustment of individual sojourners. As mentioned by Alves López and de la Peña (2013), the level of intercultural adjustment can be influenced by factors such as prior intercultural experiences, knowledge of the host culture, linguistic ability, personality, cultural similarities with their home culture, and the geography and weather of the host culture.

It is important to acknowledge the difficulties and challenges that come with cultural shock. Gan and Kang (2022) discuss various challenges and issues that students may face while living in a foreign country, with some of these difficulties possibly arising even before they depart from their home city. One potential issue could be the extensive preparation before the trip; students might find themselves feeling burdened by the necessary arrangements needed prior to embarking on a study abroad experience, including visa applications, travel plans, and packing. Adapting to a new culture, language, and social norms can present challenges for students, potentially causing feelings of homesickness and isolation; differences in food, customs, and daily routines may also create obstacles in adjusting to the lifestyle of the host country.

Students may face difficulties due to language barriers, which can impede their interactions with locals, daily activities, and active participation in academic pursuits. Insufficient proficiency in the local language could affect students' overall experience and integration into the community (Koernig, 2007).

Studying overseas can bring about financial challenges such as managing living costs, travel expenses, and unforeseen emergencies, which may cause anxiety for students; financial

challenges can arise due to changes in exchange rates, unforeseen costs, and variations in the cost of living from one's home country. Educational variations can also cause stress, as teaching methods and academic standards may demand students to swiftly adjust to unfamiliar learning settings; balancing academic responsibilities such as coursework, assignments, and exams in a foreign language or an unfamiliar academic environment can present significant intellectual challenges (Gan & Kang, 2022).

A research conducted at a public university in Pereira, Colombia by Rodríguez Marín (2022) revealed that every participant in exchange programs experienced the four phases of cultural adjustment as identified by Oberg (1960): *initial excitement, crisis or discomfort, recovery, and full adaptation*.

During the *initial phase*, students are filled with enthusiasm and curiosity about the new culture. They may experience a feeling of excitement and deep interest as everything appears fresh and unfamiliar. However, as they reach the *crisis* stage, the initial variations in language, concepts, values, and familiar signs and symbols can result in feelings of insufficiency, frustration, and potentially depression. During this phase, students may encounter difficulties in comprehending and adjusting to the unfamiliar culture, leading to potential adverse effects on their mental health and scholarly achievements. Following the crisis stage, students enter the *recovery phase* where they commence adapting and implementing strategies to deal with cultural differences. They can start by observing, listening, and learning from their surroundings without developing preconceived notions and approaching the culture with respect. Finally, during the *adaptation phase*, students have the opportunity to assimilate into the unfamiliar culture and experience increased comfort and self-assurance in their environment (Oberg K. , 1960; Davidson, 2009; Rodríguez Marín, 2022).

## 2.5 Intercultural Assessment

Evaluating intercultural competence is vital for educational institutions and organizations to assess individuals' capacity to engage meaningfully in diverse cultural contexts. This entails acknowledging and respecting cultural variances, which are indispensable skills for the contemporary globalized landscape. Conducting such assessments offers valuable insights into areas requiring further development and ensures authentic comprehension and engagement with diverse cultures, transcending superficial interactions (Deardorff, 2006).

Evaluating the impact of internationalization initiatives within academic settings is crucial, as it equips students with the necessary skills to thrive in our interconnected world. Deardorff's work on "Assessing Intercultural Competence (2011a)" highlights the significance of utilizing concrete, measurable indicators when assessing intercultural competence, emphasizing the importance of recognizing and engaging with diverse perspectives through a range of educational programs, both overseas and on campus.

The assessment of intercultural competence in an individual can be achieved through either direct or indirect measures. The direct measure involves questionnaires where individuals rate a set of cross-cultural competencies using a Likert scale, and the judgment of the level of competence is a self-assessment. The indirect measure gathers information by observing the individual's competence application and behavior in a specific scenario, which tends to be more sporadic and ongoing, with the individual's level of competence judged by an observer (Fantini A. E., 2009). Fantini further elaborates that the collected data can be classified as either discrete, focusing on a specific individual skill, or global, encompassing broader abilities that necessitate application and synthesis (Figure 2.5.1)

**Figure 2.5.1: Quadrant Assessment Formats**

|          |          |
|----------|----------|
| Direct   | Indirect |
| Discrete | Global   |

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*Source: Adapted from Fantini, A. E. (2009). Assessing intercultural competence: Issues and tools. In Darla K. Deardorff (2009)(Ed.), The SAGE Handbook of intercultural competence (pp. 456–476). Thousand Oaks, CA SAGE Publishing Inc.*

According to Deardorff (2011a) two prominent approaches to assessing intercultural competence include the use of reverse discourse completion tasks and the implementation of multifaceted assessment methods. The reverse discourse completion task, as described by Ishihara, involves presenting participants with incomplete dialogues and prompting them to construct appropriate responses, thereby evaluating their ability to navigate cultural nuances and contextual cues (Kanik, 2013).

In contrast, a multimethod or multiperspective assessment, employs a combination of written tests, performance evaluations, and portfolio assessments to provide a comprehensive evaluation of intercultural competence development (Deardorff, 2006; Jin, 2014; Ji, 2020). These multidimensional approaches allow for a more nuanced understanding of an individual's intercultural competence, capturing the complex and multifaceted nature of this skill set.

Ultimately, the assessment of intercultural competence is a crucial component in fostering globally minded graduates and ensuring the effectiveness of internationalization efforts within higher education. By adopting a range of assessment techniques, institutions can gain valuable insights into the development of this essential competency, thereby empowering students to navigate and thrive in our interconnected world (Deardorff, 2004; Pharaoh & Jiajun, 2022).

When Deborah Schnabel (2015) investigated various assessment tools for measuring intercultural competence, she found that there was no validated multimodal assessment instrument available. Consequently, she opted to develop her own situational judgment test (TMIC-SJT), which complemented other Likert-scaled self-appraisal scales (TMIC-SA). The resulting Intercultural Competence Assessment combined 75 self-report scales and 17 situational judgment items (Schnabel et al., 2015). The self-report scales evaluated the individual's self-perception (Bledow & Frese, 2009), while the situational judgment tests presented critical contextual scenarios with a fixed number of behavioral response options (McDaniel et al., 2007). Schnabel et al. (2015) applied this instrument in German universities and student organizations with an international focus, as well as at partner universities, student organizations, and communities in Brazil.

In their report "A Validation Study of the Defense Language Office Framework for Cultural Competence and an Evaluation of Available Assessment Instruments" (2011), Gabrenya Jr., Moukarzel, Pomerance, Griffith, & Deaton mention a number of nine primary evaluation instruments for the assessment of ICC developed by different authors; Multicultural Personality Questionnaire (MPQ) (Van der Zee & van Oudenhoven, 2000), Sociocultural Adaptation Scale (SCAS) (Ward & Kennedy, 1999), Cros-Cultural Adaptation Inventory (CCAI) (Kelley, 1995), Intercultural Adjustment Potential Scale (ICAPS) (Matsumoto et al., 2001), Culture Intelligence Scale (CQS) (Ang et al., 2008), Global Competencies Inventory (GCI) (Mendenhall et al., 2010), Intercultural Development Inventory (IDI) (Hammer & Bennett, 1998), Intercultural Sensitivity Scale (ISS) (Chen & Starosta, 2000), Scale of Ethnocultural Empathy (SEE) (Wang et al., 2003).

While these instruments offer valuable insights, there is a need for a more holistic, mixed-methods approach to assessing cultural competence (Echeverri et al., 2010). This approach should include not only self-assessment of perceived competencies, but also performance-based evaluations to provide a more comprehensive understanding of an individual's intercultural competence. This aligns with the recommendation from a meta-analysis of cross-cultural education assessments, which advocates for a combination of quantitative and



qualitative measures to provide a well-rounded evaluation of intercultural competence development (Matsumoto & Hwang, 2013). By employing a range of assessment techniques, institutions can gain deeper insights into an individual's ability to engage meaningfully with diverse cultures, allowing for the development of targeted educational programs that foster the cultivation of this essential skill set.

Similarly to Gabrenya et.al (2011), David Matsumoto and Hyisung Hwang (2013) reviewed the same instruments mentioned above except for the Scale of Ethnocultural Empathy (SEE) (Wang et al., 2003), Sociocultural Adaptation Scale (SCAS) (Ward & Kennedy, 1999) and Global Competencies Inventory (GCI) (Mendenhall et al., 2010), but additionally analyzed Cross-Cultural Sensitivity Scale (CCSS) (Pruegger & Rogers, 1993), Behavioral Assessment Scale for Intercultural Communication Effectiveness (BASIC) (Koester & Olebe, 1988), Intercultural Communication Competence scale (ICOCS) (Arasaratnam, 2009) and Intercultural Sensitivity Inventory (ICSI) (Bhawuk & Brislin, 1992). Matsumoto and Hwang concluded that the most promising instruments for field use were CQS, MPQ, and ICAPS (Matsumoto et al., 2001).

In her seminal research study "Identification and Assessment of Intercultural Competence as a Student Outcome of Internationalization" (2006), Darla Deardorff undertook a comprehensive and multifaceted effort to define intercultural competence and identify its core components. She first surveyed a diverse group of higher education administrators who were deeply committed to the process of internationalization within their institutions. Deardorff then also employed the Delphi method, engaging a panel of renowned national and international intercultural experts to further explore and refine the key elements of this critical competency. This multi-stakeholder, two-pronged research approach allowed Deardorff to develop a robust, consensual definition and gain a deeper, more nuanced understanding of the essential elements of intercultural competence as a vital outcome of internationalization initiatives in higher education.

The assessment of intercultural competence is a multifaceted endeavor that requires a thoughtful and nuanced approach. By employing a range of techniques, including reverse discourse completion tasks, multimethod assessments, and situational judgment tests,

institutions can gain a more comprehensive understanding of individuals' capacity to engage meaningfully with diverse cultures (Siniscope et al., 2007). This, in turn, allows for the development of targeted educational programs and initiatives that foster the cultivation of this essential skill set, ultimately preparing students to thrive in our interconnected world.

## CHAPTER 3: INTERCULTURAL COMPETENCIES COMPONENTS MODEL

### 3.1 Introduction

Developing intercultural competence is a crucial aspect of navigating the increasingly globalized and interconnected world we live in today. The ability to engage effectively with individuals from diverse cultural backgrounds has become integral to personal, professional, and academic success (Lim & Griffith, 2016; Peifer & Yangchen, 2017; Zhang & Zhou, 2019; Ren, 2023). This multifaceted competence encompasses three main components: *attitude*, *knowledge and understanding*, and *skills*, all of which work in tandem to enable productive cross-cultural interactions and mutual understanding.

As outlined in this research, intercultural competence is composed of three primary components, the first of which is *attitude*. Adopting an appropriate attitude towards a given subject is the foundational step in the learning process. This principle similarly applies to the development of intercultural competence, as a suitable attitudinal stance serves as the entry point for this journey of acquisition. This investigation identifies six key attitudinal dimensions that will be elucidated in the forthcoming section: valuing cultural diversity, respecting cultures, displaying openness, exercising tolerance, exhibiting curiosity to learn about other cultures, and demonstrating cultural (Howard-Hamilton et al., 1998; Spitzberg & Changnon, 2009; Deardorff, 2011b; UNESCO, 2013; Barret et al., 2014).

The second component, *knowledge and understanding*, represents the intellectual dimension of intercultural competence. This refers to the accumulation of culture-specific insights, values, and practices, as well as an appreciation for the contextual nature of interactions and the expectations that different cultures have for interpersonal engagement. This includes developing an understanding of cultural frameworks, belief systems, histories, and norms that shape how individuals from diverse backgrounds perceive the world and interact with one another. Additionally, this component involves gaining knowledge about the diversity within cultures, recognizing that cultures are not monolithic but rather comprise a range of perspectives and experiences. In short, this component encapsulates the cognitive aspect of

intercultural competence, which is essential for navigating and bridging cultural differences effectively.

Finally, the third component, *skills*, involves the applied abilities that enable individuals to navigate intercultural interactions effectively. These include skills such as multiperspectivity, empathy, flexibility, behavioral adaptation and linguistic abilities (Peifer & Yangchen, 2017; Ren, 2023). By cultivating these three interrelated elements – attitude, knowledge, and skills – individuals can develop the comprehensive intercultural competence necessary to engage productively with diverse cultures.

### **3.2 Attitude**

As discussed previously in this research ICC is made up by three main constructs and the first one is attitude. Having the correct attitude towards specific subject is the initial step to learning about it. The same is applied to being intercultural, to begin the journey on acquiring the competence. Attitude is divided into six different areas in this investigation that will be explained in this section of the document: Value Cultural Diversity, Respect of Cultures, Openness, Tolerance, Curiousness to Learn of other Cultures and Cultural Humility (Howard-Hamilton et al., 1998; Spitzberg & Changnon, 2009; Deardorff, 2011b; UNESCO, 2013; Barret et al., 2014).

“Curiosity and openness, readiness to suspend disbelief about other cultures and belief about one’s own. Willingness to seek out or take up opportunities to engage with others [...]. Interest in discovering other perspectives on the interpretation of familiar and unfamiliar phenomena both in one’s own and in other cultures and cultural practices” (Byram M. , 2021, p. 131).

#### **3.2.1 Value Cultural Diversity (CD)**

As noted by Cox (1993), cultural diversity (CD) refers to the presence, within a social system, of individuals exhibiting markedly distinct group memberships and cultural attributes. The concept of CD may also suggest that different cultures value each other’s differences and subtleties (Raewf & Mahmood, 2021). Through the recognition and embracement of CD,

societies can benefit from the richness and variety of perspectives, knowledge, and experiences that different cultural groups may bring. It can foster social cohesion, promote cross-cultural dialogue and learning, and contribute to the development of a more tolerant and inclusive society.

CD is a consequence of globalization, due to the global movement of people, production lines, and access to different communication networks (Briceño Linares, 2020; Appadurai, 2001).

It is worth mentioning that CD is not limited to differences at an individual level, it also extends to larger cultural communities, regional variations, and global cultural exchange. The concept underscores the importance of acknowledging and respecting the diverse ways of life and worldviews that exist within and between cultures.

Authors Grigoryan and Schwartz (2020) argue that the difference in how diversity is interpreted will depend on whether the group is a majority or a minority, hence inferring the perception of themselves and the attitude they will take towards CD.

The representation of CD in the workplace encompasses a variety of the number of areas such as the growth of minorities in the workforce. Valuing CD allows the nurturing of an inclusive atmosphere, rich in a range of talents and skills. The scholars Luijters, van der Zee, & Otten (2008) state that once employees value diversity in their work group, the perceived lack of commonality across their values may not necessarily lead to lower levels of identification. Thus, for the organization, diversity is valued as an asset, ambiguities are tolerated, and behavioral constraints are few and far between.

Çelik, Keser, & Körcük Yapıcı (2021) studied the relationship that cultural intelligence has with cultural diversity. They concluded that CQ is more advanced depending on the person's national cultural background, and it is contemplated for them to have a good relationship with their coworkers and to respect the diversity within the group; such is the case in collectivist culture which values cooperation when having interactions with others.

Cox & Blake (1991) suggest six areas in which CD predisposes a competitive advantage: cost, resource acquisition, marketing, creativity, problem-solving, and organizational flexibility.

These advantages are based on proven benefits such as the diversity of ideas brought by a heterogeneous workforce. Having diversity will bring forth new perspectives and innovative ideas into the execution of operations and can contribute many benefits when managed effectively (Thomas et al., 2015).

Pless and Maak (2004) assert that the role of diversity safekeeping plays an important role in creating an inclusive and effective organizational climate that acknowledges, maintains, and values the uniqueness of employees, by fostering identification with the workplace.

Cox (1993) believes that for a company to have a successful diversity management, managers must *“unlearn practices rooted in an old mindset, change the ways organizations operate, shift organizational culture, restore policies, create new structures, and redesign human resource systems”* (Cox T., (1993) as cited in Amaram, (2007), p.5).

A great and efficient way of developing the value of CD according to Deakins (2009), is promoting multiculturalism in higher education. His study revealed that changing the classroom culture through teachings, such as indirectly introducing diversity issues and questions and assessment exercises raised awareness and behavior and changed the attitudes of students; helping them with future diversity issues.

### 3.2.2 Respect of Cultures

A set of multiple concepts such as traditions, race, language, beliefs, and other components that a certain group of people has in common is known as culture; it represents the shared patterns of thought and feelings of belonging experienced by members of a particular group. Some of these shared cultural elements include customs, language, and values that are integral to the group's identity (Erlen, 1998). Culture serves as a defining feature that identifies a group of individuals sharing a common geographic location or national affiliation.

As human populations expand globally, the perceived level of CD has increased. The planet is made up of diversified groups of people interacting with each other, who have their own way of communicating and expressing themselves. For diversity to be appreciated, individuals

must share their values, beliefs, habits, and customs with others. An important way that a student can learn from a different culture is by being present by placing themselves in a foreign country. Navigating diverse academic environments can foster sensitivity and critical awareness as students engage with the novel academic culture they encounter (Byram & Dervin, 2008).

Recognizing and valuing diverse cultural perspectives is essential to promote the equal worth of all individuals. True cultural respect transcends mere understanding of a person or group's cultural background; it necessitates the active inclusion and participation of their customs and traditions within societal structures. This approach goes beyond simply acknowledging cultural differences, it requires the development of policies and institutions that actively safeguard and advance the unique cultural commitments of various communities (Johnson J. , 2000).

Respect and culture are two terms that must be related due to the existence of a wide array of groups of people with different backgrounds, all of them having contrasting frames of reference; these make it important for individuals having activities in foreign countries to be respectful of their customs and beliefs because this respect will speak about the person and his or her values. It is necessary to learn about a country's culture when participating in an exchange program, going to work, or visiting a different country because that will be of great help in interacting with new groups of people. Cultural knowledge is a key aspect of how to relate with others (Erlen, 1998; Johnson J. , 2000; Byram & Dervin, 2008).

### 3.2.3 Openness

Foronda, Baptiste, Reinholdt, & Ousman define openness as “possessing an attitude that is willing to explore new ideas (Foronda et al., 2016, p. 211)”. When speaking of multiculturalism, openness, embodies the willingness to accept and integrate other people, thus stressing intellectual and emotional receptiveness to the environment and other cultures.

Kryvda and Storozhuk's article "Socio-cultural definition of intercultural dialogue in the concept of Mary Douglas" (2022) asserts that the philosopher A. Bergson believed a comprehensive, humanist-based universal coalition can only be achieved when members of

an open society possess the capacity for effective international communication that transcends cultural boundaries. Bergson contended that a closed society would hinder social progress, as such societies are doomed to perpetual cyclical patterns, unable to meaningfully engage in cross-cultural communication.

Klafehn, Banerjee, & Chiu (2008) state that being open to having new experiences will help decrease obstacles between two parties when interacting with people from different cultures.

Schwartz believes that openness contributes to the perception of being open to embracing new ideas and being resistant to change.

“Openness to change values emphasize readiness for new ideas, actions, and experiences. They contrast with conservation values that emphasize self-restriction, order and avoiding change” (Schwartz et al., 2012, p. 16)

According to Ollivier (2008), the concept of openness to CD is based on a series of dichotomies. Terms such as diverse, fluid, global, liberal, open, and cosmopolitan are typically associated with positive connotations, while unitary, holistic, local, permanent, and closed are viewed as having negative implications.

Openness is closely associated with the assets of transferable cultural resources, such as knowledge, skills, and expertise, as well as personal qualities like tolerance, adaptability, flexibility, and the pursuit of personal growth. The concepts most commonly associated with openness are open-mindedness and flexibility (Ollivier, 2008; Schwartz et al., 2012; Foronda et al., 2016).

Openness “[...] entails an effort to understand the attitudes, perceptions, and values of others in a cultural context and a willingness to consider views that conflict with one’s own.” (Kealey, 1996, p. 87)



### 3.2.4 Tolerance

Tolerance denotes the readiness of individuals to acknowledge and respect the diversity present among people of different cultural, racial, ethnic, religious, and personal backgrounds. The Declaration of Principles on Tolerance, adopted and endorsed by UNESCO member states in 1995, offers the most comprehensive definition of tolerance:

“Tolerance is respect, acceptance and appreciation of the rich diversity of our world's cultures, our forms of expression and ways of being human. It is fostered by knowledge, openness, communication, and freedom of thought, conscience and belief. Tolerance is harmony in difference. It is not only a moral duty, but also a political and legal requirement. Tolerance, the virtue that makes peace possible, contributes to the replacement of the culture of war by a culture of peace [...] an active attitude prompted by recognition of the universal human rights and fundamental freedoms of others.”  
(UNESCO, 1995, p. 2)

It is being aware that people from different cultures have a right to their own beliefs and practices, so long these are not violating commonplace moral values. There needs to be a commitment for the functioning and continuity of interpersonal relations to have tolerance; it is very important for diverse societies to protect an individual's rights. Tolerance is a reply to the challenge of how different perspectives can be expressed freely and still be able to exist side by side harmoniously. Having diverse cultures, ideologies, and religions in a society, entails a wider essential view of mindsets and lifestyles (Verkuyten & Killen, 2021; Verkuyten & Kollar, 2021).

In the article “Dialogue of Cultures as an Alternative to Tolerance in Intercultural Communication” Melikov, Tabasaranskii, & Akhmedova believe that tolerance can be built between two cultures through effective communication. The authors state that *“Tolerance usually ends where an attempt on the cultural values of the host society begins.”* (Melikov et al., 2019, p. 1)

Dr. Roosevelt Thomas Jr. (1999) emphasizes that fostering tolerance requires a commitment to comprehending and appreciating the variations among employees, as well as establishing an environment where all individuals can contribute and thrive. Through the promotion of tolerance, as proposed by the author, organizations can unlock the full potential of their diverse workforce, resulting in a more innovative, productive, and successful enterprise. For institutions and companies with a multicultural approach, tolerance implies that employees can collaborate in a respectful and inclusive manner, regardless of their differences, where individuals are willing to learn and understand the cultural perspectives and practices of their colleagues, enabling them to communicate and collaborate effectively with people from diverse backgrounds. The encouragement of tolerance and respect within the organization can create a more harmonious and productive environment, facilitating employee collaboration and the achievement of shared goals.

In the article “Children’s and Adolescents’ Tolerance for Divergent Beliefs: Exploring the Cognitive and Affective Dimensions of moral conviction in our youth” (2012) Jennifer C. Wright, aimed to investigate how cognitive and emotional attachment to moral traits affects tolerance for different mentalities; and the role that the context in which they encounter these divergences influence their reactions. The author concluded that the classification of beliefs and the context of the situation contributes to the tolerance for different ideologies.

Individuals who have experienced studying abroad may develop greater tolerance, owing to their immersion in diverse cultures. This exposure enables them to respect and appreciate the existing differences among people from varied backgrounds, cultures, and perspectives – a highly valued quality in the professional environment, as it allows them to collaborate effectively with others, regardless of their differences (UNESCO, 1995; Roosevelt, 1999; Wright, 2012; Rodríguez-Izquierdo, 2022).

### 3.2.5 Curiousness to Learn of Other Cultures.

This curiousness refers to an individual's interest in exploring and understanding different cultural traditions, customs, and practices. Such inquisitiveness can manifest in various ways, travel, literature, art, music, cuisine, or through direct interactions with people from different cultural backgrounds. Curiosity to learn about other cultures is often driven by a desire to broaden one's horizons, gain new perspectives, and develop a more nuanced understanding of the world. It can help individuals develop greater empathy, tolerance, and appreciation for diversity, and can also facilitate cross-cultural communication and collaboration (Mikhaylov, 2016; Sobkowiak, 2019).

Research has demonstrated that cultural curiosity (CCU) is positively correlated with intercultural competence, which is the ability to interact efficiently and appropriately with individuals from diverse cultural backgrounds (Deardorff, 2011b). In her article "Curiosity and its Role in Cross-cultural Knowledge Creation" (2016), the scholar Mikhaylov discusses strategies for motivating individuals to learn about and engage with other cultures. She emphasizes the need to consider entertainment and affective factors in international education and training for global professionals. Mikhaylov's research indicates that participants consider potential future benefits, such as employment opportunities, as factors influencing their cultural CCU. The United States, in particular, is cited as a culture of interest due to its educational practices, teamwork, and business customs. The investigation underscores factors including personal interest, practical value, cultural distance, and the "fun" aspect of cultures that shape individuals' curiosity.

In his paper "The Impact of Studying Abroad on Students' Intercultural Competence: An Interview Study" (2019) Sobkowiak explores the extent to which studying abroad contributes to students' intercultural growth and intercultural competence; stating that studying abroad does not always provide ample opportunities for students to fully immerse themselves in the local community and new cultural environments. However, students who interacted with local and international peers were motivated to explore and interpret CD, leading to the acquisition of knowledge of the foreign culture and an increase in their cultural sensitivity. The research

conducted through interviews with students revealed that those who actively sought meaningful intercultural interactions during their abroad stay, engaged in discussions with individuals from different cultural backgrounds; viewing their international peers as representatives of their cultures and integrating them into their social networks.

Intercultural competence is increasingly seen as an important skill for individuals to have in a globalized world where people from different cultures regularly interact with each other; an important trait that can lead to personal growth, as well as help to promote understanding and harmony across cultural boundaries (Deardorff, 2011b).

Individuals who are curious about other cultures tend to be more open-minded and have more positive attitudes towards diversity, being more likely to engage in behaviors that promote intercultural understanding and communication, such as learning another language or participating in cultural exchange programs. CCU can also help to break down stereotypes and misconceptions that people may have. By exposing oneself to different cultural traditions and practices, individuals can learn to appreciate their unique qualities. It can also have a positive impact on personal relationships and can facilitate cross-cultural communication and collaboration in professional settings. In today's interconnected world, individuals who have diverse cultural knowledge (CK) are better equipped to navigate the challenges and opportunities presented by global interactions (Deardorff, 2009; 2011b; Mikhaylov, 2016; Sobkowiak, 2019).

Having CCU can be very advantageous in the workplace. It can help to improve communication between colleagues with diverse backgrounds, resulting in better collaboration and fewer misunderstandings. When an individual is curious about other cultures, he or she becomes more aware of cultural differences, such as customs, beliefs, and practices, which can help you avoid cultural mistakes and create a more inclusive work environment. Exposure to different cultures and perspectives can also help you think outside the box and develop innovative ideas, which can benefit your team and your company. Lastly, it can help businesses better understand and connect with their customers from different backgrounds, which can lead to

improved customer relations and increased sales (UNESCO, 1995; Roosevelt, 1999; Wright, 2012; Rodríguez-Izquierdo, 2022).

### 3.2.6 Cultural Humility

The term, cultural humility (CH), was first emanated by Tervalon and Murray-García who described it as *“a lifelong commitment to self-evaluation and critique”* (Tervalon & Murray-García, 1998, p. 123). This process ensures that one remains open to realities other than oneself and considers the continuous search for knowledge while being flexible to new perspectives according to one’s own culture. CH encourages self-reflection and other aforementioned attitudes such as openness and tolerance.

Foronda, Baptiste, Reinholdt, & Ousman (2016) attributed the features of openness, self-awareness, egoless, supportive interactions, and self-reflection and critique to the concept of CH. These attributes were discovered through extensive research that sought to identify the words most frequently mentioned in articles about CH.

CH fosters respect, mutual empowerment, tolerance, and openness within the workspace. An inclusive environment can be developed based on these attributes. Furthermore, it underscores the importance of cultural identity and the need to address cultural dynamics (Zhu et al., 2021).

Through the research of Zhu, Luke, and Bellini *“A Grounded Theory Analysis of Cultural Humility in Counseling and Counselor Education”* a general understanding of the concept was reached, CH was understood as a *“type of presence, stance, essence, internal quality, and code of humanness”* (Zhu et al., 2021, p. 80).

Hook J. N., Davis, Owen, & DeBlaere state that CH incorporates a consciousness of a person’s constraints to be capable of understanding another’s cultural background and experiences, and failure to do so may cause misunderstanding and struggles; making it an *“ongoing process of growth in humility, openness, interest and flexibility”* (Hook et al., 2017, p. 16).

Psychologists Davis, Worthington, and Hook (2010) reviewed the concept of humility and in the definitions, they found a pattern that involved intrapersonal and interpersonal traits. In the *intrapersonal dimension*, they mention how a humble person has a more precise view of himself, there need to be self-critique and reflexivity to recognize and accept biases and assumptions; in the *interpersonal dimension*, the same humble individual can sustain an effective multicultural encounter thanks to the understanding cultural beliefs and application of gratitude, acknowledging mistakes, mindful listening, lack of superiority, openness to ideas, among others (Davis et al., 2010;2011; Hook et al., 2013; Hughes et al., 2020).

Hughes et al. (2020) recommend heightening and continuing the cultivation of individuals' intrapersonal and interpersonal cultural humility during the early stages of development. This, they argue, will enhance personal adaptability through improved self-reflection, ultimately leading to more effective multicultural interactions.

The dynamism that exists between cultures within spaces of interaction such as a scholarly exchange, draws attention to concepts such as cultural humility (CH) and its counterpart, cultural competence. The space where the individual thrives enables the characteristics inherited from his or her culture to shine through and from a positive vantage point, one must handle these differences with care. The conceptualization of cultural humility is highlighted as an ongoing process of self-reflection and learning that emerges from the display of diverse, intricate, and nuanced cultural dynamics, which relies on CH to foster an inclusive environment (Tervalon & Murray-García, 1998; Foronda et al., 2016; Zhu et al., 2021).

Markey, Prosen & Repo (2021) investigated the importance of CH in multicultural diverse teams of nurses, ensuring that it is very important for the team to be efficient and that its development supports inclusiveness. There are a wide number of complex ramifications that take place when operating in diverse professional preparedness and cultural norms in a culturally diverse team that needs thorough planning to successfully face work-related differences, ethnic ideologies and own cultural identities (Montayre et al., 2017; Byrne et al., 2019; O'Brien et al., 2019; Markey et al., 2021).

### 3.3 Knowledge and Understanding

Human mobility has been present since the earliest periods in the history of civilization and humankind, the moving of wealth, talent, labor, and refugees; and it continued to grow exponentially in the past years due to the key factors of globalization; the transformation of economies, societies, politics and technology. It is very important for economic globalization because it is an important component due to the transfer of knowledge, technologies, and ideas that have a great impact on global talent management systems and multinational enterprises (MNE) (Solimano, 2009; Bender, 2022).

It is very important for students and other individuals to learn to communicate with other cultures since it will be undeniably the status quo in the near future as Spitzbert and Changnon wrote:

“Whereas a world of one people and one speech is unlikely in any imminently foreseeable future, the objective of finding common purpose through mutually coordinated communication across cultures and languages continues to be a goal of many if not most people, organizations, and nations” (Spitzberg & Changnon, 2009, p. 2).

Organizations must have employees with the required characteristics to perform accordingly in different cultural settings, producing the need for change agents to help in these situations. Fred Lunenburg states that such agents can be internal employees or external consultants and defines a change agent as “The individual or group that undertakes the task of initiating and managing change in an organization” (Lunenburg, 2010, p. 1).

Given the need stated above, it would be a great advantage for multinational enterprises to hire those who have the sensitivity to work in an intercultural environment. This gives universities an important role in which according to Dziminska, Fijałkowska, & Sułkowski (2020), HEIs act as cultural change agents to their students, through the development of their social, personal, intercultural, service, and business in the real-world skills through their teaching, research and social interaction.

### 3.3.1 Internal Diversity and Heterogeneity of Cultural Groups

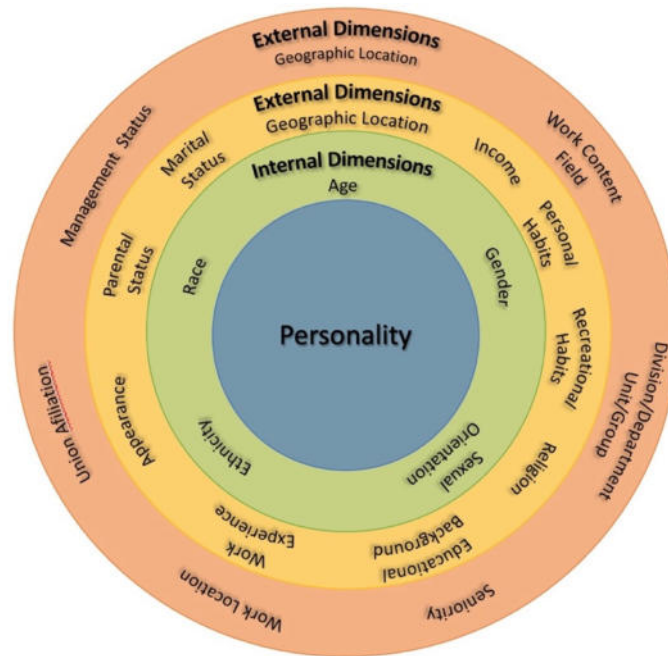
The cultural perceived differences between an individual and another are referred to as diversity and heterogeneity of cultural groups. These dissimilarities can manifest in various forms, such as variations in beliefs, values, customs, language, ethnicity, race, gender, sexual orientation, socioeconomic status, and more. It's the representation within a social system of the affiliations and cultural significance of a group of people (Jackson S. , 1992; Cox T. , 1993; Kapur, 2020).

Loden & Rosener (1991) defines diversity as that which characterizes one group from another along the primary and secondary dimensions. According to the authors, the primary dimension is formed by characteristics that cannot be changed such as ethnicity, gender, age, sexual orientation, race, and mental and physical abilities; the secondary dimensions can be controlled or modified and can have an influence on the personal identity and add to the primary dimension by the impact it causes to self-esteem and self-definition, these include geographic location, first language, religion, educational background, family status, work experience, income among others.

Based on the dimensions outlined by Loden and Rosener (1991), in the second edition of their work "Diverse Teams at Work: Capitalizing on the Power of Diversity" (2003), Gardenswartz and Rowe categorized the "wheel of dimensions" into four distinct levels. The first level encompasses *Personality* traits such as openness, conscientiousness, extraversion, and agreeableness. The second level covers *Internal dimensions* including ethnicity, gender, age, sexual orientation, race, and mental and physical abilities. The third level addresses *External dimensions* such as geographic location, income, personal habits, recreational habits, religion, educational background, work experience, appearance, parental status, and marital status. Finally, the fourth level pertains to *Organizational Dimensions* including functional level, work content field, division/department/unit/group, seniority, work location, union affiliation, and management status (Figure 3.3.1.1 ).



**Figure 3.3.1.1: Four Layers of Diversity**



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Source: Adapted Loden, Marilyn & Rosener, Judy (1991), "Workforce America! Managing Employee Diversity as a Vital Resource. Gardenswartz & Rowe (2003), "Diverse Teams at Work: Capitalizing on the Power of Diversity" 2<sup>nd</sup> edition.

Acknowledging, and learning these differences, and promoting understanding and inclusivity, will avoid a major obstacle in the evolution of a peaceful interaction within multicultural societies bringing forth racism and bigotry – cultural stereotypes (Lankester & Alexopoulos, 2021).

Hamilton & Sherman (1994) define stereotypes as a standard perspective belief of certain characteristics, attributes, and behaviors of members of a group.

### 3.3.2 Awareness of one's and others' Assumptions

An assumption is something that is accepted as true, it is unquestioned and proofless (Cambridge University Press & Assessment , 2023). When speaking of one's and other assumptions, it refers to the recognition and understanding of the implicit or explicit beliefs, attitudes, and expectations that are held about ourselves and others. These assumptions can

be influenced by various factors, such as culture, upbringing, experiences, and personal biases. An individual needs to be aware of his or her cultural self, their own beliefs, and values, without this self-awareness, the person cannot access and perceive the differences with other cultures; they cannot see themselves from another cultures' viewpoint (Hofstede G., 2001; Bennett M., 2013; Bennett J. M., 2015).

Geert Hofstede (2001) criticizes the way society and organizations indoctrinate individuals over generations, an issue that is often overlooked. According to Newberg and Waldman in their book "Why we believe what we believe: Uncovering Our Biological Need for Meaning, spirituality, and Truth" (2006), people's beliefs and values are shaped by their environment, and due to the familiarity of this indoctrinated mindset, they rarely question it; these ingrained assumptions are what individuals rely on when evaluating others' viewpoints.

Beliefs govern nearly every aspect of our lives. They tell us how to pray and how to vote, whom to trust and whom to avoid; and they shape our personal behaviors and spiritual ethics throughout life. But once our beliefs are established, we rarely challenge their validity, even when faced with contradictory evidence. Thus, when we encounter others who appear to hold differing beliefs, we tend to dismiss or disparage them (Newberg & Waldman, 2006, p. 2).

It is important to be aware of our assumptions because they can shape people's perceptions, attitudes, and behaviors toward others. If an individual holds negative assumptions about a certain group of people, it may be more likely to discriminate against them or treat them unfairly. Similarly, it is important to be aware of others' assumptions because they can influence the way they perceive and interact with us (Newberg & Waldman, 2006).

In the article "The Canon Debate, Knowledge Construction, and Multicultural Education" (1993), James A. Banks examines the debate between Western traditionalists, Multiculturalists, and Afrocentrists. Banks emphasizes the importance of educating students on constructing and establishing their own interests, positions, ideologies, and assumptions. He argues that multicultural education is essential for students to understand how knowledge is constructed, enabling them to identify the formation of cultural assumptions, perspectives,

and biases. Otherwise, students may rely solely on their personal experiences at home and in their communities when engaging in intercultural encounters, potentially leading to limited or biased judgments and actions.

An important goal of multicultural teaching is to help students to understand how knowledge is constructed. Students should be given opportunities to investigate and determine how cultural assumptions, frames of references, perspectives, and the biases within a discipline influence the ways the knowledge is constructed. Students should also be given opportunities to create knowledge themselves and identify ways in which the knowledge they construct is influenced and limited by their personal assumptions, positions, and experiences. (Banks, 1993, p. 11).

Ang, Van Dyne, and Koh (2008) state that metacognitive cultural intelligence (CQ) is a term that makes references to a person's cultural awareness consciousness during cross-cultural interactions. The term is presented in Earley & Ang's book "Cultural Intelligence: Individual Interactions Across Cultures" (2003), in which they came to the theory that CQ is a multidimensional construct formed by the *metacognitive dimension*, an individual's process to acquire and use knowledge; *cognitive dimension*, the individual's knowledge; *motivational dimension*, the drive to acquire knowledge; and *behavioral dimension*, the individual's behavior in cross-cultural interactions. The *metacognitive CQ* is the reflection of a mental process of an individual's use to obtain and understand cultural knowledge, which includes knowledge and control over a person's thought process (Flavell, 1979).

A study by Sobkowiak (2019) revealed that the students' cross-cultural interactions fostered insights and enhanced their understanding of their own cultural identity. They took pride in their home country and endeavored to be cultural ambassadors, sharing their traditions with international peers. However, they also maintained an objective and respectful attitude towards other cultures, eschewing ethnocentrism and negative comparisons. The study suggested that the students' worldviews evolved along the ethnocentric/ethnorelative spectrum.

Awareness of our own assumptions and biases can help us to communicate more effectively with others. Being aware of others' assumptions can help get a better understanding of others' communication style allowing a more appropriate response; and avoiding conflicts and misunderstandings in the workplace. Being aware of these assumptions and biases can help individuals to recognize and challenge them, leading to more effective conflict resolution. Inclusivity is another area where awareness of assumptions and biases can make a difference by recognizing and challenging our assumptions, we can create a more welcoming and supportive environment for individuals from diverse backgrounds (Reiss, 2012).

Awareness of one's and others' assumptions is important for promoting effective communication, conflict resolution, inclusivity, and decision-making in the workplace. It is important for individuals to recognize and challenge their own assumptions and biases, and to promote a culture of openness and inclusivity in the workplace.

### 3.3.3 Knowledge of Beliefs, Values and Practices

Knowledge of beliefs, values, and practices refers to the understanding of the cultural, religious, and social beliefs, values, and practices of oneself and others. The beliefs, values, and practices (BVP) are shaped by a variety of factors, such as upbringing, culture, religion, education, and personal experiences. Knowing this is important because it helps to promote understanding and respect for different cultures and perspectives. It can help individuals avoid misunderstandings and misinterpretations, and to communicate more effectively with people from different backgrounds (UNESCO, 2013; Hook et al., 2017; Lankester & Alexopoulos, 2021).

When there is an interaction between individuals hailing from another country, there are two types of knowledge present; the knowledge of each one's culture, which gives the person its identity and is learned through family, society, and formal education; and the knowledge of the interaction process, being insightful of how the other society communicates and interacts – written or in person (Byram M. , 2021).

Beliefs, values, and practices are what give individuals their identity, as well as identifying them as being part of a group, and can be divided into two categories; first, some have a common

meaning for the person and those surrounding him (religion, history, etc.); and secondly, those that conform the identity – those that make it distinct for the rest of its society (Barth, 1969; Byram M. , 2021).

There are major benefits of learning facts about other cultures, nevertheless, it is highly important to comprehend the values and attitudes to consequently develop an awareness of intercultural diversity (Bender, 2022). Authors Knafo, Roccas, & Sagiv, state that: *“Values have been recognized as having a crucial role in understanding cultures [...] They affect the way people perceive and interpret the world, and their preferences, choices, and actions”* (Knafo et al., 2011, p. 178).

It is very common for these key aspects (BVP) to be unquestioned and implied in the psyche of a person, since they are learned from a very young age, and are accepted by the society where the individual is from. The concepts are frequently judged by people through dichotomization such as Values being true or false, or Beliefs and practices being good or bad (UNESCO, 2013).

According to Craig Shealy (2016) the differences in beliefs and values between cultures should be expected and not overlooked; it should be learned and developed through experiences, skilled facilitators, and reviewing the differences and help them interpret when having a multicultural interaction by giving the individual intercultural sensitivity to successfully understand the groups' nature.

In the workplace, knowledge of beliefs, values, and practices are especially important for creating a diverse and inclusive environment. By understanding and respecting the cultural, religious, and social backgrounds of coworkers, individuals can create a more welcoming and supportive workplace for everyone. For example, an understanding of the religious practices of employees can help to ensure that work schedules and policies do not conflict with those practices. Similarly, an understanding of the cultural values and beliefs of colleagues can help to avoid unintentional offenses and misunderstandings. It can also help to promote effective collaboration and teamwork, by understanding the perspectives and approaches of others,

individuals can work together more beneficially and achieve better outcomes. (Luijters et al., 2008; Reiss, 2012; R. Delecta & Raman, 2015; Raewf & Mahmood, 2021).

#### 3.3.4 Communicative Awareness

In her chapter “Intercultural Communication Competence: A Systems-Theoretic View” in Ting-Toomey and Korzeny’s book “Cross-Cultural Interpersonal Communication” Kim (1991) describes communication competence as the capacity an individual has to abandon or change old cultural knowledge, learn to adapt some of the new cultural ways to creatively manage the unfamiliar differences, intergroup posture and the stress that comes with the dynamism of cultures.

Communicative Awareness refers to an individual’s ability to perceive and understand the nuances of verbal and non-verbal communication in various social and cultural contexts. This skill is essential for effective communication in both personal and professional settings. Verbal communication includes the words spoken by an individual and how they are spoken, including tone, volume, and pace. Non-verbal communication, on the other hand, includes body language, facial expressions, and gestures, which can convey emotions and attitudes (Lustig & Koester, 2010; UNESCO, 2013).

Schnabel et. al (2015) state that in an international situation it is important to be receptive to the person someone is talking to and to be able to direct a conversation actively; and that some facets are closely related to effectiveness, such as sensitivity, clarity, flexibility and perspective-taking in communication.

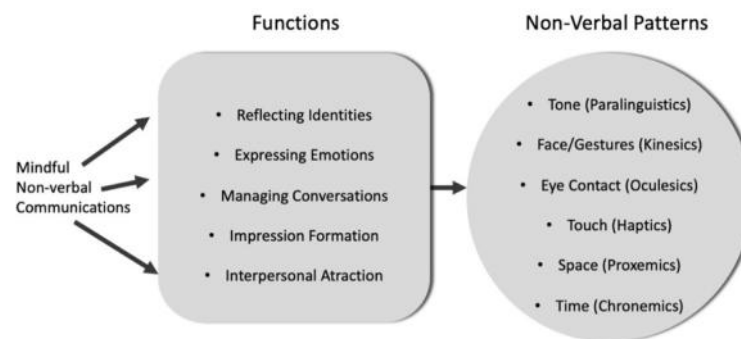
A key aspect of maintaining a successful relationship in business is the efforts made by each of the partners to communicate effectively throughout the duration of their association (Mohr & Nevin, 1990). Being communicatively aware is essential in the workplace for a few reasons. Griffith & Harvey (2001) say that the development of a strong intercultural alliance is founded on adaptability and the desire to customize to adapt intercultural communications.

According to Braslauskas (2021), the global environment is going through rapid changes, and the only ones to create and execute new ideas, are those with effective international

communication and a quick and effective adaptation to external conditions are creative organizations.

A Non-verbal message has certain functions, according to Ting-Toomey (1999) non-verbal messages are a nonlinguistic part of communication that carries a powerful emotional meaning, due to the fact that these help verbal messages by complementing, emphasizing, and in some cases contradicting the original message. The author believes this component of communication is a challenging subject. It inspects fundamental actions that take part when a conversation is taking place, some of said functions or actions are kinesics that include body and facial movements; oculusics, eye contact; vocalics, for example, volume and tone of voice; proxemics which concerns spatial distance; haptics (touch); environment, the décor or architecture; and chronemics (time) (Ting-Toomey, 1999; Bender, 2022). Figure 3.3.4.1 illustrates non-verbal functions and patterns depicted by the Ting-Toomey.

**Figure 3.3.4.1: Mindful non-verbal communication: Functions and Patterns.**



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Source: Ting-Toomey (1999) "Communicating Across Cultures"

In her book "Communicating Across Cultures" (1999), Stella Ting-Toomey gives several recommendations on how to have a respectful use of non-verbal messages; identify suitable nonverbal rules in different cultures; keep in mind the cultural values and attributions attached to the rules; understand what nonverbal behavior serve what functions in certain situations; recognize and respect sensitive cultural differences in the use of nonverbal messages; have a

deeper understanding of the complexities of nonverbal messages in different dimensions; utilize a culture-sensitive perception of checking statements.

Transnational organizations need to have human capital with the ability to adjust themselves in international situations. When having an intercultural interaction several levels of analysis must be taken into consideration to communicate successfully. According to Ting-Toomey and Dorjee (2017) the *individual level of analysis* is divided into two, *sociocultural identities*, which include religion, gender, social class, and age for example; and *personal identities*, any attributes that are associated with oneself in comparison to others. In both identities the understanding of the mutual meaning in the interaction. In the *cultural level of analysis*, it is looked at as a whole, instead of the attributes or behavior of the individual. The aforementioned authors define identity as “*a multifaceted set of group-level membership identity features and individual-level dispositions*” (Ting-Toomey & Dorjee, 2017, p. 450).

### **3.4 Skills**

This construct encompasses a broad repertoire of essential competencies that enable individuals to engage in successful intercultural interactions. These competencies include multiperspectivity, empathy, cognitive flexibility, behavioral adaptation, and linguistic proficiency, all of which work together to facilitate effective intercultural interaction (Deardorff, 2006; Barret et al., 2014).

#### **3.4.1 Multiperspectivity**

It is important to recognize and understand that individuals possess diverse perspectives on the world and its workings, which are continually shaped and influenced by the lens through which they are examined (Hanvey, 1975).

Even though every culture around the world is different, there are many similarities as well, but being aware of the specific distinctions between them is what will help an individual or an organization to benefit from separate points of view on certain situations (Griffer & Perlis, 2007). Navigating the complexities of diverse cultural landscapes can be challenging, as there



are numerous countries worldwide, each with its own distinct cultural groups that interact with one another. Subcultures may form based on factors such as age, gender, and socioeconomic status, while *countercultures* represent those who reject the dominant societal norms and perspectives (Rhoads, 1994).

Multiperspective Identity Theory studies the differences between cultures, and it can be defined as *“the study of how groups perceive the cultural differences between individual members of the group and how those differences may or may not become interconnected to each other. Thus, concepts of difference and the interconnectedness of difference shapes the culture of a group or subgroup of people”* (Perlis, 2001, p. 40).

Multiperspectivity in the workplace offers numerous benefits that contribute to a dynamic and successful environment. By embracing diverse perspectives and viewpoints, organizations can unlock a range of advantages.

Firstly, multiperspectivity enhances problem-solving capabilities. When individuals with different backgrounds and experiences collaborate, a wider array of ideas and approaches emerges. This diversity of perspectives challenges conventional thinking, fosters creativity, and leads to innovative solutions. By considering multiple viewpoints, organizations can tackle complex challenges more effectively and make well-rounded decisions (Saxena, 2014).

Furthermore, multiperspectivity fuels innovation and creativity. A workforce comprised of individuals from various cultural, educational, and professional backgrounds brings a wealth of knowledge and fresh perspectives. This diversity of thought sparks creativity and encourages innovative thinking in developing new products, services, and processes. In the realm of decision-making, multiperspectivity proves invaluable. When teams consist of individuals with diverse viewpoints, decision-making becomes more robust. The inclusion of multiple perspectives ensures that decisions are well-informed, considering a range of factors and potential outcomes. This approach helps organizations avoid biases and make more balanced and informed choices (Hunter et al., 2020).

Multiperspectivity also promotes cultural competence and a global mindset. By fostering an environment that values diverse perspectives, employees are exposed to different cultural practices and viewpoints. This exposure encourages individuals to learn from one another, respect different ways of thinking, and develop a global mindset. Such cultural competence is particularly crucial in today's interconnected world, where organizations operate in diverse markets and collaborate with partners from various cultures (Lovvorn & Chen, 2011).

Moreover, embracing multiperspectivity enhances employee engagement and satisfaction. When employees feel that their perspectives are valued and their voices are heard, they develop a sense of belonging. This, in turn, boosts engagement, job satisfaction, and productivity. Additionally, it cultivates a positive teamwork dynamic and contributes to higher employee retention rates (Nwansu & Babalola, 2023).

In terms of customer relationships, multiperspectivity plays a significant role. Organizations that embrace diverse perspectives are better equipped to understand and cater to their diverse customer base. By incorporating a range of viewpoints into product development, marketing, and customer service, businesses can create offerings that resonate with a broader range of customers. This strengthens customer relationships and enhances the organization's brand reputation (Pérez, 2022).

Lastly, multiperspectivity facilitates conflict resolution and collaboration. Open dialogue and constructive conversations are encouraged, even when conflicting opinions arise. This approach fosters the development of conflict resolution skills and a collaborative mindset. Employees learn to respect and value different viewpoints, find common ground, and work together towards shared goals (Ting-Toomey & Kurogi, 1998).

In conclusion, multiperspectivity brings numerous benefits to the workplace. It drives innovation, improves decision-making, fosters cultural competence, enhances employee engagement, strengthens customer relationships, and promotes collaboration. By valuing and leveraging diverse perspectives, organizations create a dynamic and inclusive work environment that thrives in the ever-evolving business landscape.

### 3.4.2 Empathy

There has been a great amount of research done on international management by different authors such as Hawes & Kealy (1981), Abe & Wiseman (1983), Gersten (1990), Lolla & Davis (1991) and Winter (2010) among others that agree on the fact that there is strong evidence of the significant role that cultural empathy plays in the achievement of successful intercultural interactions and relations.

Brent Ruben defines empathy as *“the capacity to clearly project an interest in others, as well as to obtain and to reflect a reasonably complete and accurate sense of another's thoughts, feelings, and/or experiences”* (Ruben, 1976, p. 340). It is very important feature for building long lasting and prosperous relationships intercultural interactions are involved. Being mindful of others' way of thinking will give them the assurance that their opinions, thoughts and feelings will be taken into consideration (Ruben, 1976; Ata U., 2003).

Some authors such as Hawes & Kealy (1981), Van der Zee & van Oudenhoven (2000) and Ata U. Karim (2003) refer to the term as “Cultural Empathy” when it is involved in the intercultural subject.

Ata U. Karim defines “Cultural Empathy” as *“Cultural empathy is the ability to recognize, understand and acknowledge the identity, experience and position of a culturally different person without denying one's own cultural identity”* (Ata U., 2003, p. 37).

Being empathetic in a situation involving a person or group with different cultural backgrounds is very important for the interaction to be fruitful and effective, because it is the foundation of trust between the involved parties (Johnson et al., 1996).

The findings of the study presented in the article, "The Multicultural Personality Questionnaire: A Multidimensional Instrument of Multicultural Effectiveness," indicate that *“will probably prove to be of specific predictive value to overseas success”* (Van der Zee & van Oudenhoven, 2000, p. 307).

Cultural empathy entails recognizing and acknowledging the distinct experiences and identities of others, rather than simply being sympathetic. It does not necessitate agreeing with the other person, but rather confirms an understanding of the differences in their cultural background (Ata U., 2003).

Based on the definitions provided, "Empathy" or "Cultural Empathy", which adheres more to the purpose of this study, can be understood as the ability to reflect on and perceive an interest in perspectives, experiences, and identities that differ from one's own (Ruben, 1976; Ata U., 2003).

### 3.4.3 Cognitive Flexibility

J.M Bennet defines it as *"the capacity to shift frame of reference"* (2009, p. 133). The ability of moving from one frame of reference to another, allows the evaluation through different perspectives and choosing the correct one depending on each situation individual. Barret et al. has a very similar definition *"the ability to change and adapt one's way of thinking according to the situation or context"* (Barret et al., 2014, p. 20).

The ability to adjust one's cognitive approach to the relevant context is highly beneficial in mitigating misunderstandings, conflicts, boosting productivity, and lessening prejudices and stereotypes. This skill is particularly valuable when individuals navigate multicultural environments or collaborate with teams of diverse cultural backgrounds (Bennett J. M., 2015).

Moreover, it also allows individuals to navigate the challenges of cultural differences with ease. Individuals with a high level of cognitive flexibility are more likely to recognize and appreciate the value of diverse ideas and approaches, rather than being limited by their own cultural norms and beliefs (Hu et al., 2018).

Organizations are recognizing the benefits of embracing diversity and equality in the workplace (Aghazadeh, 2004). Cognitive flexibility is a crucial skill in navigating the complexities of such multicultural environments (Hu et al., 2018). In a multicultural organizational setting, it is crucial for individuals to comprehend and value diverse perspectives, communicate

proficiently across cultural divides, and develop innovative solutions to challenges (Legare et al., 2018).

Cognitive flexibility plays a critical role in promoting harmonious and productive interactions among individuals from different cultural backgrounds, enabling them to be open-minded and receptive to new ideas and perspectives (Ionescu, 2012). This skill allows individuals to step outside of their own cultural biases and consider alternative viewpoints, leading to more effective communication and collaboration within multicultural teams (Schachaf, 2008).

Additionally, cognitive flexibility enables individuals to adapt their communication style to different cultural contexts, switching between direct and indirect communication styles depending on the cultural norms of their colleagues. Communication adaptation is essential for building strong relationships and establishing effective teamwork within a multicultural workplace (Harvey & Griffith, 2002).

In a section of "The SAGE Encyclopedia of Intercultural Competence" (2015), Janet M. Bennett described an exercise developed in 1973 at the University of Minnesota's Speech Communication Department by herself and Milton Bennett, known as the D.I.E. exercise. The exercise is designed to promote greater flexibility in interpretation. The process begins by presenting participants with several ambiguous objects and photographs. First, the individuals are asked to describe what they observe without making any interpretations or evaluations. Secondly, they are prompted to interpret the object by considering two questions: What might this be? What might it be used for? Subsequently, the participants are asked to provide a positive or negative judgment. In the final step, the facilitator reveals the actual use of the object.

#### 3.4.4 Behavioral Adaptation

To have appropriate and effective behavior, there is a need for sufficient knowledge, motivation, and skills, which can be obtained through intercultural communication and exposure to diverse cultural perspectives. Engaging in intercultural exchange helps individuals develop a deeper understanding of different norms, values, and customs, which in turn fosters more culturally appropriate and effective communication and behavior (Lustig & Koester, 2010).

Earley and Ang's (2003) research suggests that international experiences, such as short-term study abroad or employment in another country, correlate with an individual's motivational cultural intelligence, which reflects their drive to learn and adapt to diverse cultural environments.

Pusch (2009) characterizes behavioral flexibility as the capacity of individuals to modify their conduct to align with the expectations of diverse cultural contexts. The author asserts that adaptable persons can continually shift their perspectives to encompass divergent cultural worldviews, while simultaneously adjusting their behaviors to conform to the norms and conventions of each specific culture. This is achieved through the judicious application of empathy, behavioral adaptability, cognitive flexibility, and tolerance.

#### 3.4.5 Linguistic Skills

The language of a country is the foundation of how the culture of a country is built and it is the channel on how information is transmitted by the population and without it, the knowledge, values and beliefs of the culture cannot be passed down from generations to generation (Kramsch, 1998; Saint-Jacques, 2006; Bender, 2022).

Shannon & Begley state that Language skills *“refer to the extent to which individuals can speak easily and accurately in the language that cross-cultural interactions require”* (Shannon & Begley, 2008, p. 43). Such skills are a crucial element in acquiring and understanding cultural knowledge. The authors believe that individuals with multilingual abilities have a systematic

mechanism to be able to access the core values of different cultures and should have more knowledge of specific aspects of other cultures.

Having the correct linguistic skills will make more fluid the international collaboration of interdisciplinary teams, as a result of effective communication process (Winter, 2010).

## CHAPTER 4: GLOBAL EMPLOYABILITY

### 4.1 Introduction

When graduates finish their undergraduate or postgraduate studies, they start their path to develop their professional careers by obtaining a job that is related to their field of study. Initially, they must question their employability. Hillage & Pollard describe employability as *“the ability to realize potential through sustainable employment”* (Hillage & Pollard, 1998, p. 2). In the context of human resource management, employability can be understood as an individual's potential to secure and maintain employment (Rothwell et al., 2008).

The interconnectedness of national economies and activities has given rise to innovative business models, and intercultural proficiency is a crucial factor for the sustainable development of these new ways of conducting business. The current reality for most organizations is that international operations, previously viewed as a strategic advantage, have now become indispensable for their very survival. This presents new challenges for companies, as they must comprehend cultural disparities and possess qualified human resources capable of operating within culturally diverse teams (Luijters et al., 2008; Kaftan et al., 2023; Sun et al., 2024).

It is increasingly common for modern organizations to have a significant number of expatriate employees on international assignments in their subsidiaries as part of global expansion and talent management initiatives. This allows the headquarters to maintain closer oversight of the operations in their offshore offices (Sanchez et al., 2023).

Current and future employees have to be prepared to change residence when the job requires it. As it has been mentioned previously in this research the individual must be able to adapt to its work environment to be able to efficiently work with a multicultural team, but it is also important for the person to adapt in its personal life, maintaining and equilibrium between its professional and family life will bring forth a successful adaptation and have a positive impact on their career development and job satisfaction (Mabkhot & Al-Ameryeen, 2023).



A study conducted by Mercers in (2015) found that a significant number of companies are expecting an increase in the utilization of permanent transfers (54%), developmental and training assignments (50%), and locally hired foreigners (47%). A smaller percentage of respondents (44%) anticipate a rise in more traditional long-term assignments. The report also notes that most extended-term assignees (66%) are aged between 35 and 55, while the proportion of short-term assignees in the younger category under 35 has risen to 48%, up from 45% in 2013. These findings highlight the evolving nature of global employability strategies within companies, with a shift towards a greater emphasis on developmental and training assignments, as well as the recruitment of locally hired foreigners (Mercer, 2015).

The change in global employment strategies indicates a growing awareness of the significance of local expertise and cultural adaptability in the international business sphere. According to predictions by PricewaterhouseCoopers (2020), there will be a 50% increase in assignments by 2020, driven by the rising importance of emerging markets. This development is expected to lead to notable shifts in mobility patterns, as skilled workers from emerging markets increasingly take on roles across their home region and beyond, leading to increased diversity within the global talent pool. Additionally, it is projected that millennials will dominate international assignments and they are likely to approach career opportunities and work-life balance with more flexibility (PricewaterhouseCoopers, 2020).

Intercultural competence plays a crucial role in enhancing employability in international corporations for several reasons. Firstly, intercultural competence allows individuals to effectively communicate and collaborate with colleagues and clients from different cultural backgrounds. Effective communication and collaboration are essential in today's globalized business environment. Miscommunication and misunderstandings can lead to costly mistakes, loss of business opportunities, and damaged relationships (Landis & Bhagat, 1996).

Secondly, intercultural competence enables individuals to adapt and navigate unfamiliar cultural contexts. This includes understanding and respecting cultural norms, customs, and expectations, which is crucial for building rapport and trust with international counterparts.

Thirdly, intercultural competence helps individuals to develop a global mindset and perspective (Bennett J. M., 2015). This is increasingly important in international corporations as they operate in diverse markets and organizations.

#### **4.2 Employability and the Importance of Soft Skills for the Labor Market**

Employability skills can be defined as the industry's expectations of graduates, their enthusiasm for their work, and the abilities they possess (Kaushal, 2016). Saranya and Rajakumar (2022) note that employability skills are considered crucial for graduates seeking employment, and these skills are often referred to as basic skills, core competencies, core skills, enabling skills, essential skills, generic capabilities, key skills, soft skills, transferable skills, and work skills.

Students need to evaluate their self-perceived employability to focus on developing the skills and competencies they require further reinforcement in (Finch et al., 2013). There is a difference on what students perceive as what makes them more employable vs what employers consider critical for employment. According to Świgoń, the following are components that students take in mind when talking about self-perceived employability:

1. Engagement in the studies and academic performance;
2. The university's brand;
3. The field of study of the university;
4. The status of the field of study;
5. the labor market's demand for professionals in their field of study;
6. The perception of the state of the labor market;
7. The opportunities in the labor market;
8. Confidence in their skills and competences;
9. Personal knowledge and information management (PKIM), along with information literacy (IL).

(Świgoń, 2022, pág. 152)

Świgoń's (2022) research revealed that approximately 40% of the surveyed students believed they could secure any job, provided they possessed adequate skills and experience. This suggests that many students and graduates tend to prioritize factors influenced by their university or field of study, rather than solely concentrating on their own competencies and qualifications. The findings indicate that students may hold an excessively optimistic view of their employability, potentially undervaluing the importance of cultivating a robust set of skills and practical experience that employers seek.

While these factors reflect the students' perspectives on employability, research indicates that employers often prioritize different criteria when evaluating job candidates. Employers tend to place greater emphasis on students' specific job-related skills, general cognitive abilities such as problem-solving, and key personal qualities like initiative, adaptability, and leadership. Employers seek graduates who not only possess technical expertise but also demonstrate strong interpersonal skills, the ability to collaborate effectively, and a proactive mindset. These soft skills are essential for success in the modern workplace, enabling employees to navigate diverse, dynamic, and often ambiguous work environments. By developing a robust set of both technical and soft skills, students can make themselves more attractive and valuable to prospective employers (Mahmud et al., 2023).

According to Hillard and Pollard, employability is determined by four principal components. The first is the depth of knowledge and abilities the individual holds. The second is how they showcase and utilize those capabilities. The third is the manner in which they market themselves to prospective employers. The final factor is the setting in which they pursue employment, such as the job market conditions and their personal situation (Hillage & Pollard, 1998).

According to Ramisetty and Desai (2017), employability is comprised of various factors that have been categorized into four groups by academics, business professionals, employers, and policymakers based on five different investigations: *Basic Academic Skills* (communication skills), *Thinking Skills* (problem-solving, decision making, creativity, and reasoning),

*Interpersonal Skills*, (teamwork, leadership, etc.), *Personal Characteristics and Attitudes* (self-esteem, motivation, growth, etc.).

Table 4.2.1 presents the findings of a study conducted by Yong and Ling (2021). The researchers collected data from 395 graduates in 2017 and a group of non-governmental employers affiliated with the Business International Networks. They asked the participants to rank a series of soft skills based on their perceived importance for labor market readiness.

**Table 4.2.1: Graduates Vs. Employers Soft-Skill Rank Order**

| No. | Skill                 | Graduate Rank Order | Employers Rank Order | No. | Skill             | Graduate Rank Order | Employers Rank Order |
|-----|-----------------------|---------------------|----------------------|-----|-------------------|---------------------|----------------------|
| 1   | Goal setting          | 16                  | 9                    | 13  | Networking        | 11                  | 7                    |
| 2   | Job Commitment        | 12                  | 2                    | 14  | Leadership        | 12                  | 5                    |
| 3   | Organizational skills | 7                   | 3                    | 15  | Team spirit       | 8                   | 6                    |
| 4   | Self-care             | 3                   | 7                    | 16  | Empathy           | 5                   | 4                    |
| 5   | Balancing life        | 1                   | 8                    | 17  | Global Awareness  | 14                  | 11                   |
| 6   | Self-awareness        | 17                  | 9                    | 18  | Adaptability      | 13                  | 5                    |
| 7   | Ethical               | 6                   | 6                    | 19  | Analytical skill  | 14                  | 8                    |
| 8   | Creativity            | 4                   | 6                    | 20  | Lifelong learning | 7                   | 7                    |
| 9   | Self-presentation     | 5                   | 4                    | 21  | Decision making   | 9                   | 6                    |
| 10  | Communication         | 2                   | 4                    | 22  | Management skills | 18                  | 12                   |
| 11  | Critical thinking     | 10                  | 9                    | 23  | Productivity      | 10                  | 7                    |
| 12  | Social enterprising   | 13                  | 10                   | 24  | Collaborative     | 15                  | 7                    |
|     |                       |                     |                      | 25  | Proactivity       | 10                  | 1                    |

*Source: Adapted from Skills Gap: “The Importance of Soft Skills in Graduate Employability between the Employers and Graduates” (Yong & Ling, 2021)*

There are several definitions of soft skills; Moss and Tilly define them as “skills, abilities, and traits that pertain to personality, attitude, and behavior rather than to formal or technical knowledge” (Moss & Tilly, 2001, p. 44); Stewart, Wall & Marciniac (2016) describes them as “non-technical, applied skills that employees are expected to possess”.

Soft skills are not dependent nor technical of an abstract cognitive, they involve interpersonal and intrapersonal skills to achieve controlled performances in certain social contexts (Hurrell et al., 2013). The competencies or skills, that companies are looking for and are missing in

many of the people searching for work are problem-solving, teamwork, leadership, communication, creativity, critical thinking, and work ethic to name a few (Mourshed et al., 2012).

The study conducted by Jatto et al. (2024) on fresh graduates from the Federal Polytechnic Offa in Nigeria found a significant positive correlation between soft skills and employability. The researchers determined that soft skills have a favorable impact on the success of recent graduates in the workplace. Based on these findings, the study recommends that educational institutions incorporate soft skills development into their curricula to enhance the employability and overall success of their graduates.

Similarly, a study by Succi and Canovi (2019) examining the perceptions of employers and students in the tourism industry in Italy found that employers place a higher emphasis on soft skills compared to students. Employers highlighted competencies such as communication, problem-solving, and adaptability as key for success in the industry, while students tended to prioritize technical skills and knowledge. These findings underscore the need for higher education institutions to work closely with employers to better align their curricula and pedagogical approaches with the evolving needs of the job market.

Other studies, such as Stewart, Wall & Marciniak's (2016) have shown that graduates and students concur on the importance of soft skills for obtaining a job after graduating; but take in mind that employers are expecting the applicants to know how to apply them – they also constantly complain about new hires lacking the needed skills. Saranya & Rajakumar concluded that *“having a pleasant personality and exhibiting soft skills enables a student's personality for employment readiness”* (Saranya & Rajakumar, 2022, p. 32).

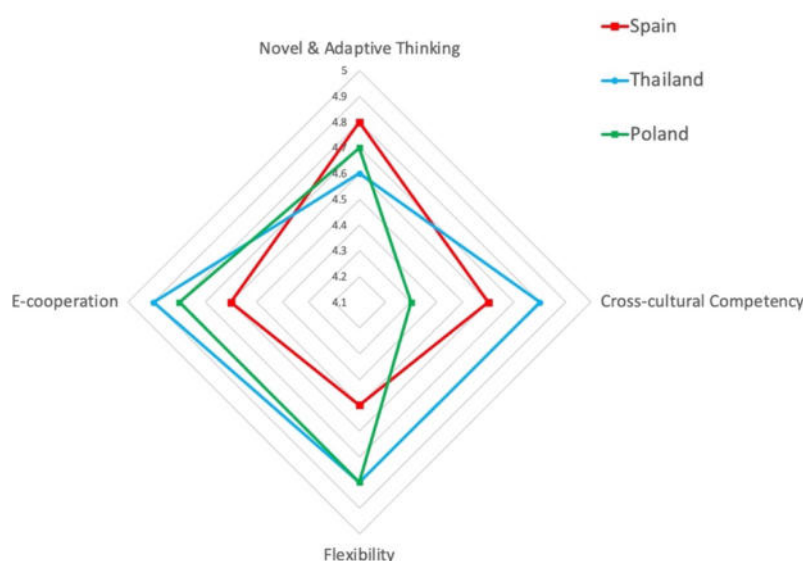
According to Saranya & Rajakumar (2022), soft skills accreditation is, nowadays, the most trending tool of modern colleges and schools that provide training to its students looking to improve their overall skills required for job placements; Soft-skill training seeks to ensure that students succeed in life in areas such as leadership, communication, humor, warmth and others.

An article written by Wladawsky-Berger in The Wall Street Journal “The Jobs Outlook for 2022: A Shifting Human-Machine Frontier” (2018) comments on the transition of jobs from humans to machines and artificial intelligence, among the important soft skills for 2022 he predicted in the survey back in 2018 were human social skills and culture specialists.

In (2020) Joseph Rios et al. analyzed 142,000 job advertisements to identify the main non-technical skills that employers were looking for in their potential staff members. The most mentioned in the results from the analysis were oral communication, written communication, collaboration, problem-solving, social intelligence, professionalism, adaptability, service orientation, continual learning, and cultural sensitivity – in that order of frequency. It is worth mentioning that job positions reviewed in the study were for local employment in which only 67% required at least a bachelor’s degree; the job positions reviewed by the author belonged to the fields of business management, finance, health science, and STEM (Science, Technology, Engineering and Mathematics); the education level of the positions where associate’s (14%), bachelor’s (70%), and graduate (16%) degrees.

In Rakowska & de Juana-Espinosa’s publication “Ready for the Future? Employability Skills and Competencies in the twenty-first century: The View of international experts” (2021), they analyzed the experts’ views from three different universities located in Spain, Thailand, and Poland, of the competencies and skills that will be important for the labor markets in the near future – 2020-2024. The academics conducted their surveys in 2016 and 2019. All the countries had different points of view regarding employability skills, but there was a tendency to the importance of adaptive thinking, flexibility, E-cooperation, and cross-cultural competencies – as skills that will be needed in 2024 (Fig.4.2.1). Contrary to the findings of Yong and Ling (2021), the study by Rakowska and de Juana-Espinosa (2021) identifies cross-cultural competence as a crucial skill for future employment.

**Figure 4.2.1: Common Competency Expectations for 2024**



Source: Adapted from “Ready for the future? Employability Skills and Competencies in the Twenty-first Century: The view of International Experts” (Rakowska & de Juana-Espinosa, 2021)

Individuals start learning skills from a young age, it’s the parent’s duty to start developing skills that will help them throughout their life (Bosley, n.d.). In graduates, some soft skills are acquired, developed, and improved throughout their studies at HEIs. HEIs know what employers demand regarding non-technical competencies, resulting in several universities offering courses to further develop or acquire skills (Weiss, 2019).

Graduates can also help strengthen their skills through employers, but this might be a problem due to the difficulty of being hired for not having a certain level of the demanded skills; although some employers give them the chance to evolve their competencies through internships, students claim that it’s not always the case since most of the activities they are assigned to are not related to their future work and the tasks given to them are not related to their profession (Tran T. T., 2014).

According to the World Economic Forum (2016), by 2020, technological and soft skills will be among the ten most in-demand skills. Non-technical skills are seen as complementary tools for hard skills, which comprise an individual's professional knowledge and abilities. In this

competitive era, today's professionals must possess both technical and non-technical skills to achieve success.

As a consequence of the COVID-19 pandemic, Ramnanan (2022) highlights the urgent need of employees with soft skill competencies like communication, flexibility, and resilience. Nick Deligiannis (2020) mentions that the COVID-19 pandemic's impact made soft skills turn into something more critical thanks to the employees working from home; giving importance to skills such as change adaptation, enthusiasm for upskilling, emotional intelligence, effective communication, problem-solving and creativity.

#### 4.2.1 The role of Higher Education Institutions in the Development of Soft-Skills

The employability of university graduates has become a growing concern for both higher education institutions and employers. Research suggests that companies not only value soft skills over academic reputation, but also consider them more important than students or graduates themselves perceive. A study found that employers place the highest importance on soft skills when hiring new graduates, prioritizing them even more than academic performance (Finch et al., 2013).

This trend is further supported by findings that 86% of respondents indicate an increased emphasis on soft skills over the last 5–10 years (Succi & Canovi, 2019). The 21st-century labor market has significantly evolved, and employers now seek graduates who possess a diverse array of competencies beyond just discipline-specific knowledge. They are looking for well-rounded individuals who can demonstrate a range of transferable skills that are essential for success in today's dynamic and collaborative work environments.

Soft skills are becoming increasingly important in the modern workforce. According to Kupryaeva et al. (2021), soft skills are easily measurable and trainable, forming the core basis for necessary professional competencies. These universal skills are developed throughout a person's lifetime, starting in the family and then in society, and they contribute to the quick social and professional inclusion of graduates in new workplaces or rapid professional change, ultimately increasing the graduate's competitiveness in the labor market (Kupryaeva et al.,



2021). Soft skills are critical for long-term business success, as they allow employees with technical skills to work together amicably and civilly, building successful business relationships (Truong et al., 2017).

The literature suggests that employers place a high emphasis on soft skills when evaluating new graduates for hire. Specifically, employers consider soft skills like communication, problem-solving, critical thinking and teamwork to be more important than academic reputation or technical skills and have emerged as essential employability qualities. Surveys have consistently shown that employers view these skills as necessary for success in the modern workplace, which often requires individuals to work in diverse, international, and multicultural environments. Therefore, higher education institutions must ensure that their graduates develop not only discipline-specific knowledge but also a robust set of soft skills to improve their overall employability and career prospects (Finch et al., 2013; Succi & Canovi, 2019).

Higher education institutions have a crucial role to play in addressing this gap between employer expectations and student perceptions. Institutions must work closely with employers to not only increase students' awareness of the importance of soft skills, but also provide guidance on how to effectively acquire and develop these essential competencies (Succi & Canovi, 2019).

Integrating soft skills training throughout academic curricula and providing opportunities for international mobility experiences are strategies that can help students become more attractive to future employers (Lozovoy et al., 2019; Handayani & Wienanda, 2020).

The rising cost of education and the increasing questioning of the value of traditional education models, particularly in developed countries, are pushing educational institutions to demonstrate a clear return on investment for students. This translates to a greater emphasis on aligning curricula with industry needs, fostering relevant skills, and ensuring graduates are readily employable (Giani, 2022).

The demands of the labor market are a significant driving force behind the pursuit of quality education, it acts as a feedback loop, signaling the need for specific skills and knowledge, which in turn drives educational institutions to adapt and improve their programs to meet these demands. As globalization increases competition, nations and businesses seek individuals with advanced skills and knowledge to maintain a competitive edge. This, in turn, creates a demand for high-quality education that can equip individuals with the necessary skills and competencies (Moses, 2016).

Employers are seeking graduates who possess strong technical expertise as well as a robust set of transferable soft skills, such as communication, teamwork, and critical thinking. Higher education institutions must adapt their curricula and pedagogical approaches to ensure that students develop these essential skills alongside their discipline-specific knowledge. By working closely with employers and providing opportunities for students to enhance their soft skills, universities can better prepare graduates for the demands of the modern labor market and improve their overall employability (Truong et al., 2017; Succi & Canovi, 2019).

According to a study by Sarbini et al. (2023), students recommended several ways for higher education institutions to enhance their employability. 14% of the responses suggested conducting more workshops to develop students' skills, such as communication, problem-solving, and teamwork. 13% recommended improving the course outline, facilities, and systems within the university to better align with industry needs. 33% suggested having a longer period of industrial training or internships to connect students to industries and gain practical work experience. The remaining 40% of the respondents had no further comments or suggestions, indicating that the previous recommendations were comprehensive in addressing the key areas for improving student employability.

The Accreditation Board of Engineering and Technology (Accreditation Board of Engineering and Technology, 2023) has established several student learning outcomes that engineering programs should strive to develop in their graduates. These include the ability to communicate effectively with diverse audiences, recognize and fulfill ethical and professional obligations, function productively as part of a team, and apply new knowledge to real-world engineering

problems. These outcomes are designed to ensure that engineering graduates possess not only technical expertise, but also the professional competencies essential for success in their field.

In their study "Soft Skills for Entry-Level Engineers: What Employers Want," Hirudayaraj et al. (2021) identified a list of key soft skills that employers prioritize for early-career engineering graduates. The researchers concluded that soft skills are often cultivated through practical experience and that graduates should seek opportunities to develop these competencies through internships, volunteer work, and extracurricular activities. According to the authors' findings, the most crucial soft skills sought by employers include:

- *Communication skills* encompass active listening, which involves attentively focusing on others' messages, posing clarifying inquiries, and conveying comprehension. Additionally, clear articulation - the ability to express ideas and thoughts precisely and concisely, both verbally and in written form. Empathy, the capacity to understand and respond sensitively to the feelings and perspectives of others, is also an important communication competency.
- *Teamwork* involves collaborating with others to achieve common goals, sharing ideas, and contributing to a positive team environment. Feedback reception entails being open to both positive and constructive feedback and using it to improve performance.
- *Proficiency in problem-solving and critical thinking*, encompassing the ability to adapt to changing circumstances and priorities, engage in creative thinking to generate innovative solutions, and employ effective decision-making skills by analyzing information, weighing alternatives, and reaching well-informed conclusions. Adaptability, which allows individuals to readily adjust to new situations, respond flexibly to emerging challenges, and exhibit a growth mindset as they encounter unfamiliar contexts. But merely possessing these skills is not enough – engineering graduates must also demonstrate the ability to effectively apply them in professional settings.

- *Professionalism and a strong work ethic*, exemplified through effective time management skills, the ability to prioritize tasks and meet deadlines, as well as dependability, responsibility, and commitment to follow-through. Additionally, demonstrating a positive and optimistic mindset, even in the face of adversity.

The development of both technical and soft skills is crucial for engineering graduates to thrive in the dynamic, ever-evolving modern workforce. Institutions of higher education play a pivotal role in nurturing these competencies, equipping students with the tools they need to excel not only in their chosen fields, but also in the broader scope of their professional and personal lives (Hirudayaraj et al., 2021).

#### **4.3 Demand for Intercultural Competence in the Global Labor Market**

Modern corporations deal with cultural diversity (CD) within their organization as a result of the migration of the workforce, due to the rising globalization of the economy (Greblikaite & Daugeliene, 2010). Consequentially, employers demand staff with cross-cultural proficiency and experience in global awareness, communication, economics, and the know-how of doing business globally (Gore, 2013).

With the influx of diversity candidates into the marketplace, companies are recognizing the importance of embracing cultural differences and fostering a workplace that respects and values diverse cultures (Aghazadeh, 2004).

According to a systematic review conducted by Fisher et al. (2022) the ability to effectively navigate and collaborate with individuals from different cultural backgrounds has become a critical skill in today's globalized job market. International corporations are increasingly operating in diverse and multicultural environments, requiring their employees to possess intercultural competence.

All the complexities and difficulties present in any team are intensified when the team comprises of members from diverse cultural backgrounds. When effectively managed, a multicultural team can provide organizations with significant assets for fostering innovation.

Team leaders should prioritize and demonstrate cultural awareness as they guide the group and cultivate the cultural intelligence of each individual. Organizations that enhance their cultural intelligence will witness enhanced communication and performance within their varied teams. They will also be better equipped to effectively leverage the unique perspectives and strengths of individuals from different cultures, leading to increased creativity and problem-solving capabilities (Livermore & Van Dyne, 2015).

There is a high expectancy by employers of skills that graduates must possess, such as communication, interpersonal, technological, and functionality in multicultural environments; these companies give said abilities a higher level of importance over their grade point average (Rachmawati et al., 2024).

The development of intercultural communication competence is very important for not only for today's everyday life, but also for a person to succeed in a globalized world where education and international business interact (Sarwari et al., 2024).

Gary Dessler (2020) affirms that an employee with intercultural abilities definitely offers a competitive advantage in the business world and can be essential to the company's leadership around the world – contrasting with Joseph Rios' investigation in his article *Identifying Critical 21st Century for workplace success: A content analysis of job advertisement* (2020), that reports that after analyzing the job advertisements his results did not mention anything concerning cross-culture and cultural adaptability.

Abdullah Atalar (2020) mentions that businesses want employees with skills that can make them more competitive in the international market and successful in the same market. These employees must be able to interact with people from other cultures and countries. Most university graduates need to speak other languages to work in multicultural teams. To prepare students for a globalized world, higher education institutions are creating new challenges. One of the most effective methods for this preparation is a student exchange program for one or two semesters. This helps students become multilingual with intercultural competencies and aids universities in expanding their academic mobility programs.

Livermore & Van Dyne (2015) suggests that in today's global economy, all employees, human resource professionals, and managers work on a daily basis with people who are from a different cultural background, reason why many employees find awkward and confusing events regularly. CQ has become essential in the 21<sup>st</sup> century to successfully carry out duties. A leader who can effectively manage people and projects across multicultural contexts is important for other members to further develop their cross-cultural competence.

Multicultural contexts have been increasing due to globalization, making cultural intelligence (CQ) a central pillar of efficient leadership (Paiuc, 2021). Brooks Peterson defines CQ as:

“Cultural intelligence is the ability to engage in a set of behaviors that uses skills (i.e., language or interpersonal skills) and qualities (e.g., tolerance for ambiguity, flexibility) that are tuned appropriately to the culture-based values and attitudes of the people with whom one interacts” (Peterson, 2004, pág. 89)

It could be said that the level of multiculturalism an organization possesses is based on the degree to which it values the usage and encouragement of cultural diversity (Wijewantha, 2016). In his book *Organizational Behavior: An Evidence-Based Approach*, Fred, Brett & Kyle Luthans points out four characteristics of a truly developed multicultural organization:

1. Reflects the contributions and interests of diverse cultural and social groups in its mission, operations, and product or service.
2. Acts on a commitment to eradicate social oppression in all forms within the organization.
3. Includes the members of diverse cultural and social groups as full participants, especially in decisions that shape the organization.
4. Follows through on broader external social responsibilities, including support of other institutional efforts to eliminate all forms of social oppression.

(Luthans et al., 2020, p. 30)

A way to understand the differences between cultures can be analyzed through the development of Hofstede's Framework and Inglehart's Theory. Hofstede's Framework consists

of six cultural dimensions in a business context, 1. power distance, 2. uncertainty avoidance, 3. Individual vs collectivism, 4. masculinity vs. femininity, 5. short-term vs. long-term orientation and 6. indulgence vs. restraint (Hofstede G. , 2011). Each one of these dimensions allows the comparison of the differences of one culture from another. Inglehart's Theory assumes that culture changes over time and is temporally dynamic, his work is dominant in the field of political science and sociology; the theory contains two measures of natural-cultural values, traditional vs. secular-rational values and survival against self-expression values (Pergelova & Angulo-Reiz, 2017).

For decades, cultural adaptability has been an important aspect of business, according to Edgar & Peter Schein (2017), any system must be able to maintain itself concerning the environment's changes, by seeking to survive and grow. The cultural variable is important for innovation; therefore, organizations intensely emphasize adaptability and cooperation; having a norm gives them adaptability, alignment, and flexibility (Chatman et al., 2014).

Informed by qualitative and quantitative evidence, Nesbit and Lam's (2014) research indicates that organizations exhibit key characteristics of cultural adaptability, including initiating and supporting organizational change and learning. In the present day, contemporary firms must enhance the durability of their adaptive organizational culture.

In a dynamic group with successful cultural adaptability, members can express themselves in a wide range of behaviors with freedom of expression allowing them to the possible exploration of diverse solutions to problems, develop new products or process ideas, and take advantage of market opportunities (O'Reilly & Tushman, 2013).

Individuals and companies who want to successfully operate in the international markets must ask themselves two questions:

What is the difference between individuals and organizations that succeed in today's multicultural, globalized world and those that fail?

Why are some individuals able to adeptly move in and out of dozens of cultures daily and other cannot?

(as in Livermore & Van Dyne, 2015, p.03)

#### **4.4 Importance of Intercultural competence for Engineers in Multinational Corporations**

Engineers working in a global enterprise must exhibit an open, flexible, and tolerant mindset towards diverse cultural norms and practices. For instance, they need to be perceptive of differences in communication styles, temporal orientations, attitudes towards authority, and approaches to building trust across culture (Rawboon et al., 2019; Marnewick & Handley, 2020)

Successful global engineers are willing to actively modify their own behaviors, communication approaches, decision-making processes, and overall mindsets to effectively collaborate with international counterparts. They demonstrate an open, flexible, and accepting disposition, readily accommodating diverse cultural norms and practices to foster productive cooperation and develop holistic, contextually relevant engineering solutions that are responsive to the unique local contexts, customs, and needs of the communities they serve (National Academy of Engineering, 2004).

Professionals operating in international contexts must demonstrate cultural sensitivity when collaborating in multinational teams. They should be cognizant of and adjust to variations across cultures and adapt to differing norms around authority structures, prioritization of punctuality, and preferred interpersonal interaction styles. Exhibiting flexibility and openness



to accommodating diverse cultural preferences is crucial for enabling effective cooperation in global work settings (Marnewick & Handley, 2020).

Furthermore, global engineers must possess a nuanced comprehension of the social, political, and economic contexts prevalent in the regions where they operate. Thorough knowledge of local conditions, customs, and cultural norms can enable them to navigate complex international projects more effectively. Understanding of the distinctive societal, governmental, and economic factors shaping a particular locale, engineers can better anticipate potential challenges, identify suitable solutions, and collaborate productively with local stakeholders. This contextual understanding is critical for developing engineering solutions that are both technically robust and responsive to the needs and preferences of the communities they aim to serve (Marnewick & Handley, 2020).

Exemplary global engineers exhibit a dedication to continuous cultural learning and flexibility. They actively pursue opportunities to broaden their cross-cultural understanding, such as through international experiences, diverse professional collaborations, and examining global trends and issues. By cultivating an open and curious mindset, global engineers can strengthen their ability to navigate complex international projects, work productively with local partners, and develop solutions responsive to the distinct needs and preferences of diverse communities (Downey et al., 2006; Jackson et al., 2016).

Engineers or any other employees working in global firms, it is crucial for individuals to be aware of cultural differences and adapt their behaviors accordingly. Recognizing and respecting diverse cultural norms, values, and practices is essential for effective collaboration and success in the international professional landscape. All employees who participate in multicultural teams must exhibit an open, flexible, and tolerant mindset, and a willing to adjust their approaches in order to build trust to align with the preferences and expectations of their counterparts from different backgrounds. Embracing cultural diversity and demonstrating cultural competence allows individuals to navigate complex global projects and partnerships more effectively (Jackson et al., 2016; Rawboon et al., 2019; Marnewick & Handley, 2020)

Proficient intercultural communication capabilities are a critical competency for engineers working in global contexts. These skills enable engineers to clearly articulate their ideas and attentively engage with diverse viewpoints from team members of varying cultural backgrounds (Johnston, 2001).

Effective intercultural communication is an essential and vital competency for engineers working in global environments. A strong proficiency in intercultural communication enables engineers to express their ideas clearly and actively listen to diverse perspectives from team members with various cultural backgrounds. This capacity to engage in respectful and efficient cross-cultural dialogue facilitates more effective collaboration, integration of differing viewpoints, and the development of solutions tailored to local contexts and needs (May & Tekkaya, 2014).

Proficient language abilities, particularly fluency in multiple languages, can significantly enhance global collaboration and negotiation. Engineers should also endeavor to cultivate an appreciation for the variations in engineering practices, design methodologies, and technological approaches across different nations and regions. By developing this contextual understanding, engineers can engage more effectively with international partners, align their work to local needs and preferences, and generate innovative solutions that are responsive to the distinct challenges and requirements of diverse global communities (Johnston, 2001; Jackson et al., 2016; Rawboon et al., 2019; Marnewick & Handley, 2020)

Engineers can employ various approaches to cultivate intercultural competence, transforming them into engineers with global skills. Developing a comprehensive grasp of various cultural norms, values, and communication methods is crucial for successful cooperation with diverse teams and stakeholders. This involves understanding local anticipations and ethical standards across different geographical areas. Proficiency in international languages can improve communication and the development of relationships with global partners. They should carefully consider acquiring language skills that are pertinent to their industry or the specific geographic areas in which they work. Engineers need to have the skills to make ethical decisions in a variety of cultural settings. Education on ethical considerations in international

engineering practice can assist professionals in addressing complex moral challenge. Encouragement of engagement in international initiatives, such as study abroad programs or intercultural exchanges, can offer practical exposure to global engineering practices. Pairing with mentors who possess expertise in global engineering can offer valuable direction and perspectives on managing international projects and partnerships. The evolving nature of international engineering requires engineers to consistently pursue knowledge, remain informed about worldwide developments, and be open to adjusting to new obstacles and prospects (Parkinson, 2009; Ragusa, 2011; Mohtar & Dare, 2012; Jesiek et al., 2014; American Society of Civil Engineers, 2019).

## **SECTION 3: QUALITATIVE AND QUANTITATIVE VALIDATION**

### **CHAPTER 5: QUALITATIVE VALIDATION OF THE LITERATURE REVIEW ON THE IMPACT OF INTERNATIONAL ACADEMIC MOBILITY IN THE INTERCULTURAL COMPETENCE ACQUIREMENT FOR GLOBAL EMPLOYMENT MARKET READINESS**

#### **5.1 Introduction**

This chapter outlines the qualitative methodological approach employed to investigate and analyze the multifaceted factors acquired by engineering students through their international academic mobility experiences, and the significant influence of these factors on their overall preparedness and competitiveness for the global job market.

The key variables examined include the development of intercultural attitudes, knowledge and understanding of diverse cultures, as well as the acquisition of critical skills such as communication, adaptability, and empathy – all of which are crucial for success in the global labor market. Additionally, the study explores global labor market readiness as a key dependent variable, examining how these international experiences shape and empower engineering students to thrive in the increasingly interconnected and diverse professional world.

The overarching goal of this research is to shed light on the crucial role that international academic mobility plays in equipping engineering students with the necessary competencies to navigate and excel in the global workforce.

Internationalization has been a central focus in higher education for some time. However, it is often driven by misguided expectations or a desire to follow the lead of other institutions. As J. Knight has argued, the purported benefits of internationalization can be mythical, leading to the wasteful expenditure of financial resources and the inefficient utilization of the university's human capital. Knight's article "Five Myths about Internationalization" explores

these flawed assumptions about the achievements of internationalization efforts (Knight, 2011).

The purpose of this study is to explore and critically evaluate the actual benefits, challenges, and drawbacks of international academic mobility in the acquisition of intercultural competence for global employment market readiness. By analyzing interview data from both outgoing faculty and incoming students, this paper aims to provide a holistic perspective on the realities of internationalization in higher education (Dias et al., 2020).

Existing literature has examined the impact of international mobility on the internationalization of higher education. Research indicates that mobility can significantly contribute to the development of intercultural competence, which is crucial for success in the global job market. However, international mobility also presents significant challenges, such as language barriers, cultural shock, mental health issues, and financial pressures (Prasetyaningrum, 2023).

International academic mobility enhances the knowledge and competencies of both students and faculty (Quiroz Schulz & Médor, 2022). It contributes to the advancement of educational products and services in global markets, expanding the potential of higher education. The diverse models and programs utilized by universities facilitate the diversification of educational service markets (Makarova et al., 2021).

Engagement in IAM can enrich students' scholarly learning by introducing them to innovative ideas, methodologies, and modes of thought. This has the potential to improve their analytical abilities and creativity. Immersion in diverse cultural environments can foster individual growth by expanding students' perspectives, cultivating empathy, and promoting openness to new concepts. Such experiences enable individuals to gain deeper self-awareness and understanding of others (Fielden et al., 2007).

International experience substantially improves the employability and career opportunities of students. In today's highly interconnected and globalized environment, employers increasingly seek a flexible and culturally proficient workforce capable of operating effectively

across diverse international contexts. This escalating demand motivates universities to internationalize their educational approaches and programs, with the aim of cultivating professionals equipped to address the dynamic needs of a rapidly evolving global society (Koris et al., 2017).

Research questions in qualitative studies evolve, unlike in static quantitative research. Open-ended questions are preferred unless required by a specific strategy. Specifying participants and settings adds clarity to the qualitative research design (Moustakas, 1994). According to Creswell & Creswell (2018), Creswell (2016), Hatch (2002), and Marshall, Rossman & Blanco (2021) qualitative research has certain characteristics, just to mention a few, the information gathered comes from participants who are experiencing or have experienced the problem; the researcher collects the data by itself through the examination of documents, observation or interview making the researcher a key instrument; it is common to work inductively or deductively through the building of patterns, categories or themes organizing the information into more complex analysis units; it is focused on the meaning that the participants have on the problem; it allows the researcher to change or shift the phases of the design; it reflects the interpretations depending on their background, culture and experiences.

This hands-on approach ensures the data collection process is nuanced and comprehensive, enhancing the quality and richness of the research findings. This chapter is constructed through three phases, *theoretical approximation* in which the instrument will be designed; *data recollection* where the profile identification and description of the participants of the study will be established, and the application of the instrument; *data analysis*, where the data will be coded, categorized and validated.

## 5.2 Methodology

Qualitative studies begin with the researcher simultaneously reviewing “State of the Art” literature and previous studies done on the subject matter; with the main objective of generating a consistent theory based on the observed results of said investigations. Some of the characteristics of this research method is its flexibility by allowing the researcher to recalculate its problem statement as the study is being done; Logic and inductive reasoning predominate, allowing the exploration prior to generating a theory; most qualitative studies do not prove a hypothesis; it's a more natural route due to that the study subjects explain the case as they happened to them; it is defined through the interpretation of the participants and the researcher; and it gathers information concerning perceptions, emotions and experiences of the participants (Hernández-Sampieri & Mendoza Torres, 2018).

The Delphi technique will be employed for the qualitative component of this study. As described by Linstone and Turoff (2002), the Delphi method is a beneficial process for engaging large groups of individuals. It structures anonymous communication to facilitate consensus development among group members. Moreover, the Delphi method proves particularly effective when the expert participants are geographically dispersed (Deardorff, 2006).

The most commonly used methods when conducting qualitative research are some form of *Narrative Analysis*, *Interpretative Phenomenological Analysis (IPA)*, *Grounded Theory* and *Thematic Analysis* when using interviews as a data source (Robinson, 2014). The present investigation has non-experimental, transactional, correlational, exploratory, and descriptive characteristics.

Mitroff and Turoff validate the method stating, “*the validity of the resulting judgment of the entire group is typically measured in terms of the explicit degree of consensus among the experts*” (Mitroff & Turoff, 2002, p. 22). After a thorough literature review on the subject matter, from which the elements needed will be identified, an in-depth semi-structured interview script will be applied simultaneously to two groups of experts.

Interviews allow the researcher to acquire data directly from someone explaining how he or she recalls a specific situation (Okes, 2019). Fontana and Frey (2000) believe that in-depth interviews are one of the most powerful tools to obtain an understanding and exploration of topics. Although this type of gathering data is not recommended to be applied to large numbers due to the cost and amount of information that is thrown to the researcher, the information delivered can be used to construct a survey to be applied to a larger group (Oishi, 2013).

One of the groups consists of experts on intercultural competencies, composed by academics and individuals engaged in the cooperative development between diverse cultures and nations. The other group to be interviewed will be employers from international corporations, from whom firsthand data will be obtained regarding their requirements for intercultural competencies and their expectations of their current and prospective employees. This data will be interpreted to assist in validating or disproving the information gathered and analyzed during the literature review phase of the investigation.

The methodology process for this study will consist of three phases, as shown on Figure 5.2.1. Each phase will contribute to building a more comprehensive understanding of the impact and importance that having a proper level of intercultural competence has on students' readiness for the global employment market.

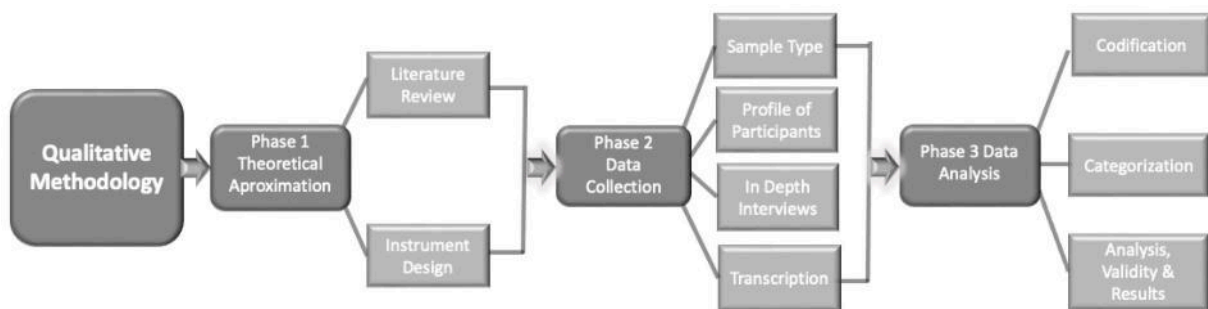
The *first phase*, theoretical approximation, comprises two distinct components. The initial component involves a critical examination of the existing scholarly literature on the conceptualization of intercultural competence and its constituent elements (Table 5.2.1); the impact of international academic mobility on the development of intercultural competence; the significance of intercultural competence for students' preparedness for employment in the global job market (Table 5.2.2); as well as the trends, benefits, and challenges faced by multinational corporations.

The second component of the *first phase* involves the development of a semi-structured interview protocol. This protocol will be grounded in the key concepts identified through the



comprehensive literature review process. The interview questions will be designed to thoroughly explore and critically evaluate the actual benefits, challenges, and drawbacks of international academic mobility in the acquisition of intercultural competence for global employment market readiness. The application of the semi-structured instrument will aim to obtain in-depth insights and perspectives from the study participants on these important aspects of internationalization in higher education.

**Figure 5.2.1: Qualitative Methodology Process**



Source: Own work

The *second phase* entails the qualitative data collection process, during which individual in-depth interviews will be conducted. This phase is divided into four sections. The first section will describe the sample population to be interviewed, comprising experienced faculty, staff members, or other academic experts with expertise in the internationalization of higher education or involvement in international activities within the higher education context. Additionally, industry experts will be included to provide their perspectives on the importance of intercultural competence for their current and prospective employees.

The second section will provide a detailed demographic profile of the participants, including their age, gender, nationality, and academic or professional background. This section will also explore the participants' individual international experiences, such as the duration and nature of their overseas engagements, the countries or regions visited, and the types of international activities they have been involved in, such as study abroad programs, international research

collaborations, or professional exchanges. This information will help contextualize the participants' perspectives and insights on the impact of international academic mobility.

The third stage of this phase will involve conducting the individual in-depth interviews. The participants will be asked to share their personal experiences, perceptions, and understandings of the role and significance of intercultural competence in preparing students for the global employment market. This stage will also explore the participants' views on the benefits, challenges, and limitations of international academic mobility in the development of intercultural competence.

The fourth section of the data collection process involves the transcription of the individual interviews conducted with the study participants. This entails converting the audio recordings of the in-depth interviews into written transcripts, which will serve as the primary source of qualitative data for the subsequent analysis phase. The transcription process is a critical step in ensuring the accurate and comprehensive documentation of the participants' responses, perspectives, and insights shared during the interviews. These detailed transcripts will provide the foundation for the systematic coding and thematic analysis to be undertaken in the third phase of the research methodology.

The *third phase* encompasses the qualitative data analysis process, which is structured into three distinct components. The first component is the coding of the interview transcripts. This will involve a careful and iterative process of identifying, categorizing, and organizing the key concepts, themes, and patterns that emerge from the participants' responses. The second component is the categorization of the data into thematic clusters. This step will involve grouping the coded data into broader themes and sub themes that capture the essence of the participants' perspectives and experiences.

The final component is the analysis, interpretation, and validation of the results. This step will involve a deep examination and synthesis of the coded data and thematic clusters to extract meaningful insights and conclusions. The analysis will aim to identify overarching themes, patterns, and relationships that shed light on the role and significance of intercultural

competence in preparing students for the global employment market. The interpretation phase will involve contextualizing the findings within the existing scholarly literature and drawing out the broader implications and applications of the study.

Finally, the validation process will involve cross-checking the results against the original research questions and objectives to ensure the credibility and trustworthiness of the study's findings.

**Table 5.2.1: Cross-cultural/Multicultural Competences**

| Construct | Variable                               | Author  |
|-----------|--|---|
| Attitude  | ATTITUDE CONSTRUCT                     | (Howard-Hamilton et al., 1998) (Spitzberg & Changnon, 2009) (Deardorff, 2011b) (UNESCO, 2013) (Barret et al., 2014).  |
|           | Value Diversity                        | (Cox & Blake, 1991) (Cox T. , 1993) (Appadurai, 2001) (Pless & Maak, 2004) (Amaram, 2007) (Luijters et al., 2008) (Deakins, 2009) (Thomas et al., 2015) (Jaeger et al., 2016) (Briceño Linares, 2020) (Grigoryan & Schwartz, 2020) (Çelik et al., 2021) (Raewf & Mahmood, 2021)                   |
|           | Respect of Cultures                    | (Erlen, 1998) (Johnson J. , 2000) (Aghazadeh, 2004) (Byram & Dervin, 2008) (Díaz Romero, 2021)  |
|           | Openness                               | (Kealey, 1996) (Klafehn et al., 2008) (Ollivier, 2008) (Schwartz et al., 2012) (Foronda et al., 2016) (Glazer, 2020) (Kryvda & Storozhuk, 2022)   |
|           | Tolerance                              | (UNESCO, 1995) (Roosevelt, 1999) (Wright, 2012) (Melikov et al., 2019) (Verkuyten & Killen, 2021) (Verkuyten & Kollar, 2021) (Rodríguez-Izquierdo, 2022) (Verkuyten et al., 2022)   |
|           | Curiousness to Learn of other Cultures | (UNESCO, 1995) (Roosevelt, 1999) (Deardorff, 2009) (Deardorff, 2011b) (Wright, 2012) (Mikhaylov, 2016) (Sobkowiak, 2019) (Rodríguez-Izquierdo, 2022)  |
|           | Cultural Humility                      | (Tervalon & Murray-García, 1998) (Davis et al., 2010) (Davis et al., 2011) (Hook et al., 2013) (Foronda et al., 2016) (Montayre et al., 2017) (Hook et al., 2017) (Byrne et al., 2019) (Hook & Davis, 2019) (O'Brien et al., 2019) (Hughes et al., 2020) (Markey et al., 2021) (Zhu et al., 2021) |

| Construct                   | Variable  | Author   |
|-----------------------------|---|--|
| Knowledge and Understanding | KNOWLEDGE AND UNDERSTANDING CONSTRUCT                   | (Solimano, 2009) (Spitzberg & Changnon, 2009) (Dziminska et al., 2020) (Lunenburg, 2010) (Bender, 2022)  |
|                             | Internal Diversity and Heterogeneity of Cultural Groups | (Loden & Rosener, 1991) (Jackson S. , 1992) (Cox T. , 1993) (Hamilton & Sherman, 1994) (Gardenswartz, 2003) (Kapur, 2020) (Lankester & Alexopoulos, 2021)  |
|                             | Awareness of One's and Others' Assumptions              | (Flavell, 1979) (Banks, 1993) (Hofstede G. , 2001) (Earley & Ang, 2003) (Deardorff, 2006) (Newberg & Waldman, 2006) (Ang et al., 2008) (Gerhart, 2008) (Lustig & Koester, 2010) (Jones, 2011) (Reiss, 2012) (Bennett M. , Basic concepts of intercultural communication: Paradigms, principles, & practices., 2013) (Bennett J. M., 2015) (Sobkowiak, 2019) (Cambridge University Press & Assessment , 2023) |
|                             | Knowledge of Beliefs, Values, and Practices             | (Barth, 1969) (Luijters et al., 2008) (McGhee, 2008) (Knafo et al., 2011) (Reiss, 2012) (UNESCO, 2013) (R. Delecta & Raman, 2015) (Shealy, 2016) (Hook et al., 2017) (Byram M. , 2021) (Lankester & Alexopoulos, 2021) (Raewf & Mahmood, 2021) (Bender, 2022)  |
|                             | Communicative Awareness                                 | (Mohr & Nevin, 1990) (Kim, 1991) (Ting-Toomey, 1999) (Griffith & Harvey, 2001) (Lustig & Koester, 2010) (UNESCO, 2013) (Schnabel et al., 2015) (Ting-Toomey & Dorjee, 2017) (Braslauskas, 2021) (Bender, 2022)   |
| Skills                      | SKILLS CONSTRUCT  | (Deardorff, 2006) (Barret et al., 2014)  |
|                             | Multiperspectivity                                      | (Hanvey, 1975) (Rhoads, 1994) (Ting-Toomey & Kurogi, 1998) (Perlis, 2001) (Deardorff, 2004) (Yershova et al., 2000) (Griffer & Perlis, 2007) (Lovvorn & Chen, 2011) (Saxena, 2014) (Ivenicki, 2021) (Hunter et al., 2020) (Priyadarshani, 2021) (Sorokowska et al., 2021) (Vakil, 2021) (Pérez, 2022) (Nwansu & Babalola, 2023)  |
|                             | Empathy   | (Ruben, 1976) (Hawes & Kealy, 1981) (Abe & Wiseman, 1983) (Gertsen, 1990) (Lolla & Davis, 1991) (Johnson et al., 1996) (Van der Zee & van Oudenhoven, 2000) (Ata U., 2003) (Winter, 2010)  |

| Construct | Variable              | Author  |
|-----------|-----------------------|---|
|           | Cognitive Flexibility | (Harvey & Griffith, 2002) (Aghazadeh, 2004) (Schachaf, 2008) (Bennet, 2009) (Ionescu, 2012) (Barret et al., 2014) (Bennett J. M., 2015) (Hu et al., 2018) (Legare et al., 2018) (Deardorff, 2023) |
|           | Behavioral Adaptation | (Earley & Ang, 2003) (Pusch, 2009) (Lustig & Koester, 2010) (Díaz Romero, 2021)   |
|           | Linguistic Skills     | (Kramsch, 1998) (Saint-Jacques, 2006) (Shannon & Begley, 2008) (Carol & Ramírez, 2020) (Mitchell et al., 2020) (Bender, 2022)   |

Source: Own work

**Table 5.2.2: Global Employability**

| Variable   | Author   |
|--|--|
| GLOBAL EMPLOYABILITY   | (Landis & Bhagat, 1996) (Hillage & Pollard, 1998) (Luijters et al., 2008) (Rothwell et al., 2008) (Bennett J. M., 2015) (Mercer, 2015) (PricewaterhouseCoopers, 2020) (Kaftan et al., 2023) (Mabkhot & Al-Ameryeen, 2023) (Sanchez et al., 2023) (Sun et al., 2024)  |
| Employability and Importance of Soft Skills for the Labor Market Readiness | (Bosley, n.d.) (Hillage & Pollard, 1998) (Moss & Tilly, 2001) (Rothwell et al., 2008) (Mourshed et al., 2012) (Finch et al., 2013) (Hurrell et al., 2013) (UNESCO, 2013) (Tran T. T., 2014) (Kaushal, 2016) (Moses, 2016) (Stewart et al., 2016) (World Economic Forum, 2016) (Akella, 2017) (Pitan, 2017) (Ramisetty & Desai, 2017) (Truong et al., 2017) (Wladawsky-Berger, 2018) (Lozovoy et al., 2019) (Nguyen & Le, 2019) (Succi & Canovi, 2019) (Weiss, 2019) (Deligiannis, 2020) (Handayani & Wienanda, 2020) (Rios et al., 2020) (De Wit & Altbach, 2021) (Hirudayaraj et al., 2021) (Kupryaeva et al., 2021) (Rakowska & de Juana-Espinosa, 2021) (Yong & Ling, 2021) (Giani, 2022) (Ramnanan, 2022) (Rodríguez-Izquierdo, 2022) (Saranya & Rajakumar, 2022) (Świgoń, 2022) (Accreditation Board of Engineering and Technology, 2023) (Mahmud et al., 2023) (Sarbini et al., 2023) (Jatto et al., 2024) |

| Variable  | Author  |
|---|---|
| Demand for Intercultural Competences in the Global Labor Market | (Peterson, 2004) (Parkinson, 2009) (Greblikaite & Daugeliene, 2010) (Hofstede G. , 2011) (Lovvorn & Chen, 2011) (Ragusa, 2011) (Mohtar & Dare, 2012) (Gore, 2013) (O'Reilly & Tushman, 2013) (Chatman et al., 2014) (Jesiek et al., 2014) (Nesbit & Lam, 2014) (ILO et al., 2015) (Livermore & Van Dyne, 2015) (Wijewantha, 2016) (Pergelova & Angulo-Reiz, 2017) (Pitan, 2017) (Koris et al., 2017) (Schein & Schein, 2017) (American Society of Civil Engineers, 2019) (Atalar, 2020) (Dessler, 2020) (Luthans et al., 2020) (Rios et al., 2020) (Paiuc, 2021) (Mascarenhas et al., 2021) (Rakowska & de Juana-Espinosa, 2021) (Fisher et al., 2022) (Rachmawati et al., 2024) (Sarwari et al., 2024) |
| Intercultural Competence in Engineering                         | (Johnston, 2001); (National Academy of Engineering, 2004); (Downey et al., 2006); (Parkinson, 2009); (Ragusa, 2011); (Mohtar & Dare, 2012); (Jesiek et al., 2014); (May & Tekkaya, 2014); (Jackson et al., 2016) (American Society of Civil Engineers, 2019); (Rawboon et al., 2019); (Marnewick & Handley, 2020)   |

*Source: Own work*

### 5.3 Theoretical Approximation

The present chapter describes the qualitative method approach used to explore and analyze the factors acquired by engineering students through their studying abroad experience and the impact it has on their readiness to enter the global labor market; using as indirect variables; Attitude, Knowledge and Understanding, and skills; as well as Global Labor Market Readiness as a dependent variable.

The study conducted an extensive and thorough literature review spanning a wide range of scholarly sources, including books, published articles, reports, and dissertations from around the world. The timeframe of the literature review ranged from the 1950s to the present year of 2024. The core focus of this investigation centered on the concept of intercultural competence and its key components, as proposed by various prominent researchers and institutions. These include scholars such as Hamilton, M. F., Richardson, B. J., & Shuford, B. (1998), Spitzberg, Brian & Changnon, Gabrielle (2009), , Deardorff (2011b), Barret, Byram,

Lázár, Mompont-Gaillard, Philippou (2014), and institutions like UNESCO (2013). Additionally, the review encompassed the broader topic of global employability skills, which encompasses the growing demand for soft skills in the labor market, the necessity of intercultural competence in the global workforce, and the significance of these competencies for engineers in multinational corporations.

There has been a number of authors that have published scientific papers and doctoral dissertations on the subject regarding the independent variable “Attitude” such as Appadurai (2001); Barret et al. (2014); Briceño (2020), Byram & Dervin (2008); Byrne, Brugha, & McGarvey (2019); Çelik, Keser, & Körcük Yapıcı (2021); Cox & Blake (1991); Cox T. (1993); Davis, et al. (2011); Davis, Worthington Jr., & Hook (2010); Deakins (2009); Deardorff (2004) (2006) (2009) (2011a) (2011b); Deardorff & Jones (2012); Díaz Romero (2021); Erlen (1998); Foronda, Baptiste, Reinholdt, & Ousman, (2016); Glazer (2020); Grigoryan & Schwartz (2020); Howard-Hamilton et al. (1998); Hook & Davis (2019); Hook, Davis, Owen, & DeBlaere (2017); Hook, Davis, Owen, Worthington Jr., & Utsey (2013); Hughes, et al. (2020); Jaeger, Kim & Butt (2016); Johnson (2000); Kealey (1996); Klafehn, Banerjee & Chiu (2008); Kryvda & Storozhuk (2022); Luijters, Van der Zee, & Otten (2008); Markey, Prosen, & Repo (2021); Melikov, Tabasaranskii, & Akhmedova (2019); Mikhaylov (2016); Montayre, Montayre, & Holroyd (2017); O'Brien, Tuohy, Fahy, & Markey (2019); Ollivier (2008); Pless & Maak (2004); Raewf & Mahmood (2021); Rodríguez-Izquierdo (2022); Roosevelt (1999); Schwartz, et al. (2012); Sobkowiak (2019); Spitzberg & Changnon (2009); Tervalon & Murray-García (1998); Thomas, et al. (2015); UNESCO (1995) (2013); Verkuyten & Killen, (2021); Verkuyten & Kollar (2021); Verkuyten, Yogeewaran, & Adelman (2022); Wright (2012); and Zhu, Luke, & Bellini (2021).

Some of the most notable researchers that have investigated the independent variable “Knowledge and Understanding” in the previous years are Ang, Van Dyne, & Koh (2008); Banks (1993); Barth (1969); Bender (2022); Bennet J.M (2015); Bennett M. (2013); Braslauskas (2021); Byram M. (2021); Cambridge University Press & Assessment (2023); Cox T. (1993), Deardorff (2006); Dziminska et al. (2020); Early & Ang (2003); Flavell (1979); Freeman, et al. (2009); Gardenswartz (2003); Gerhart (2008); Griffith & Harvey (2001); Hamilton & Sherman

(1994); Hofstede G. (2001); Jackson (1992); Jones (2011); Kapur (2020); Knafo, Roccas, & Sagiv (2011); Kim (1991); Lunenburg (2010); Lankester & Alexopoulos (2021); Loden & Rosener (1991); Lustig & Koester (2010); Luijters et al. (2008); McGhee (2008); Mohr & Nevin (1990); Newberg & Waldman (2006); R. Delecta & Raman (2015); ;Raewf & Mahmood (2021); Reiss (2012); Schnabel, Kelava, Seifert, & Kuhlbrodt (2014); Shealy (2016); Sobkowiak (2019); Solimano (2009); Spitzberg & Changnon (2009); Ting-Toomey (1999); Ting-Toomey & Dorjee (2017); UNESCO (2013).

The writers taken in considerations for the literature review of this investigation on the Skills factor are Abe & Wiseman (1983); Aghazadeh (2004); Ata U (2003); Barret et al. (2014); Bender (2022); Bennett J. M. (2009) (2015); Carol & Ramírez (2020); Deardorff (2006) (2023); Díaz Romero (2021); Earley & Ang (2003); Gertsen (1990); Griffer & Perlis (2007); Hanvey (1975); Harvey & Griffith (2002); Hawes & Kealy (1981); Hu et al. (2018); Hunter et al. (2020); Ionescu (2012); Ivenicki (2021); Johnson et al. (1996); Kramsch (1998); Legare et al. (2018); Lolla & Davis (1991); Lovvorn & Chen (2011); Lustig & Koester (2010); Mitchell, Tracy-Ventura & Huensch (2020); Nwansu & Babalola (2023); Pérez (2022); Perlis (2001); Priyadarshani (2021); Pusch (2009); Rhoads (1994); Ruben (1976); Saint-Jacques (2006); Saxena (2014); Schachaf (2008); Shannon & Begley (2008); Sorokowska, et al. (2021); Vakil (2021); Van der Zee & van Oudenhoven (2000); Winter (2010); Yershova, DeJaeghere, & Mestenhauser (2000).

The dependent variable “Global Employability” was previously researched by the following scientists and organizations Accreditation Board of Engineering and Technology (2023); Akella (2017); American Society of Civil Engineers (2019); Atalar (2020); Bosley (n.d.), Chatman, Caldwell, A. O'Reilly, & Doerr (2014); De Wit & Altbach (2021); Deligiannis (2020); Dessler (2020); Downey et al. (2006); Finch et al. (2013); Fisher et al. (2022); Giani (2022); Gore (2013); Greblikaite & Daugeliene (2010); Handayani & Wienanda (2020); Hillage & Pollard (1998); Hirudayaraj et al. (2021); Hofstede G. (2011); Hurrell A, Scholarios, & Thompson (2013); International Labor Organization, International Monetary Fund, Organization for Economic Co-operation and Development & The World Bank (2015); Jackson et al. (2016); Jatto et al. (2024); Jesiek et al. (2014); Johnston (2001); Kaftan et al. (2023); Kaushal (2016); Koris, Örtenblad, &



Ojala (2017); Kupryaeva et al. (2021); Landis & Bhagat (1996); Livermore & Van Dyne (2015); Lovvorn & Chen (2011); Lozovoy et al. (2019); Luijters et al. (2008); Luthans, Luthans, & Luthans, (2020); Mabkhot & Al-Ameryeen (2023); Mahmud et al. (2023); Marnewick & Handley (2020); Mascarenhas, Rodrigues Días, & Dias (2021); May & Tekkaya (2014); Mercer (2015); Mohtar & Dare (2012); Moses (2016); Moss & Tilly, (2001); Mourshed, Farrell, & Barton (2012); National Academy of Engineering (2004); Nesbit & Lam (2014); Nguyen & Le (2019); O'Reilly & Tushman (2013); Paiuc (2021); Parkinson (2009); Pergelova & Angulo-Reiz (2017); Peterson (2004); Pitan (2017); PricewaterhouseCoopers (2020); Rachmawati et al. (2024); Ragusa (2011); Rakowska & de Juana-Espinosa (2021); Ramisetty & Desai (2017); Ramnanan (2022); Rawboon et al. (2019); Ríos, Ling, Pugh, Becker, & Bacalla (2020); Rodríguez-Izquierdo (2022); Rothwell, Herbert, & Rothwell (2008); Sanchez et al. (2023); Saranya & Rajakumar (2022); Sarbini et al. (2023); Sarwari et al. (2024); Schein & Schein (2017); Stewart, Wall, & Marciniac (2016); Succi & Canovi (2019); Sun et al. (2024); Świgoń (2022); Tran T. T. (2014); Truong et al. (2017); UNESCO (2013); Weiss (2019); Wijewantha (2016); Wladawsky-Berger (2018); World Economic Forum (2016); Yong & Ling (2021).

### 5.3.1 Literature Review

The theoretical framework for this study draws on research by authors from diverse international backgrounds, reflecting the global scope of the inquiry into intercultural competence. Table 5.3.1.1 outlines these researchers, their countries of origin, and the years in which they conducted the work that informs the theoretical foundation of the present investigation. This international representation reinforces the study's grounding in a wide range of perspectives and experiences pertaining to the development of intercultural competence and its significance for global employability.

**Table 5.3.1.1: Factor Literature Review**

| Author  | Year | Country of Study         | Factors  |                             |        |                             |
|---|------|--------------------------|----------|-----------------------------|--------|-----------------------------|
|   |      |                          | Attitude | Knowledge and Understanding | Skills | Global Employment Readiness |
| Abe & Wiseman                                     | 1983 | Japan, USA               |          |                             | ●      |                             |
| Accreditation Board of Engineering and Technology | 2023 | USA                      |          |                             |        | ●                           |
| Aghazadeh   | 2004 | USA                      |          |                             | ●      |                             |
| Akella  | 2017 | USA                      |          |                             |        | ●                           |
| American Society of Civil Engineers               | 2019 | USA                      |          |                             |        | ●                           |
| Ang, Van Dyne, & Koh                              | 2008 | Singapore, USA           |          | ●                           |        |                             |
| Appadurai   | 2001 | Argentina                | ●        |                             |        |                             |
| Ata U.  | 2003 | USA                      |          |                             | ●      |                             |
| Atalar  | 2020 | Turkey                   |          |                             |        | ●                           |
| Banks   | 1993 | USA                      |          | ●                           |        |                             |
| Barret et al.                                     | 2014 | Cyprus, Iceland, Hungary | ●        | ●                           | ●      |                             |
| Barth   | 1969 | Norway                   |          | ●                           |        |                             |
| Bender  | 2022 | Switzerland, USA         |          | ●                           | ●      |                             |
| Bennet J.M  | 2015 | USA                      |          | ●                           | ●      |                             |
| Bennet J.M  | 2009 | USA                      |          |                             | ●      |                             |
| Bennett M.  | 2013 | USA                      |          | ●                           |        |                             |
| Bosley  | n.d. | USA                      |          |                             |        | ●                           |
| Braslauskas                                       | 2021 | Turkey                   |          | ●                           |        |                             |
| Briceño Linares                                   | 2020 | Spain                    | ●        |                             |        |                             |
| Byram & Dervin                                    | 2008 | UK                       | ●        |                             |        |                             |
| Byram M.  | 2021 | UK                       |          | ●                           |        |                             |
| Byrne, Brugha, & McGarvey                         | 2019 | Ireland                  | ●        |                             |        |                             |
| Cambridge University Press & Assessment           | 2023 | UK                       |          | ●                           |        |                             |

| Author                                  | Year  | Country of Study   | Factors  |                             |        |                             |
|---|-------|--|----------|-----------------------------|--------|-----------------------------|
|   |       |  | Attitude | Knowledge and Understanding | Skills | Global Employment Readiness |
| Carol & Ramírez                         | 2020  | Chile  |          |                             | ●      |                             |
| Çelik, Keser, & Körcük Yapıcı           | 2021  | Australia, France, Germany, India, Iran, Italy, Nigeria, Poland, South Africa, South Korea, Syria, Turkey, UK, USA | ●        |                             |        |                             |
| Chatman, Caldwell, A. O'Reilly, & Doerr | 2014  | USA  |          |                             |        | ●                           |
| Cox & Blake                             | 1991  | USA  | ●        |                             |        |                             |
| Cox T.                                  | 1993  | USA  | ●        | ●                           |        |                             |
| Davis, et al.                           | 2011  | USA  | ●        |                             |        |                             |
| Davis, Worthington Jr., & Hook          | 2010  | USA  | ●        |                             |        |                             |
| De Wit & Altbach                        | 2021  | USA  |          |                             |        | ●                           |
| Deakins                                 | 2009  | New Zealand  | ●        |                             |        |                             |
| Deardorff                               | 2023  | USA  | ●        | ●                           | ●      |                             |
| Deardorff                               | 2009  | USA  | ●        |                             |        |                             |
| Deardorff                               | 2011a | USA  | ●        |                             |        |                             |
| Deardorff                               | 2011b | USA  | ●        |                             |        |                             |
| Deardorff                               | 2006  | USA  |          | ●                           | ●      |                             |
| Deardorff                               | 2004  | USA  |          |                             |        | ●                           |
| Deardorff & Jones                       | 2012  | USA  |          |                             |        | ●                           |
| Deligiannis                             | 2020  | New Zealand  |          |                             |        | ●                           |
| Dessler                                 | 2020  | USA  |          |                             |        | ●                           |
| Downey et al.                           | 2006  | UK, USA  |          |                             |        | ●                           |
| Díaz Romero                             | 2021  | Mexico   | ●        |                             | ●      |                             |
| Dziminska et al.                        | 2020  | Poland   |          | ●                           |        |                             |
| Early & Ang                             | 2003  | Singapore, UK  |          | ●                           |        |                             |
| Erlen                                   | 1998  | USA  | ●        |                             |        |                             |
| Finch et al.                            | 2013  | Canada   |          |                             |        | ●                           |
| Fisher et al.                           | 2022  | USA  |          |                             |        | ●                           |

| Author                                 | Year | Country of Study | Factors  |                             |        |                             |
|--|------|------------------|----------|-----------------------------|--------|-----------------------------|
|  |      |                  | Attitude | Knowledge and Understanding | Skills | Global Employment Readiness |
| Flavell                                | 1979 | USA              |          | ●                           |        |                             |
| Foronda, Baptiste, Reinholdt, & Ousman | 2016 | USA              | ●        |                             |        |                             |
| Freeman, et al.                        | 2009 | Australia        |          | ●                           |        |                             |
| Gardenswartz                           | 2003 | USA              |          | ●                           |        |                             |
| Gerhart                                | 2008 | USA              |          |                             |        | ●                           |
| Gertsen                                | 1990 | Denmark          |          |                             | ●      |                             |
| Giani                                  | 2022 | USA              |          |                             |        | ●                           |
| Glazer                                 | 2020 | USA              | ●        |                             |        |                             |
| Gore                                   | 2013 | India            |          |                             |        | ●                           |
| Greblikaite & Daugeliene               | 2010 | Lithuania        |          |                             |        | ●                           |
| Griffer & Perlis                       | 2007 | USA              |          |                             | ●      |                             |
| Griffith & Harvey                      | 2001 | USA              |          | ●                           |        |                             |
| Grigoryan & Schwartz                   | 2020 | Russia           | ●        |                             |        |                             |
| Hamilton & Sherman                     | 1994 | Australia, USA   |          | ●                           |        |                             |
| Hamilton et al                         | 1998 | USA              | ●        | ●                           | ●      |                             |
| Handayani & Wiendanda                  | 2020 | Indonesia        |          |                             |        | ●                           |
| Hanvey                                 | 1975 | USA              |          |                             | ●      |                             |
| Harvey & Griffith                      | 2002 | USA              |          |                             | ●      |                             |
| Hawes & Kealy                          | 1981 | Canada           |          |                             | ●      |                             |
| Hillage & Pollard                      | 1998 | UK               |          |                             |        | ●                           |
| Hirudayaraj et al.                     | 2021 | USA              |          |                             |        | ●                           |
| Hofstede G.                            | 2001 | Netherlands      |          | ●                           |        |                             |
| Hofstede G.                            | 2011 | Netherlands      |          |                             |        | ●                           |
| Hook & Davis                           | 2019 | USA              | ●        |                             |        |                             |
| Hook, Davis, Owen, & DeBlaere          | 2017 | UA               | ●        |                             |        |                             |

| Author                                      | Year | Country of Study        | Factors  |                             |        |                             |
|---|------|-------------------------|----------|-----------------------------|--------|-----------------------------|
|   |      |                         | Attitude | Knowledge and Understanding | Skills | Global Employment Readiness |
| Hook, Davis, Owen, Worthington Jr., & Utsey | 2013 | USA                     | ●        |                             |        |                             |
| Hu et al.                                   | 2018 | China, USA              |          |                             | ●      |                             |
| Hughes, et al.                              | 2020 | USA                     | ●        |                             |        |                             |
| Hunter et al.                               | 2021 | Canada, N. Ireland, USA |          |                             | ●      |                             |
| Hurrell A, Scholarios, & Thompson           | 2013 | UK                      |          |                             |        | ●                           |
| ILO,IMF, OECD & TWB                         | 2015 | USA                     |          |                             |        | ●                           |
| Imahori & Lanigan                           | 1989 | USA                     |          | ●                           |        |                             |
| Ionescu                                     | 2012 | Rumania                 |          |                             | ●      |                             |
| Ivenicki                                    | 2021 | Brazil                  |          |                             | ●      |                             |
| Jackson                                     | 1992 | USA                     |          | ●                           |        |                             |
| Jackson et al.                              | 2016 | USA                     |          |                             |        | ●                           |
| Jaeger, Kim & Butt                          | 2016 | Canada, Pakistan, USA   | ●        |                             |        |                             |
| Jatto et al.                                | 2024 | Nigeria                 |          |                             |        | ●                           |
| Jesiek et al.                               | 2014 | USA                     |          |                             |        | ●                           |
| Johnson                                     | 2000 | USA                     | ●        |                             |        |                             |
| Johnson et al.                              | 1996 | USA                     |          |                             | ●      |                             |
| Johnston                                    | 2001 | USA                     |          |                             |        | ●                           |
| Jones                                       | 2011 | UK                      |          | ●                           |        |                             |
| Kaftan et al.                               | 2023 | Czech Republic, Russia  |          |                             |        | ●                           |
| Kapur                                       | 2020 | India                   |          | ●                           |        |                             |
| Kaushgal                                    | 2016 | India                   |          |                             |        | ●                           |
| Kealey                                      | 1996 | USA                     | ●        |                             |        |                             |
| Klafehn, Banerjee & Chiu                    | 2008 | USA                     | ●        |                             |        |                             |
| Knafo et al.                                | 2011 | Israel                  |          | ●                           |        |                             |

| Author                              | Year | Country of Study           | Factors  |                             |        |                             |
|-------------------------------------|------|----------------------------|----------|-----------------------------|--------|-----------------------------|
|                                     |      |                            | Attitude | Knowledge and Understanding | Skills | Global Employment Readiness |
| Koris, Örtenblad, & Ojala           | 2017 | Estonia, Norway            |          |                             |        | ●                           |
| Kramsch                             | 1998 | USA                        |          |                             | ●      |                             |
| Kryvda & Storozhuk                  | 2022 | Ukraine                    | ●        |                             |        |                             |
| Kupryaeva et al.                    | 2021 | Russia                     |          |                             |        | ●                           |
| Landis & Bhagat                     | 1996 | USA                        |          |                             |        | ●                           |
| Lankester & Alexopoulos             | 2021 | France                     |          | ●                           |        |                             |
| Legare et al.                       | 2018 | USA                        |          |                             | ●      |                             |
| Livermore & Van Dyne                | 2015 | USA                        |          |                             |        | ●                           |
| Loden & Rosener                     | 1991 | USA                        |          | ●                           |        |                             |
| Lolla & Davis                       | 1991 | Malaysia, India, Iran      |          |                             | ●      |                             |
| Lovvorn & Chen                      | 2011 | USA                        |          |                             |        | ●                           |
| Lozovoy et al.                      | 2019 | Russia                     |          |                             |        | ●                           |
| Luijters, Van der Zee, & Otten      | 2008 | Netherlands                | ●        | ●                           |        | ●                           |
| Lunenburg                           | 2010 | USA                        |          | ●                           |        |                             |
| Lustig & Koester                    | 2010 | USA                        |          | ●                           | ●      |                             |
| Luthans, Luthans, & Luthans         | 2020 | USA                        |          |                             |        | ●                           |
| Mabkhot & Al-Ameryeen               | 2023 | Malaysia, Yemen            |          |                             |        | ●                           |
| Mahmud, W. M et al.                 | 2023 | Malaysia                   |          |                             |        | ●                           |
| Marnewick & Handley                 | 2020 | South Africa               |          |                             |        | ●                           |
| Markey, Prosen, & Repo              | 2021 | Ireland, Finland, Slovenia | ●        |                             |        |                             |
| Mascarenhas, Rodrigues Dias, & Dias | 2021 | Brazil                     |          |                             |        | ●                           |
| May & Tekkaya                       | 2014 | Germany                    |          |                             |        | ●                           |
| McGhee                              | 2008 | USA                        |          | ●                           |        |                             |

| Author                               | Year | Country of Study                  | Factors  |                             |        |                             |
|--------------------------------------|------|-----------------------------------|----------|-----------------------------|--------|-----------------------------|
|                                      |      |                                   | Attitude | Knowledge and Understanding | Skills | Global Employment Readiness |
| Melikov, Tabasarsanskii, & Akhmedova | 2019 | Russia                            | ●        |                             |        |                             |
| Mendenhall et al.                    | 2010 | USA                               |          |                             |        | ●                           |
| Mendenhall, M. & Oddou, G.           | 1985 | USA                               |          |                             |        | ●                           |
| Mercer                               | 2015 | USA                               |          |                             |        | ●                           |
| Mikhaylov                            | 2016 | Turkey                            | ●        |                             |        |                             |
| Mitchell et al.                      | 2020 | UK, USA                           |          |                             | ●      |                             |
| Mohr & Nevin                         | 1990 | USA                               |          | ●                           |        |                             |
| Mohtar & Dare                        | 2012 | Qatar                             |          |                             |        | ●                           |
| Montayre, Montayre, & Holroyd        | 2017 | Australia, New Zealand, Singapore | ●        |                             |        |                             |
| Moses                                | 2016 | Uganda                            |          |                             |        | ●                           |
| Moss & Tilly                         | 2001 | USA                               |          |                             |        | ●                           |
| Mourshed, Farrell, & Barton          | 2012 | USA                               |          |                             |        | ●                           |
| National Academy of Engineering      | 2004 | USA                               |          |                             |        | ●                           |
| Nesbit & Lam                         | 2014 | Hong Kong                         |          |                             |        | ●                           |
| Newberg & Waldman                    | 2006 | USA                               |          |                             |        | ●                           |
| Nguyen & Le                          | 2019 | Vietnam                           |          |                             |        | ●                           |
| Nwansu & Babalola                    | 2023 | Nigeria, South Africa             |          |                             | ●      |                             |
| O'Brien, Tuohy, Fahy, & Markey       | 2019 | Ireland                           | ●        |                             |        |                             |
| O'Reilly & Tushman                   | 2013 | USA                               |          |                             |        | ●                           |
| Ollivier                             | 2008 | Canada                            | ●        |                             |        |                             |
| Paiuc                                | 2021 | Romania                           |          |                             |        | ●                           |
| Parkinson                            | 2009 | USA                               |          |                             |        | ●                           |
| Pérez                                | 2022 | Finland                           |          |                             | ●      |                             |
| Pergelova & Angulo-Reiz              | 2017 | Canada                            |          |                             |        | ●                           |

| Author                              | Year | Country of Study   | Factors  |                             |        |                             |
|-------------------------------------|------|--------------------|----------|-----------------------------|--------|-----------------------------|
|                                     |      |                    | Attitude | Knowledge and Understanding | Skills | Global Employment Readiness |
| Perslis                             | 2001 | USA                |          |                             | ●      |                             |
| Peterson                            | 2004 | USA                |          |                             |        | ●                           |
| Pitan                               | 2017 | Nigeria            |          |                             |        | ●                           |
| Pless & Maak                        | 2004 | Switzerland        | ●        |                             |        |                             |
| Pricewaterhouse Coopers             | 2020 | USA                |          |                             |        | ●                           |
| Priyadarshani                       | 2021 | Brazil, China, USA |          |                             | ●      |                             |
| Pusch                               | 2009 | USA                |          |                             | ●      |                             |
| R. Delecta & Raman                  | 2015 | India              |          | ●                           |        |                             |
| Rachmawati et al.                   | 2024 | Malaysia           |          |                             |        | ●                           |
| Raewf & Mahmood                     | 2021 | Iraq               | ●        |                             |        |                             |
| Ragusa                              | 2011 | USA                |          |                             |        | ●                           |
| Rakowska & de Juana-Espinosa        | 2021 | Poland, Spain      |          |                             |        | ●                           |
| Ramisetty & Desai                   | 2017 | India              |          |                             |        | ●                           |
| Ramnanan                            | 2022 | USA                |          |                             |        | ●                           |
| Rawboon et al.                      | 2019 | Japan              |          |                             |        | ●                           |
| Reiss                               | 2012 | USA                |          | ●                           |        |                             |
| Rhoads                              | 1994 | USA                |          |                             | ●      |                             |
| Rios, Ling, Pugh, Becker, & Bacalla | 2020 | USA                |          |                             |        | ●                           |
| Rodríguez-Izquierdo                 | 2022 | Spain              | ●        |                             |        |                             |
| Roosevelt                           | 1999 | USA                | ●        |                             |        |                             |
| Rothwell, Herbert, & Rothwell       | 2008 | UK                 |          |                             |        | ●                           |
| Ruben                               | 1976 | USA                |          |                             | ●      |                             |
| Saint-Jacques                       | 2006 | Japan              |          |                             | ●      |                             |
| Sanchez e. al.                      | 2023 | Spain, USA         |          |                             |        | ●                           |
| Saranya & Rajakumar                 | 2022 | India              |          |                             |        | ●                           |



| Author                                 | Year | Country of Study   | Factors  |                             |        |                             |
|--|------|--|----------|-----------------------------|--------|-----------------------------|
|  |      |  | Attitude | Knowledge and Understanding | Skills | Global Employment Readiness |
| Sarbini et al.                         | 2023 | Brunei   |          |                             |        | ●                           |
| Sarwari et al.                         | 2024 | Malaysia   |          |                             |        | ●                           |
| Saxena                                 | 2014 | India  |          |                             | ●      |                             |
| Schachaf                               | 2008 | USA  |          |                             | ●      |                             |
| Schein & Schein                        | 2017 | USA  |          |                             |        | ●                           |
| Schnabel, Kelava, Seifert, & Kuhlbrodt | 2014 | Germany  |          | ●                           |        |                             |
| Schwartz, et al.                       | 2012 | Canada, Finland, Germany, Italy, Poland, Portugal, Switzerland, Turkey, USA  | ●        |                             |        |                             |
| Shannon & Begley                       | 2008 | USA  |          |                             | ●      |                             |
| Shealy                                 | 2016 | USA  |          | ●                           |        |                             |
| Sobkowiak                              | 2019 | Poland   | ●        | ●                           |        |                             |
| Solimano                               | 2009 | Sweden   | ●        |                             |        | ●                           |
| Sorokowska, et al.                     | 2021 | Algeria, Australia, Austria, Belgium, Brazil, Chile, China, Colombia, Costa Rica, Croatia, Cuba, El Salvador, Estonia, Georgia, Germany, Greece, Hungary, India, Italy, Lithuania, Malaysia, Mexico, Netherlands, Nigeria, Pakistan, Peru, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, South Korea, Spain, Sweden, Turkey, Uganda, Ukraine, USA |          |                             | ●      |                             |
| Spitzberg & Changnon                   | 2009 |  | ●        | ●                           |        |                             |
| Stewart, Wall, & Marciniec             | 2016 | USA  |          |                             |        | ●                           |
| Succi & Canovi                         | 2019 | USA  |          |                             |        | ●                           |
| Sun et al.                             | 2024 | China Canada   |          |                             |        | ●                           |
| Świgoń                                 | 2022 | Poland   |          |                             |        | ●                           |
| Tervalon & Murray-García               | 1998 | USA  | ●        |                             |        |                             |
| Thomas, Aycan, Cerdin, & Pekerti       | 2015 | Australia, Austria, Canada, China, France, Netherlands, Spain, Turkey, USA   | ●        |                             |        |                             |
| Tran T. T.                             | 2014 | Vietnam  |          |                             |        | ●                           |
| Truong et al.                          | 2017 | Australia  |          |                             |        | ●                           |

| Author                               | Year | Country of Study         | Factors  |                             |        |                             |
|--------------------------------------|------|--------------------------|----------|-----------------------------|--------|-----------------------------|
|                                      |      |                          | Attitude | Knowledge and Understanding | Skills | Global Employment Readiness |
| UNESCO                               | 1995 | France                   | ●        |                             |        |                             |
| UNESCO                               | 2013 | France                   |          | ●                           |        |                             |
| Vakil                                | 2021 | Azerbaijan               |          |                             | ●      |                             |
| van der Zee & Otten                  | 2008 | Netherlands              | ●        |                             |        |                             |
| Van der Zee & van Oudenhoven         | 2000 | Netherlands              |          |                             | ●      |                             |
| Verkuyten & Killen                   | 2021 | Netherlands, USA         | ●        |                             |        |                             |
| Verkuyten & Kollar                   | 2021 | Netherlands              | ●        |                             |        |                             |
| Verkuyten, Yogeeswaran, & Adelman    | 2022 | Netherlands, New Zealand | ●        |                             |        |                             |
| Weiss                                | 2019 | USA                      |          |                             |        | ●                           |
| Wijewantha                           | 2016 | Sri Lanka                |          |                             |        | ●                           |
| Winter                               | 2010 | Germany                  |          |                             | ●      |                             |
| Wladawsky-Berger                     | 2018 | USA                      |          |                             |        | ●                           |
| World Economic Forum                 | 2016 | USA                      |          |                             |        | ●                           |
| Wright                               | 2012 | USA                      | ●        |                             |        |                             |
| Yershova, DeJaeghere, & Mestenhauser | 2000 | USA                      |          |                             | ●      |                             |
| Yong & Ling                          | 2021 | Malaysia                 |          |                             |        | ●                           |
| Zhu, Luke, & Bellini                 | 2021 | USA                      | ●        |                             |        |                             |

*Source: Own Work*

Based on a thorough review of the literature, the key independent variables investigated in this study were identified as attitudes, knowledge and understanding, and skills related to intercultural competence. These variables were examined in the context of the impact of academic mobility experiences on the development of intercultural competence and its implications for global employability, as presented in Table 5.3.1.2.

Table 5.3.1.2 presents detailed definitions that characterize and describe each of the key factors under investigation in this study. These factors were identified as the primary independent variables in relation to the development of intercultural competence through international academic mobility experiences and their influence on global labor market readiness.

**Table 5.3.1.2: Factor Selection and Definition**

| Factor                      | Definition  |
|-----------------------------|---|
| Attitude                    | “Curiosity and openness, readiness to suspend disbelief about other cultures and belief about one’s own. Willingness to seek out or take up opportunities to engage with others [...]. Interest in discovering other perspectives on the interpretation of familiar and unfamiliar phenomena both in one’s own and in other cultures and cultural practices” (Byram M. , 2021, p. 131). |
| Knowledge and Understanding | Another type of knowledge is conceptual, reflecting an understanding of how the particular country views and values central concerns such as appropriate forms of behavior, individual rights, group membership and its associated obligations, and obligations to the state (Bird et al., 1993, p. 417).   |
| Skills                      | Set of abilities to successfully interact with people from other cultures, such as listening, observing, evaluating, analyzing, interpreting, multiperspectivity, empathy, flexibility, adapting, linguistics, and mediation (Deardorff, 2006; Barret et al., 2014).  |
| Global Employability        | The potential that an individual must acquire and retain a job (Rothwell et al., 2008). Employability skills can be defined as what the industry looks for in graduates, how passionate they are about their jobs, and the skills they possess (Kaushal, 2016). Global employability is employability applied to a global market.   |

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*Source: Own work*

Following the identification of the key factors to be investigated (Table 5.3.1.2), through the analysis of relevant sources, which were then synthesized and integrated into a comprehensive

and informative table, as presented in Table 5.3.1.1; the factors were grouped and organized according to their respective dimensions, as illustrated in Table 5.3.1.3.

**Table 5.3.1.3: Factors and Dimensions**

| Factor                             | Dimension   |
|------------------------------------|---|
| Attitude<br>(X)                    | Value Cultural Diversity                                |
|                                    | Respect of Cultures                                     |
|                                    | Openness  |
|                                    | Tolerance   |
|                                    | Curiousness to Learn of Other Cultures                  |
|                                    | Cultural Humility                                       |
| Knowledge and Understanding<br>(X) | Internal Diversity and Heterogeneity of Cultural Groups |
|                                    | Awareness of One's and Others' Assumptions              |
|                                    | Knowledge of Beliefs, Values, and Practices             |
| Skills<br>(X)                      | Communicative Awareness (Verbal & Non-Verbal)           |
|                                    | Multiperspectivity                                      |
|                                    | Empathy   |
|                                    | Cognitive Flexibility                                   |
|                                    | Behavioral Adaptation                                   |
|                                    | Linguistic Skills                                       |

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*Source: Own work*

Factor 1: Attitude. The dimensions considered for this factor are a) Value cultural diversity, b) Respect of cultures, c) Openness, d) Tolerance, e) Curiousness to learn of other cultures, and f) Cultural humility.

Factor 2: Knowledge and Understanding. The dimensions considered for this factor are a) Internal diversity and heterogeneity of cultural groups, b) Awareness of one's and others' assumptions, c) Knowledge of beliefs, values, and practices, and d) Communicative awareness (verbal & non-verbal).

Factor 3: Skills. The dimensions considered for this factor are a) Multiperspectivity, b) Empathy, c) Cognitive flexibility, d) Behavioral adaptation, and e) Linguistic skills.

### 5.3.2 Instrument Design

After a thorough review of the existing literature, which included scientific papers, books, websites and reports from international organizations, a semi-structured interview protocol was developed to gather qualitative data from academics and global employers.

As previously stated, in-depth interviews enable researchers to gather data directly from participants who can describe and reflect on their personal experiences and perspectives (Okes, 2019). Fontana and Frey (2000) argue that this qualitative method is one of the most effective ways to gain a deeper understanding and exploration of research topics.

The interview protocol was designed to explore the participants' perspectives on the importance of intercultural competence in the global labor market, as well as their insights into the specific knowledge, skills and attitudes that engineering students acquire through international academic mobility experiences. The questions were developed through the guidance of the theoretical framework and the key factors identified in the literature review. The scholarly sources that informed the development of the instrument included Grigoryan & Schwartz (2020); Hughes et al. (2020), Verkuyten et al. (2022); Deardorff (2006); Lustig & Koester (2010); Shealy (2016); Braslauskas (2021); Hamilton et al. (1998); Stoermer et al. (2020); Ho (2009); Yershova et al. (2000); Rakowska & de Juana-Espinoza (2021); and Sarwari & Wahab (2017).

The objective was to develop an interview guide that would yield in-depth, detailed, and contextual responses from the participants. The interview protocol featured open-ended questions designed to elicit rich, detailed responses from the participants. Given the two distinct types of participants in this study, academics and employers, the interview protocol maintained consistent questions while incorporating some variation to address the relevant perspectives and experiences of each group.

The questions were organized into four main sections, each corresponding to one of the primary independent variables: attitudes, knowledge and understanding, and skills and the dependent variable: global labor market readiness (**Table 5.3.2.1**).

The data collection instruments used to gather the necessary information for triangulating the results from the quantitative portion of this study are presented in Appendix II (Instrument for Academics) and Appendix III (Instrument for Employers).

**Table 5.3.2.1: Interview Structure for Academics and Employers**

| Variable                      | Items per Variable | Dimension   | Author                              | Items per Dimension |
|-------------------------------|--------------------|---|-------------------------------------|---------------------|
| Attitude                      | 4                  | Respect and Value of other Cultures                     | Grigoryan & Schwartz (2020)         | 1                   |
|                               |                    | Cultural Humility                                       | Hughes et al. (2020)                | 1                   |
|                               |                    | Tolerance   | Verkuyten et al. (2022)             | 1                   |
|                               |                    | Other attitudinal qualities.                            | Deardorff (2006)                    | 1                   |
| Knowledge & Understanding     | 4                  | Awareness of Other's and One's Assumptions              | Lustig & Koester (2010)             | 1                   |
|                               |                    | Knowledge of Beliefs, Values and Practices              | Shealy (2016);                      | 1                   |
|                               |                    | Communicative Awareness                                 | Braslauskas (2021)                  | 1                   |
|                               |                    | Other essential knowledge and understanding of cultures | Hamilton et al. (1998)              | 1                   |
| Skills                        | 4                  | Behavior Adaptability                                   | Stoermer et al. (2020)              | 1                   |
|                               |                    | Linguistic Skills                                       | Ho (2009)                           | 1                   |
|                               |                    | Multiperspectivity                                      | Yershova et al. (2000)              | 1                   |
|                               |                    | Other essential skills needed                           | Rakowska & de Juana-Espinoza (2021) | 1                   |
| Global Labor Market Readiness | 3                  | Academic Mobility                                       | Sarwari & Wahab (2017)              | 1                   |
|                               |                    | Intercultural Competence                                | Rakowska & de Juana-Espinoza (2021) | 1                   |
|                               |                    | Other Competences                                       | Rakowska & de Juana-Espinoza (2021) | 1                   |

*Source: Own work*

### 5.3.2.1 Instrument Validation

To ensure the validity and reliability of the interview protocol, the development of the interview protocol was an iterative process, with multiple rounds of review and refinement by experts to ensure the questions were clear, unbiased, and aligned with the study's objectives.

The experts that participated in the development and refinement of the interview protocol included academics in the field of intercultural competence and education. Their feedback was incorporated to refine the wording and structure of the questions, as well as to validate the alignment between the interview questions and the research objectives. A brief

description of the experts that provided feedback for the development of the script were the following:

*Jose Tejada Fernández PhD.*, professor of Didactics and Educational Organization at the Universitat Autònoma de Barcelona and general coordinator of the Occupational Training research group. He is an expert in program evaluation, training innovation, and the training of training professionals. He has extensive experience in university and non-university teaching and research in these areas, including undergraduate, doctoral, master's, and postgraduate programs, both nationally and internationally. He has an extensive publication record, with over 290 books, book chapters, and articles in specialized journals. Additionally, he has supervised 43 doctoral theses and presented more than 200 papers and communications at national and international conferences.

*Gerardo Tamez González, Ph.D.*, is the former dean of the School of Political Science and International Relations at the Universidad Autónoma de Nuevo León. He has an extensive publication record, including 13 books, 14 book chapters, and 7 articles in reputable publishers and journals. Additionally, he has presented at numerous national and international conferences. Currently, he serves as the director of all undergraduate programs at the university.

*David García Waldman PhD.*, holds a doctoral degree in Philosophy, specializing in International Relations, Business, and Diplomacy from the Autonomous University of Nuevo León. He currently holds the position of Academic Deputy Director of the Undergraduate Studies System and serve as a full-time professor at the institution, possessing a desirable PRODEP profile. Furthermore, they are a member of the consolidated academic body UANL-CA-319 International Markets and Regional Studies and the National System of Researchers. He has a research expertise encompasses the domains of Knowledge Management and International Relations.

*Gabriela Mata Sánchez PhD.*, Coordinator of Research and Academic Coordinator of the Doctorate in Philosophy with a focus on International Relations, Business, and Diplomacy, has

an extensive publication record. She has coordinated the book "Current and prospective international relations: implications for Mexico," which compiles a series of academic works analyzing Mexico's foreign relations from political, social, economic, and commercial perspectives. Additionally, her recent scholarly articles have explored the role of social legitimacy, reputation, and interest groups as elements of corporate diplomacy, published in the Revista Relaciones Internacionales of UNAM. Furthermore, she has contributed book chapters, such as "The role of UNESCO in the promotion of art and culture in International Relations," which appears in the work "International Relations: cultural diplomacy, art and foreign policy," edited by the Mexican Association of International Studies.

## **5.4 Data Recollection**

### **5.4.1 Sample**

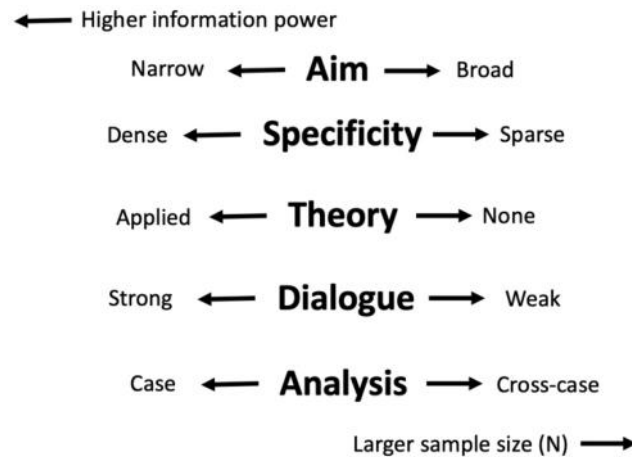
After a literature revision, it has been noticed that the authors do not have very clear arguments regarding the exact sample sizes used when conducting a qualitative investigation (Carlsen & Glenton, 2011; Mason M. , 2010). After reviewing a series of articles in five different top journals in which interviews were the data source, Marshall, Cardon, Poddar, & Fontenot (2013) found that most of them put no effort into justifying their sample size through citing other authors or methodologists that had similar with precedent studies or similar designs and research problems. The sample of a qualitative research design is a very important element, but it has not been given its rightful place in investigation methodology books and articles (Mason J. , 2017).

Malterud, Siersma and Guassora (2015) developed the model "Information Power in Qualitative Interview Studies Model" (Figure 5.4.1.1) in their article "Sample Size in Qualitative Interview Studies: Guided by Information Power" in which they contemplate that the size of the sample depends on the *aim of the study*, if it is broad the need of a large sample will be needed and if its narrow a small number will suffice; the *sample specificity*, the density and sparsity will depend on the peculiarities of the participating individuals; *established theory*, a large sample will be needed if background theoretical perspective is scarce, the opposite will



be applied when there is information on the subject is abundant; *quality of the dialogue*, will depend on the fluency and of the communication between the interrogator and the participants, and the ability to conduct the interview by the researcher; *analysis strategy*, an exploratory cross-case will require a larger number compared to an in-depth narrative analysis.

**Figure 5.4.1.1: Information Power in Qualitative Interview Studies Model**




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Source: Reprint from Malterud, Siersma, & Guassora's "Information Power Model" from the article "Sample Size in Qualitative Interview Studies: Guided by Information Power" (2015)

The power of the information given by the participants will depend on certain characteristics such as experience, knowledge, or other properties they possess regarding the subject in hand; if the interviewed sample is very specific to the aim of the investigation, a small sample will be sufficient (Malterud et al., 2015). A small number of interviews will also be very helpful in the interviewing process since there will be a closer association between the researcher and the participants, which in turn will enhance the validity of the information and will build up a better in-depth analysis (Crouch & McKenzie, 2006).

Consistent with the goals of this dissertation and informed by the guidance provided in Malterud, Siersma, and Guassora's (2015) article on the "Information Power in Qualitative Interview Studies Model" as well as the recommendations of Crouch and McKenzie (2006), a sample of 10 participants were interviewed. Following the administration of the interview

protocol instrument to this sample, their responses underwent a detailed and comprehensive analysis.

The robust qualitative analysis provided a critical complement to the quantitative results, offering a richly textured interpretation of the phenomena under study, while also enabling the triangulation of the findings across the two methodological approaches.

The interview transcripts were examined using a thematic analysis methodology, wherein the researcher methodically identified, structured, and interpreted the meaningful patterns present in the data.

The thematic analysis process involved several key steps, as outlined by Braun and Clarke (2006): The thematic analysis process involved a series of key steps: 1) thoroughly reviewing the interview transcripts to become familiar with the data; 2) generating initial codes from the data; 3) collating the codes into potential overarching themes; 4) reviewing the themes to ensure they accurately represented the data; 5) defining and naming the themes; and 6) producing the final report.

#### 5.4.2 Profile of Participants

The participants to be interviewed were divided into two distinct groups. The first group consisted of experts on intercultural competencies, including academics and other individuals with extensive experience in fostering academic or governmental cooperation between diverse cultures and nations. This group was selected to provide in-depth insights into the development, cultivation, and application of intercultural competencies from both theoretical and practical perspectives.

The second group of participants to be interviewed will consist of employers and high-level executives from multinational corporations and international organizations. This group can provide direct insights into their expectations regarding the intercultural competencies they expect from their current employees as well as prospective hires. These participants will offer valuable perspectives on the specific intercultural skills, knowledge, and behaviors that are most essential for success in global, cross-cultural business settings.

#### 5.4.2.1 Academic Participants

**Interviewee 1.** Agnieszka Olter-Castillo PhD.

*Native Country:* Poland

*Educational Level:* PhD.

*International Experience:* Coordinator of the International Strategy and expert in interculturality

*Organization/University:* University of Warsaw / Cracow University of Economics, ex-coordinator of International Relations at the University of Lima.

*Position:* Professor/Researcher

*Country where your organization/university is located:* Poland/Peru

**Interviewee 2.** Alejandra Perales PhD.

*Native Country:* México

*Educational Level:* PhD

*International Experience:* 15 years in the UANL international relations office

*Organization/University:* Universidad Autónoma de Nuevo León

*Position:* Director of International Projects and Agreements

*Country where your organization/university is located:* Mexico.

**Interviewee 3.** Benjamin Rontard, PhD.

*Native Country:* France

*Educational Level:* PhD

*International Experience:*

- Master's degree internship with the Autonomous University of the State of Mexico
- International relations with France at the UASLP Faculty of Engineering
- Doctorate in Environmental Sciences at the UASLP
- Research stays at Motu Economics and Policy Research in Wellington, New Zealand
- Director of the Instituto Potosino de Francés
- Honorary Consul of France in San Luis Potosí
- Head of University and Scientific Cooperation at the Consulate General of France in Monterrey.

*Organization/University:* French Consulate in Monterrey/ French Embassy in Mexico

*Position:* Head of University and Scientific Cooperation  
*Country where your organization/university is located:* Mexico.

**Interviewee 4.** Elene Rodríguez Falcon PhD.

*Native Country:* México

*Educational Level:* Master

*International Experience:* I have lived and worked in academia in the UK for the past 26 years.

*Organization/University:* Study Group Limited, Universidad Autónoma de Nuevo León

*Position:* Provost and Chief Academic Officer, President of the International Council at Universidad Autónoma de Nuevo León.

*Country where your organization/university is located:* United Kingdom but has operations across the world.

#### 5.4.2.2 Employer Participants

**Interviewee 1.** Anely Anguiano

*Native Country:* Mexico

*Educational Level:* Master of Management with emphasis on human resources

*International Experience:* Has activities with Colombia, Peru, Argentina and USA

*Company/Organization:* Schweitzer Engineering Laboratories, S.A. de C.V

*Industry Sector:* Electric

*Position:* Regional Director of HR

*Country where your company/organization is located:* San Luis Potosí (Company of American Origin)

*Countries where your company/organization has activity:* Colombia, Peru, Argentina and USA

**Interviewee 2.** Fabian Ponce

*Native Country:* Mexico

*Educational Level:* B.S. Industrial Engineering, Master's in Finance

*International Experience:* Global Sourcing

*Company/Organization:* Crown Holdings

*Industry Sector:* Can Makers

*Position:* Director Sourcing

*Country where your company/organization is located:* USA

*Countries where your company/organization has activity:* Global

**Interviewee 3.** Janelly Mitsué Haros Pérez

*Native Country:* Mexico

*Educational Level:* PhD in Philosophy with emphasis on International Relations, Business and Diplomacy.

*International Experience:* Coaching for expats. Residence abroad.

*Company/Organization:* Racing Cargo México

*Industry Sector:* Logistic.

*Position:* Global Content Editor

*Country where your company/organization is located:* Mexico - Japan

*Countries where your company/organization has activity:* Global

**Interviewee 4.** Marcela Mariam Safa Treviño

*Native Country:* Mexico

*Educational Level:* Master's degree

*International Experience:* In academic level I have had the opportunity to study outside Mexico twice, in both cases in cities in northern France. To my professional, since graduate I have had the opportunity to work for companies with global activity. Today I work for a Mexican company with global activity where the role of executive and administrative recruitment was performed in more than 35 countries in the world where there is productive or commercial activity.

*Company/Organization:* Ruhrpumpen

*Industry Sector:* Manufacture

*Position:* Recruiting Manager

*Country where your company/organization is located:* Mexico

*Countries where your company/organization has activity:* Mexico, USA, Germany, Egypt, Brazil, Colombia, India, China, Russia, United Kingdom, among others.

**Interviewee 5.** María Andrea Abarca

*Native Country:* Mexico

*Educational Level:* Postgraduate

*International Experience (brief description):*

1. Exchange program in San Diego, CA for English school for 5 months.
2. Exchange program in Quebec, QC, Canada for 6 months to complete baccalaureate classes.
3. Trip to the University of Texas in Austin to represent UDEM.
4. Exchange program in Florence, Italy for 8 months to complete undergraduate classes.

*Company/Organization:* John Deere

*Industry Sector:* Manufacturing

*Position:* Human Resource Consultant

*Country where your company/organization is located:* United States – Mexico

*Countries where your company/organization has activity:* North, Central and South America, Africa, Asia, Australia, New Zealand, Middle East, Europa.

**Interviewee 6.** Rafael Garcia

*Native Country:* Mexico

*Educational Level:* Masters in Global Business Administration

*International Experience:* Experienced financial leader with extensive international experience in the marine construction industry and a strong background and understanding of operations. Over 20 years of challenging assignments across different countries, including USA, Mexico, Canada, Norway, Trinidad & Tobago, Suriname and others, leading the finance function in managing significant growth, turnarounds, restructurings, operational start-ups, and JV management. Accomplished at building strong relationships with Operational leaders within the organization, adding value and working in multi-cultural environments.

*Company/Organization:* BOA Group

*Industry Sector:* Marine Offshore

*Position:* Finance/HR Director

*Country where your company/organization is located:* Norway.

*Countries where your company/organization has activity:* Worldwide (e.g., Norway, Spain, France, Italy, Mexico, USA, Canada, Singapore, etc.).

**Interviewee 7. Roberto Ambriz Cisneros**

*Native Country:* Mexico

*Educational Level:* Master's Degree

*International Experience:* Working in a company that manages cross-country installation projects. I have experienced a good amount of different cultural backgrounds, I've worked directly with clients in Europe, USA, Asia, South America, Africa, etc. Working in a global construction company provides firsthand exposure to diverse cultures, regulatory environments, and business practices across different countries and regions. My experience involves collaborating with international teams, managing projects in various cultural contexts, and navigating cross-border challenges such as language barriers, regulatory compliance, etc.

*Company/Organization:* Tecno Montajes S.A. de C.V.

*Industry Sector:* Construction

*Position:* Commercial, Administrative and Operations Manager

*Country where your company/organization is located:* Mexico

*Countries where your company/organization has activity:* USA, Canada, Germany, etc.

**5.4.3 Data Analysis of Interviews with Academic Experts**

The research instrument was administered to a sample of four academic experts. The interview questions were designed to gather in-depth, qualitative data regarding the participants' experiences, perspectives, and insights pertaining to the development and implementation of intercultural competencies within educational and organizational contexts.

Table 5.4.3.1 provides an overview of the academic experts who were administered the instrument.

Due to scheduling conflicts, some of the interviews were conducted asynchronously. After the interviews were transcribed, the acquired information was carefully analyzed to gain a comprehensive understanding of the participants' perspectives and experiences. The following presents the data collected from the academic experts.

**Table 5.4.3.1: Academic Experts that Participated in a face to face/Asynchronous Interview**

| ID | Name                      | Organization   | Position  | Organization Headquarters |
|----|---------------------------|--|---|---------------------------|
| AO | Agnieszka Olter-Castillo  | University of Warsaw/Cracow University/Universidad de Lima | Professor/Researcher/Ex coordinator of International Relations Universidad de Lima                        | Peru/Poland               |
| AP | Alejandra Perales Alvarez | Universidad Autónoma de Nuevo León                         | Director of International Projects and Academic Agreements  | Mexico                    |
| BR | Benjamin Rontard          | French Consulate in Monterrey/ French Embassy in Mexico    | Head of University and Scientific Cooperation   | Mexico                    |
| ER | Elena Rodriguez Falcon    | Universidad Autónoma de Nuevo León; Study Group Limited    | President of the International Council at UANL/ Provost and Chief Academic Officer at Study Group Limited | México/ United Kingdom    |

*Source: Own Work*

**Question 1.** Why is valuing and respecting other cultures important when working in a global company?

Embracing and respecting cultural diversity is vital for success in a global company. The presence of varied cultural perspectives, knowledge, and approaches within a multinational workforce can significantly enrich decision-making, problem-solving, and innovation. Demonstrating genuine respect and appreciation for these cultural differences fosters an inclusive, collaborative work environment where employees from diverse backgrounds feel valued and empowered to contribute their unique insights. This, in turn, reduces the risk of misunderstandings, interpersonal conflicts, and barriers to effective teamwork.

Conversely, a lack of cultural humility and tolerance can create a hostile environment where employees feel marginalized, leading to decreased morale, engagement, and ultimately, hindering their professional development. For a higher education graduate aspiring to thrive in a global company, cultivating cultural humility is of paramount importance. This mindset enables one to recognize and set aside personal biases, remain curious and adaptable, and engage with colleagues from all backgrounds as equal partners. Coupled with a genuine tolerance for differences in beliefs, values, and practices, cultural humility facilitates seamless cross-cultural collaboration, fueling innovation and organizational success.



*Question 2.* On many occasions, individuals do not have a critical self-reflection of their culture at an intrapersonal or interpersonal level. Why is cultural humility an important part of multicultural competence for a higher education graduate working in a global company?

Cultural humility, at its core, enables individuals to recognize and deeply reflect on their own cultural biases, assumptions, and limitations. This self-awareness and willingness to challenge one's preconceptions facilitates more open, respectful, and empathetic interactions with colleagues from diverse cultural backgrounds. A culturally humble graduate understands that their way of thinking and behaving is shaped by their cultural upbringing, and they are eager to learn about and adapt to alternative perspectives and practices.

This mindset of cultural humility is essential for success in a global company, where teams are comprised of individuals with vastly different worldviews, values, and communication styles. By setting aside any notions of cultural superiority and approaching differences with a genuine curiosity and appreciation, a culturally humble employee can foster an inclusive, collaborative work environment that harnesses the full potential of the organization's diversity. They are able to seamlessly navigate cross-cultural interactions, avoiding misunderstandings and conflicts that could otherwise hinder effective teamwork and decision-making.

Developing cultural agility is a critical skill for a global company employee. Understanding the nuances of how one's own culture operates and being willing to adjust accordingly when working with individuals from other backgrounds, demonstrates flexibility, open-mindedness, and a commitment to organizational success.

*Question 3.* When living in a multicultural society there are differences in beliefs, convictions, and practices; and individuals are adherent to their own. Why would you say that tolerance is an important characteristic that a higher education graduate must possess to work at a global company?

Tolerance is essential for success in a global company. Fostering an inclusive, collaborative work culture that celebrates diversity is critical for driving business success. This is a strategic organizational need in global enterprises, where teams are comprised of individuals with vastly

different backgrounds. It allows individuals to accept and respect differences in beliefs, values, and practices without prejudice – actively embrace and respect the diversity of their colleagues. This facilitates cooperation, understanding, and harmony among colleagues from diverse contexts, promoting a positive and productive work environment.

Embracing cultural differences and learning to navigate them through open-mindedness, empathy, and practice is crucial for a higher education graduate to thrive in a multicultural setting. Cultivating tolerance is absolutely essential for a higher education graduate to succeed in the dynamic, multicultural environment of an international company. By approaching cultural differences with an open-minded, empathetic, and proactive attitude, employees can facilitate genuine cooperation, mutual understanding, and organizational harmony. A higher education graduate who can seamlessly adapt their style, communication, and decision-making to different cultural settings will be poised to thrive and make meaningful contributions to the global company's mission.

*Question 4.* What attitudinal qualities, besides the previously mentioned, are most important for a higher education graduate to compete for a job position in a global company? Why?

In addition to cultural humility, respect and tolerance, a range of key attitudinal qualities are essential for a higher education graduate to thrive in the dynamic, multicultural environment of a global company. Foremost among these is empathy – the ability to understand and connect with the perspectives and emotions of colleagues from diverse backgrounds. Coupled with resilience, which enables graduates to manage stress and adapt quickly to changing circumstances, empathy fosters genuine collaboration and mutual understanding across cultural lines. This multifaceted cultural awareness equips them to make well-informed decisions, anticipate challenges, and leverage the full innovative potential of a diverse workforce.

*Question 5.* How could making assumptions or stereotyping one's own culture and other cultures affect the way a corporation conducts its business?

Making assumptions or stereotyping cultures can have severe consequences for a global corporation's operations and workplace dynamics. Such biases can lead to misunderstandings, conflicts, and breakdowns in communication that undermine the company's ability to function effectively. When employees harbor beliefs of cultural superiority, it creates a tense, non-inclusive work environment that hinders the professional development of the entire workforce.

Rather than succumbing to unfounded stereotypes, companies must make a concerted effort to suspend judgment and seek a deeper, more nuanced understanding of diverse cultures. This requires immersing themselves in local customs, values, and practices through direct engagement and observation. Even then, global organizations must acknowledge that there will always be aspects of other cultures that remain opaque or challenging to fully comprehend. Maintaining this humility and openness is essential for navigating the complexities of the multinational business landscape, building trust with international partners and customers, and leveraging the full innovative potential of a diverse workforce.

*Question 6.* What is the importance of having a cultural assessment (beliefs, values, and practices) of the country where a corporation has operations?

Conducting a comprehensive cultural assessment is essential for corporations operating globally. It allows them to develop a nuanced understanding of the local standards, norms, values, and practices that shape the business environment. This in-depth cultural knowledge enables them to thoughtfully adapt their strategies, policies, and operations to align with local expectations and sensibilities. This cultural understanding is crucial for facilitating successful integration into the market, navigating complex negotiations, effectively managing multicultural teams, and building strong, trusting relationships with customers and partners. Ultimately, this cultural awareness helps global companies avoid the costly pitfalls of misunderstandings and conflicts that can arise from cultural ignorance.

In the increasingly interconnected world of modern business, a failure to invest in rigorous cultural assessment represents a significant barrier to the long-term success and sustainability of multinational companies.

*Question 7.* Besides linguistic skills, what elements are key to being able to communicate effectively with an individual or group of individuals from another country? Why?

Effective communication in a global environment demands more than just linguistic proficiency. It requires a deep understanding of diverse cultural contexts, the ability to navigate emotional nuances, and a high degree of adaptability. Truly effective global communicators must possess a nuanced grasp of the cultural norms, values, and practices that shape how messages are conveyed and interpreted in different settings.

The ability to communicate successfully in multicultural environments is an indispensable asset for professionals aspiring to thrive in the interconnected global economy. It enables them to overcome linguistic barriers, navigate complex social dynamics, and leverage the full innovative potential of diverse teams and international partnerships.

*Question 8.* What knowledge and understanding of other cultures is essential for higher education graduates aspiring to a job vacancy within global companies? Why?

Applicants for global companies must possess an in-depth understanding of the social norms, values, business practices, and communication styles of the diverse cultures they will interact with. This nuanced cultural awareness enables them to engage in respectful and effective interactions, navigate complex social dynamics, and reduce the risk of misunderstandings – all highly valued attributes in the global business context. Graduates should also demonstrate familiarity with the historical, religious, political, and social customs of the regions where their prospective employers operate. This deeper cultural knowledge allows them to build stronger professional relationships, anticipate potential challenges, and adapt their approach accordingly.

Beyond just linguistic proficiency, comprehensive knowledge of the political, economic, societal, technological, and legal systems at play in a given country or region is essential for

graduates aspiring to thrive in the global labor market. This multidimensional understanding equips them to make informed decisions, leverage opportunities, and overcome obstacles in an interconnected world. By cultivating this breadth and depth of intercultural competence, graduates can set themselves apart as truly effective communicators and problem-solvers poised to contribute meaningfully to the success of multinational organizations.

*Question 9.* Why do you think that an employee with a high level of cultural adaptability is an important element in a global company? Why?

An adaptable employee is essential for global companies, as they possess the ability to quickly respond to changes, learn new skills, and effectively navigate diverse cultural contexts. This flexibility and intercultural agility are crucial in the dynamic global business environment, where the capacity to seamlessly adjust to shifting markets, emerging technologies, and evolving operational requirements is key to a company's long-term success. Adaptable employees can readily embrace new challenges, assimilate alternative working methods, and deftly maneuver through unfamiliar cultural environments. This versatility makes them invaluable contributors to the company's success, enabling them to identify opportunities, overcome obstacles, and drive innovation in a complex, interconnected world.

Highly adaptable employees demonstrate cognitive flexibility, emotional intelligence, and cultural sensitivity, enabling them to flourish in the face of uncertainty and collaborate effectively with colleagues from diverse backgrounds. This positions them as invaluable assets within the global organization.

*Question 10.* Would you say that besides the linguistic skills of a foreign language, the use of said language is tied to the culture of that country? Why?

The use of a foreign language is inextricably linked to the culture of the country from which it originates. Language is intrinsically woven into the fabric of a society, reflecting its unique values, norms, and contextual frameworks. Mastering the nuances and subtleties of a language requires a deep understanding of the underlying cultural elements that shape its structure, idioms, and patterns of usage. This cultural knowledge is essential for effective

communication, as it allows individuals to navigate the unspoken rules and cultural cues that are integral to meaningful exchanges. By demonstrating such cultural awareness and applying a language within its proper cultural context, individuals can build stronger, more genuine professional relationships, fostering trust and facilitating successful collaboration.

While certain languages like English have become globally ubiquitous in the business realm, communicating in a country's native tongue still serves as a powerful symbol of respect, commitment, and appreciation for that culture. The symbiotic relationship between language and culture is a critical consideration for those seeking to thrive in the increasingly interconnected global marketplace.

*Question 11.* Would teaching students how to integrate their knowledge across disciplines or cultural contexts help them stand out in the global labor market? Why?

Integrating knowledge across disciplines or cultural contexts equips graduates with a multifaceted understanding of the world, broadening their perspectives and expanding their problem-solving capabilities.

This versatility is highly valued in the global labor market, where employers seek individuals who can innovate and adapt to diverse contexts. By developing these interdisciplinary skills and the ability to thrive in varied work environments, graduates cultivate the creative problem-solving and adaptive mindset necessary to navigate the complexities of the interconnected globalized world.

Companies and institutions actively seek out these adaptable, flexible graduates who can not only perform effectively in a range of contexts and respond to unexpected challenges, but also bring a depth of contextual knowledge and cross-cultural awareness to their roles. An education that fails to instill these critical competencies is increasingly inadequate, as graduates without the necessary holistic preparation will struggle to find suitable employment and succeed in the ever-evolving global economy.

*Question 12.* What skills, not mentioned previously, do you think are important for a higher education graduate to successfully operate within a global company? Why?

Beyond the foundational competencies of teamwork, time management, emotional intelligence, effective communication, and problem-solving skills, higher education graduates seeking to thrive in global companies must also cultivate a deep cultural awareness and adaptability. Graduates must develop an understanding of cultural differences, communication styles, and business practices, allowing them to build trust, foster collaboration, and contribute meaningfully to the company's success.

Furthermore, graduates should hone their critical thinking and creative problem-solving capacities, essential for addressing the complex, multifaceted challenges that arise in the global marketplace. By combining strong intercultural competence with innovative, adaptable mindsets, graduates can provide immense value to their employers, driving growth, innovation, and effective cross-border operations.

*Question 13.* Would you say that a higher education graduate who participated in an academic mobility program, is more flexible to adapt and work with another culture in the future? Why?

Participating in academic mobility programs equips graduates with heightened flexibility and adaptability to navigate diverse cultural landscapes. The immersive experience of living and studying abroad imbues them with a deeper understanding of intercultural dynamics, honing practical skills in cross-cultural communication and collaboration.

This fosters greater mental agility and openness, empowering graduates to integrate seamlessly into global teams and succeed in the interconnected, multicultural world. Having directly experienced the challenges and rewards of adapting to a foreign environment, these graduates develop robust coping mechanisms to manage cultural differences. Their enhanced proficiency in a second language further enables more nuanced interactions and smoother transitions when adapting to new contexts in the future. The transformative nature of academic mobility programs positions graduates as invaluable assets, primed to thrive in the complex, globalized economy.

*Question 14.* Do you think that having successfully developed attitude, knowledge and understanding, and skills will increase the employability level within a global company of a higher education graduate? Why?

Developing a graduate's open and adaptable mindset, deep intercultural knowledge, and a diverse arsenal of practical skills significantly enhances their employability and value within the global marketplace. These multifaceted competencies are essential for graduates to thrive in the dynamic, intercultural environments of international organizations, positioning them as invaluable assets primed to drive innovation, growth, and effective cross-border operations.

Companies are increasingly seeking employees who can seamlessly navigate and collaborate within diverse settings – a priority that higher education institutions are working to address by providing graduates with the comprehensive training and real-world experiences needed to become globally ready professionals. Without these capabilities honed through rigorous academic mobility and experiential learning, graduates may struggle to remain competitive, facing considerable challenges in adapting to and succeeding within the complex, interconnected world.

*Question 15.* What are the most important competencies, not mentioned previously, for a higher education graduate to possess to have a higher employability level within a global company? Why?

Beyond the essential competencies of problem-solving skills and critical thinking, higher education graduates seeking success in global companies require a deeper set of capabilities. Foremost is the development of cultural intelligence. Coupled with this is the capacity for genuine adaptability, allowing graduates to fluidly adjust their behaviors and communication styles to work productively with colleagues and stakeholders from varied backgrounds.

Equally important are strong intercultural communication skills, empathy to connect across cultural divides, and an underlying respect for different perspectives and ways of being. Collectively, these advanced competencies empower graduates to tackle complex, cross-



cultural challenges with innovative, nuanced solutions that drive the success of global enterprises.

#### 5.4.4 Data Analysis of Interviews with Employers

The research instrument was administered to a sample of seven participants employed by international companies, comprising three human resource recruiters and three high-level employees with international experience. The interview questions aimed to elicit in-depth, qualitative information about the participants' experiences, perspectives, and insights related to the development and integration of intercultural competencies within educational and organizational settings. Table 5.4.4.1 provides an overview of the employer experts who were administered the instrument. Due to scheduling conflicts, some of the interviews were conducted asynchronously. The following presents the data collected from the participants.

**Table 5.4.4.1: Employer that Participated in a face to face/Asynchronous Interview**

| ID | Name           | Organization                                     | Position   | Industry Sector | International Activity  | Organization Headquarters |
|----|----------------|--|--|-----------------|---|---------------------------|
| AA | Anely Anguiano | Schweitzer Engineering Laboratories, S.A. de C.V | Regional Director of HR                          | Electric        | Colombia, Perú, Argentina and USA   | Mexico/USA                |
| FB | Fabian Ponce   | Crown Holdings                                   | Global Sourcing                                  | Can Makers      | Global  | USA                       |
| JH | Janelly Haros  | Racing Cargo Mexico                              | Global Content Editor/Co-Founder/Ex-Pat Coaching | Logistics       | Global  | Mexico/Japan              |
| MS | Marcela Safa   | Ruhrpumpen                                       | Recruiting Manager                               | Manufacture     | Mexico, USA, Germany, Egypt, Brazil, Colombia, India, China, Russia, United Kingdom, among others.  | Mexico                    |
| MA | Maria Abarca   | John Deere                                       | Human Resource Consultant                        | Manufacturing   | North America, Africa, Asia, Australia, New Zealand, Middle East, Europa, Central and South America | United States – Mexico    |

| ID | Name           | Organization                | Position  | Industry Sector | International Activity  | Organization Headquarters |
|----|----------------|-----------------------------|---|-----------------|---|---------------------------|
| RG | Rafael García  | BOA Group                   | Finance/HR Director                               | Marine Offshore | Global (e.g., Norway, Spain, France, Italy, Mexico, USA, Canada, Singapore, etc.) | Norway                    |
| RA | Roberto Ambriz | Tecno Montajes S.A. de C.V. | Commercial, Administrative and Operations Manager | Construction    | USA, Canada, Germany.   | México                    |

*Source: Own Work*

*Question 1.* Would you say that valuing and respecting other cultures is an important competence that a higher education graduate must have to work in a global company? Why?

The experts unanimously emphasize that respecting and valuing other cultures is a crucial competence for higher education graduates aspiring to work in global companies. Developing robust cultural competence enables individuals to navigate complex multicultural environments effectively, enhance their understanding of diverse market needs and consumer behaviors, and ultimately contribute to the overall success of the company in the global marketplace.

Graduates must proactively develop an open, unbiased, and understanding of diverse cultures, moving beyond superficial stereotypes that may have been shaped by limited exposure through the internet and social media. Cultivating cultural humility, tolerance, and genuine appreciation for cultural differences are essential for graduates to work productively and collaboratively within a multicultural work environment. These advanced competencies empower graduates to tackle complex, cross-cultural challenges with innovative, culturally sensitive solutions that drive the success of global enterprises.

*Question 2.* On many occasions, individuals do not have a critical self-reflection of their culture at an intrapersonal or interpersonal level. Why is cultural humility an important part of multicultural competence for a higher education graduate working in a global company?

The interviewees unanimously emphasize that cultural humility and respect for diverse cultural perspectives are essential competencies for recent graduates aspiring to join the global workforce. Graduates must be open-minded and proactively seek to learn from other cultures, recognizing that no culture is perfect, but that by finding common ground and mutual understanding, they can navigate complex multicultural work environments effectively.

Cultivating cultural humility fosters deep respect for diverse cultures, enhances cross-cultural communication and collaboration, and promotes an inclusive, harmonious work environment – all of which are key for driving effective teamwork, innovation, and conflict resolution within a multicultural workforce. Employers highly value candidates who demonstrate cultural intelligence, including a comprehensive knowledge of different cultural contexts, the ability to gather and analyze cultural information, a genuine drive to continuously learn and adapt to new cultures, and essential psychological qualities like critical thinking, empathy, and strong self-reflection skills. Meaningful experiences living, working, or studying abroad can be instrumental in helping graduates develop a more global, empathetic vision, enhanced flexibility and adaptability, and deeper self-awareness – all of which are invaluable for graduates to challenge their own potential cultural biases, enhance their respectful behavior, and build meaningful, trust-based relationships worldwide.

*Question 3.* When living in a multicultural society there are differences in beliefs, convictions, and practices; and individuals are adherent to their own. Why would you say that tolerance is an important characteristic that a higher education graduate must possess to work at a global company?

Tolerance is an essential competency for higher education graduates seeking employment in global companies. It involves actively respecting and appreciating cultural differences, being open-minded and curious to learn from diverse perspectives, and promoting a harmonious, inclusive, and productive multicultural work environment. Tolerance goes beyond passive acceptance – it requires a proactive effort to deeply understand and value the richness that different cultures bring, which can contribute to personal growth, enhanced cross-cultural communication, and the collective strength and innovative capacity of the organization.

Developing tolerance through conflict resolution mechanisms, open and empathetic dialogue, and a willingness to compromise enables graduates to successfully navigate the challenges of a global, interconnected workplace and enhance the company's reputation, brand image, and overall competitiveness in the international market.

*Question 4.* What attitudinal qualities, besides the previously mentioned, are most important for a higher education graduate to compete for a job position in a global company? Why?

Key attitudinal qualities for a higher education graduate to compete for a job in a global company include strong communication abilities, open and adaptable mindset, respect for diverse customs and cultures, integrity, empathy, assertiveness, leadership, accountability, adaptability, open-mindedness, proactivity, creativity, effective communication skills, resilience, intercultural competence, and ethical integrity.

These qualities enable graduates to navigate the complexities of a global, multicultural work environment, contribute positively to the organization's success through collaboration and innovation, and thrive in dynamic, fast paced settings.

Graduates who possess this well-rounded set of attitudinal qualities are better equipped to excel in the increasingly interconnected and diverse global marketplace, building lasting relationships, bridging cultural divides, and driving the organization's growth and competitiveness.

*Question 5.* How could making assumptions or stereotyping one's own culture and other cultures affect the way a corporation conducts its business?

Sending employees to work in unfamiliar international locations can undermine their confidence and productivity, negatively impacting the company's operations and performance. To avoid this, companies should proactively foster a culture of diversity, inclusion, and cultural tolerance, where employees from diverse backgrounds can seamlessly adapt and contribute without feeling marginalized or alienated.

Making assumptions and relying on stereotypes in a corporate context can lead to significant communication issues, hinder effective collaboration, result in the underutilization of talent, generate ineffective marketing strategies, and potentially expose the company to legal and ethical problems – all of which can negatively affect a corporation's global business operations and competitiveness.

Celebrating diversity and promoting an inclusive work environment are essential for corporations to succeed and thrive in today's increasingly interconnected and diverse global marketplace, allowing them to avoid the pitfalls associated with cultural assumptions and stereotypes.

*Question 6.* What is the importance of having a cultural assessment (beliefs, values, and practices) of the country where a corporation has operations?

Conducting a comprehensive cultural assessment is crucial for corporations with international operations. It provides invaluable insights that help companies deeply understand the local context, including social norms, communication styles, business practices, and regulatory environments. With this knowledge, corporations can adaptively tailor their strategies, build meaningful relationships with local stakeholders, mitigate potential risks, enhance employee engagement and productivity, ensure compliance with relevant regulations, and promote corporate social responsibility.

By wholeheartedly embracing cultural sensitivity, empathy, and responsiveness, corporations can thrive in diverse cultural environments, navigate complex cross-cultural challenges, and achieve sustainable long-term growth and success in the global marketplace.

*Question 7.* Besides linguistic skills, what elements are key to being able to communicate effectively with an individual or group of individuals from another country? Why?

Effective communication with individuals from other countries requires a multifaceted approach that combines cultural knowledge, language proficiency, and refined communication skills. Understanding the cultural differences, idiomatic expressions, and diverse

communication styles is essential to avoiding misunderstandings and ensuring clear, respectful interactions.

Additionally, mastering both verbal and non-verbal communication skills is crucial when navigating unfamiliar environments and working with people from diverse cultural backgrounds. Incorporating a range of elements is key to bridging cultural differences and building positive relationships in diverse global contexts. This includes developing cultural awareness, demonstrating empathy, utilizing effective non-verbal communication, practicing active listening, exhibiting adaptability, communicating with clarity, showing respect, exercising patience, and cultivating an open and tolerant mindset. By embracing this holistic approach, graduates can navigate complex cross-cultural scenarios, foster mutual understanding, and establish productive, long-lasting professional relationships across international boundaries.

*Question 8.* What knowledge and understanding of other cultures is essential for higher education graduates aspiring to a job vacancy within global companies? Why?

Understanding the depth of cultural knowledge, such as nuances in communication styles, social norms, historical contexts, and diverse belief systems, is essential for effective interaction and collaboration within the global business environment.

Developing a well-rounded cultural awareness, beyond just language proficiency, is crucial for fostering mutual understanding, tolerance, and respect, which are vital for success in diverse work settings. For graduates aspiring to roles in global companies, a comprehensive knowledge of social etiquette, business protocols, communication styles, historical influences, religious and philosophical contexts, and local laws and regulations is paramount.

This multifaceted cultural competence enables seamless interaction, facilitates the building of professional relationships, and contributes to overall international business success. By fully embracing cultural diversity and cultivating intercultural competence, graduates can significantly enhance their adaptability, problem-solving skills, and ability to positively contribute to a company's global success and expansion.

*Question 9.* Why do you think that an employee with a high level of cultural adaptability is an important element in a global company? Why?

As graduates enter the increasingly globalized workforce, the ability to navigate diverse organizational cultures, embrace change, and succeed in fast-paced, technology-driven environments will be essential. Employees with a high level of cultural adaptability are vital assets for global companies, as they enhance collaboration, respond effectively to dynamic market changes, inspire innovative thinking, improve customer relations, resolve cross-cultural conflicts, and provide a distinct competitive edge in diverse markets.

Cultivating adaptability, flexibility, and a proactive, open-minded attitude will be key for graduates to thrive and make meaningful contributions in the rapidly evolving global business landscape. Demonstrating agility in the face of change will enable graduates to excel and become valuable assets for international organizations.

*Question 10.* Would you say that besides the linguistic skills of a foreign language, the use of said language is tied to the culture of that country? Why?

Understanding the cultural context and linguistic differences of a language is essential for global professionals. Language is deeply connected to the culture of its speakers, reflecting societal values, beliefs, and history. Cultural expressions, idioms, and norms of politeness in language are rooted in the cultural context.

Mastery of a foreign language requires more than just linguistic skills – it also demands an in-depth understanding of the cultural context in which the language is used, including the customs, traditions, and social etiquette. This cultural fluency is crucial for effective communication, relationship building, and global business success. Graduates must be both culturally and linguistically adept to navigate international social and business environments effectively, demonstrating empathy, adaptability, and a willingness to learn.

Developing this competence enables graduates to build stronger connections, foster trust, and collaborate more seamlessly with colleagues, clients, and partners from diverse backgrounds, ultimately contributing to the success of global organizations.

*Question 11.* Would teaching students how to integrate their knowledge across disciplines or cultural contexts help them stand out in the global labor market? Why?

Focusing on the specific cultural contexts and languages relevant to the local or regional labor market demands, students can gain more in-depth training on key cultural and linguistic skills, rather than a broad, superficial exposure. This targeted approach could be more valuable for students as they enter the global workforce.

In addition, integrating knowledge across disciplines and cultural contexts prepares students for the global labor market in several ways. This interdisciplinary approach fosters innovative thinking, enhanced cultural competence, and stronger problem-solving skills. By developing these crucial capabilities, students gain a competitive edge that makes them more attractive to multinational employers seeking adaptable, culturally competent global professionals. Blending specialized knowledge and intercultural fluency, allows graduates to navigate the diverse and rapidly evolving professional landscape more effectively.

*Question 12.* What skills, not mentioned previously, do you think are important for a higher education graduate to successfully operate within a global company? Why?

Key skills for global success include a genuine interest in understanding different subjects and cultures, proactive learning through various resources, strong communication and adaptability skills, an accelerated learning capacity that allows for quick adaptation to new environments, language facility in multiple languages, an openness to new ideas and perspectives, and a high adaptability to diverse environments and ways of working.

Additional important skills are proficiency in digital learning tools and technologies, critical thinking abilities to analyze complex scenarios, robust project management skills to execute global scale tasks efficiently, effective networking capabilities to build valuable intercultural professional connections, and a high level of cultural intelligence that enables effective collaboration in diverse cultural settings.

Furthermore, skills such as intercultural negotiation, intercultural leadership, the development of a global mindset, proficiency in the latest technologies, crisis management expertise, and



language proficiency are all crucial for navigating the diverse and rapidly evolving professional landscape of global companies.

*Question 13.* Would you say that a higher education graduate who participated in an academic mobility program, is more flexible to adapt and work with another culture in the future? Why?

Participation in an academic mobility program can significantly enhance a student's flexibility and adaptability to work with different cultures in the future. These programs provide direct exposure to diverse cultural practices, leading to increased cultural sensitivity and improved language skills vital for intercultural communication.

Participants also experience personal growth, independence, and the development of a global mindset, understanding international issues and business strategies. This exposure to new perspectives and ways of thinking can make graduates more open-minded, innovative, and better able to navigate the complex, multicultural dynamics of global companies.

However, the real-world application of these skills is important, as sometimes graduates may struggle to fully translate their international experiences into effective performance within the company's specific cultural context and job requirements. *Employers value the increased intercultural competence, but graduates must also demonstrate the ability to apply their skills in practical, business-oriented ways to succeed in the global workplace.*

Academic mobility programs equip students with a valuable toolkit for thriving in diverse, international environments, but graduates must continue to develop and adapt these skills to maximize their career opportunities within multinational organizations.

*Question 14.* Do you think that having successfully developed attitude, knowledge and understanding, and skills will increase the employability level within a global company of a higher education graduate? Why?

Employers highly value global competencies in higher education graduates, such as language fluency beyond just Spanish, and the ability to apply the knowledge and skills gained from international experiences in their local work environment. This maturity and adaptability

make graduates more employable and potentially suited for future international transfers within a global company.

Developing a positive attitude, comprehensive knowledge, and practical skills significantly boosts a higher education graduate's employability in global companies. Key competencies include cultural adaptability, willingness to face new challenges, intercultural knowledge, versatile skills, and the ability to collaborate, innovate, and grow within an international workplace.

Measurable indicators of a successful recent graduate include TOEFL or Cambridge intermediate-level English proficiency, relevant training or diplomas, internship experience at a global company, and consistent extracurricular activities. Employability in global companies is influenced by the combination of a candidate's attitude, knowledge, and skills, which can enhance adaptability, intercultural competence, communication, collaboration, problem-solving, innovation, leadership potential, global perspective, and professionalism.

*Question 15.* What are the most important competencies, not mentioned previously, for a higher education graduate to possess to have a higher employability level within a global company? Why?

Successful higher education graduates seeking employment in global companies should possess a broader perspective on the world and the company's operations, not just their specific role. They should have strong collaboration and teamwork skills, and the ability to communicate directly and solve problems face-to-face, rather than relying solely on digital communication. Graduates should also demonstrate conflict management skills, empathy for others, and a focus on the common good, not just individual goals.

Additionally, they should master interpersonal skills, strategic thinking to shape and achieve long-term business goals, financial acumen to understand a company's financial health, and knowledge of environmental sustainability and international regulations essential for navigating the complexities of global business. Key competencies include fluency in English as the language of international business, up-to-date industry knowledge, training in soft skills

like intercultural conflict resolution, and proficiency in multiple languages beyond just the primary language of the company. Technical expertise, adaptability, effective communication, and demonstrated leadership potential are also important for employability in multinational organizations.

Understanding the depth of cultural knowledge, including nuances in communication styles, social norms, and diverse belief systems, is essential for effective interaction and collaboration within the global business environment. A comprehensive cultural competence enables seamless interaction, facilitates the building of professional relationships, and contributes to international business success.

### **5.5 Research Questions**

Participation in academic mobility programs endows engineering students with a multifaceted and impactful array of intercultural competencies. These vital skills and capabilities empower them to navigate the complexities of multicultural environments with agility and effectiveness, enriching both their professional pursuits and personal growth.

Immersion in diverse cultural environments equips students with enhanced adaptability, cognitive flexibility, and empathy. This enables them to develop a more cosmopolitan perspective and a deeper understanding of cultural nuances. Furthermore, the necessity to collaborate with individuals from varied backgrounds reinforces their intercultural communication skills, fostering more effective teamwork and relationship-building in multicultural settings.

Moreover, the intercultural competencies gained through academic mobility are highly valued by employers in international organizations, enhancing students' global employability and career prospects. Beyond professional development, immersion in new cultural contexts fosters profound personal growth, expanding students' worldviews, bolstering self-awareness, and cultivating a more nuanced understanding of global issues.

Ultimately, academic mobility programs equip engineering students with a transformative toolkit of skills and perspectives, empowering them to thrive in an increasingly interconnected world.

Based on the rigorous analysis of data collected from academic and employer experts, as well as the comprehensive literature review, the research questions presented in Chapter One can now be addressed in greater depth. The following responses provide a more detailed and nuanced understanding of the key themes and insights gleaned from the aforementioned participants.

Q1: How does having academic mobility impact the life of an engineering student?

According to the data given by academics, employers and the literature review concerning academic mobility and intercultural competence, there are several key impacts that academic mobility can have on the life of an engineering student:

- Through academic mobility, the student will gain the competence to interact effectively with individuals from diverse cultural and national backgrounds. They will develop a deeper comprehension of distinct perspectives, beliefs, values, and practices. This exposure to new cultures and ways of thinking will help the student become more culturally aware, empathetic, and adaptable in their interactions. They will learn to appreciate and navigate the nuances of diverse cultural norms, communication styles, and problem-solving approaches. This enhanced intercultural competence will enable the student to collaborate more effectively in multicultural teams.
- Through academic mobility, the student will shed their insecurities and gain confidence when engaging in multicultural interactions. This increased self-assurance will allow them to be more open-minded, curious, and willing to embrace new challenges.
- They will develop the necessary skills to enhance their adaptability, empathy, flexibility, and communication skills enabling them to better function in diverse and intercultural teams. These set of skills will help them in their professional career enabling them to

collaborate more effectively in multicultural teams, fostering mutual understanding and innovative solutions to complex challenges.

- The student can get exposed to new teaching methods, ideas, problem solving approaches, technologies from diverse cultural contexts. Helping them broaden their perspectives and increase their analytical capabilities.

Q2: What multicultural competencies were acquired by engineering students through their international academic mobility?

According to the academic and employer experts interviewed, and corroborated by the robust literature review within the theoretical framework, engineering students acquire the following key multicultural competencies through their international academic mobility experiences:

- Knowledge and understanding of the beliefs, values, and practices of colleagues. By appreciating the cultural, religious, and social backgrounds of coworkers, individuals can cultivate a more inclusive and supportive workplace environment.
- Enhance adaptive skills, cultural awareness, and openness to new perspectives: Engagement in academic mobility programs such as study abroad or international internships exposes students to diverse cultural contexts, enabling them to develop greater adaptability, cognitive flexibility, and empathy. This fosters a more cosmopolitan mindset and appreciation for cultural differences.
- Improved intercultural communication abilities: The necessity to navigate unfamiliar cultural norms and collaborate with individuals from diverse backgrounds during academic mobility experiences strengthens students' intercultural communication skills. This allows for more effective teamwork, relationship-building, and cross-cultural understanding in multicultural settings.
- Heightened self-awareness and personal growth: Immersion in new cultural contexts through academic mobility fosters profound personal development, expanding students' worldviews, bolstering self-awareness, and cultivating a more nuanced understanding.

Q3: What impact does having multicultural competence have on an engineering student's acquirement of employment in a global company?

- **Bolstered global employability and career prospects:** The intercultural competencies gained through academic mobility are highly valued by employers in international organizations. Engaging with diverse viewpoints and work cultures augments students' adaptability and capacity to succeed in the ever-changing global job market.
- **Expanded worldview and personal growth:** Participating in academic mobility programs that expose students to unfamiliar cultural environments fosters the development of enhanced self-awareness, empathy, and a more sophisticated understanding of global dynamics. This enriches students' overall personal and intellectual maturation, preparing them to engage more thoughtfully and effectively with the world around them.
- **Increased adaptability and flexibility:** The capability to effectively navigate diverse cultural environments and collaborate productively with individuals from varied backgrounds imbues engineering students with highly valuable, transferable competencies that are in high demand among global employers.

## 5.6 Hypothesis

This study sought to investigate how the attitudes, knowledge, comprehension, and capacities acquired through academic mobility at an international institution influence the preparedness of engineering students from the Universidad Autónoma de Nuevo León for the global labor market.

The general hypothesis of the investigation states that:

Attitude, knowledge and understanding, and skills acquired through academic mobility at a foreign university<sup>h1</sup> impact the global labor market employability of students in engineering programs at the Universidad Autónoma de Nuevo León<sup>h2</sup>.

The qualitative component of the study was leveraged to provide deeper insight and substantiate the second part of the hypothesis, building upon the findings from the in-depth interviews conducted with a diverse set of academic and industry expert participants. These interviews offered valuable first-hand perspectives and nuanced understanding to complement the quantitative data analysis.

The interviews conducted reveal that both academic and industry experts concur on the significance of intercultural competence for graduates' performance in the global labor market. They emphasize that companies with international operations or a global presence require employees who can effectively adapt to diverse cultural environments.

Participants highlighted that to thrive, companies must cultivate diversity, inclusion, and cultural sensitivity, avoiding stereotypes that impede collaboration.

Comprehensive cultural assessments assist in tailoring strategies, while embracing empathy and responsiveness enables organizations to navigate intercultural challenges and achieve sustainable growth.

Effective intercultural communication necessitates cultural knowledge, language skills, and a tolerant mindset to bridge differences and establish productive professional relationships.

The interviewees state that critical attitudinal qualities for succeeding in global employment include effective communication, an adaptable and receptive mindset, appreciation for diversity, ethical conduct, empathy, and intercultural proficiency. These qualities empower graduates to thrive in fluid, interconnected environments.

Employers emphasized that with regard to the dependent variable of *global employability*, participation in academic mobility programs can enhance a student's flexibility, adaptability, and cultural sensitivity for navigating diverse cultural contexts. Furthermore, they express that these programs provide direct exposure to diverse practices, fostering personal growth, a global mindset, and improved communication skills.

Employers value intercultural competence and the ability to apply international experiences locally and state that key competencies for *global employability* encompass cultural adaptability, intercultural knowledge, adaptability skills, and the capacity for collaboration and innovation within an international workplace.

Participants state that measurable indicators of a successful graduate include language fluency, relevant training, and global company experience. Possessing a comprehensive understanding of cultural knowledge, encompassing the intricacies of communication styles, social norms, and diverse belief systems, is paramount for effective collaboration and interaction within the global business landscape.

Cultivating comprehensive cultural competence enables seamless engagement, facilitates the establishment of professional relationships, and ultimately contributes to the success of international business ventures.



## **CHAPTER 6: QUANTITATIVE VALIDATION OF INTERCULTURAL COMPETENCIES ACQUIRED IN ACADEMIC MOBILITY AT A FOREIGN UNIVERSITY**

### **6.1 Introduction**

Quantitative research enables researchers to test hypotheses rigorously and identify causal relationships between variables, contributing to evidence-based decision-making (Cadman & Adriaenssens, 1999). The designed survey will have the needed components once they are presented through the semi-structured interviews.

Surveys provide analyzable statistical data of individuals by asking them questions that will output precise, accurate, and credible investigations (Fowler Jr., 2014). This technique uses a group of standardized research methods that collects information from a sample representing a statistical population or universe that pretends to describe, analyze, explain, or predict a set of characteristics (García Ferrando y otros, 2015).

For this study, a questionnaire was used as the research tool to gather quantitative data. The survey had questions tailored to capture specific aspects of intercultural competencies of the students with an academic mobility experience and students without academic mobility.

The instrument is focused on the intercultural competencies acquired by undergraduate students during or after their academic mobility at a foreign university, as well as undergraduate students without an academic mobility of the six engineering schools of the Universidad Autónoma de Nuevo León's (UANL) use of intercultural competence.

The data collected from the questionnaire was analyzed using statistical techniques such as descriptive statistics, correlation analysis, and regression analysis to assess the intercultural competencies acquired by students.

## 6.2 Variable Pertinence

The importance of the variables selected for this study was determined through a two-pronged approach, involving a literature review and validation by subject matter experts of the qualitative instruments employed. The literature review helped identify the key constructs that have been previously associated with intercultural competence. These constructs were then further validated by experts in the field to ensure their pertinence and relevance to the study of ICC.

The literature used for the construct selection consisted of academic articles, books, and research papers that focused on intercultural competence and its related constructs. These sources provided a comprehensive understanding of the constructs that have been identified as important in previous studies on ICC. The authors considered for the selection of constructs where Barret, Byram, Lázár; Mompoin-Gaillard, & Philippou (2014); Deardorff, Darla (2011a); UNESCO (2013); Spitzberg, Brian & Changnon, Gabrielle (2009); and Howard-Hamilton, M. F., Richardson, B. J., & Shuford, B. (1998). After the selection of the constructs an in-depth literature review was conducted to support their relevance and explanation of each construct's role in ICC. A full disclosure of the sources, authors, references and the construct they research in their studies can be found in Table 5.1.1 and Table 5.2.2.

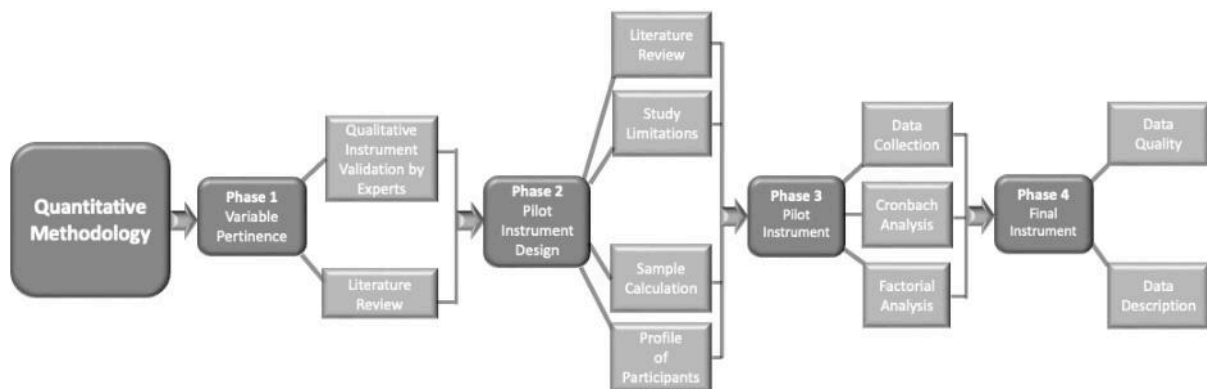
Additionally, consultations were made with experts in the field of intercultural competence to gather their insights and opinions on the relevance of the chosen constructs. The experts who validated the selected constructs consisted of researchers in the field of interculturality and international relations. These experts provided valuable feedback on the constructs, confirming their importance through their validation of the qualitative and quantitative instruments applied for this study.

### 6.3 Methodology

This non-probabilistic study employed a survey administered digitally through the Microsoft "Forms" platform to facilitate efficient data collection. The quantitative validation process will encompass four stages: variable pertinence, pilot instrument design, pilot instrument application, and final instrument application.

*Phase one* will consist of the variable pertinence process that was carried out through literature review and the expert's validation of the qualitative instrument. Cohen, Schneider & Tobin's (2023) guidelines are followed in this process to ensure the validity of the qualitative instrument's content. The variable selection process involved gathering academic articles, books, and research papers that focused on intercultural competence and related constructs. Consulting with experts in the ICC field has also been confirmed as crucial for validating the content of the qualitative instrument, as noted by Escobar and Cuervo (2008).

**Figure 6.3.1: Quantitative Methodology Process**



Source: Own work

*Phase two* will include developing the initial instrument based on the chosen factors, research review, and input from experts. The design aims to quantify the selected elements and their associated constructs. It will encompass various tasks, including a literature review, scoping the study, determining population and sample size, as well as characterizing the survey respondents.

In *phase three* the qualitative validation process, involves conducting a small-scale test of the instrument on a sample of participants. The subjects for the survey were undergraduate students who returned or are currently on an abroad stay in the past five years, and students at the Electrical and Mechanical Engineering School of the UANL who did not have the experience of an academic mobility in a foreign university. This helped to assess the intercultural competence and point of view on its importance of both type of students. The questionnaire consisted of three parts: general questions to collect demographic information about the participants themselves, self-assessment questions and series of questions to evaluate their intercultural abilities.

The undergraduate students that did not have an abroad received the first survey randomly through a series of professors of the Mechanical and Electrical Engineering School of the UANL to ensure a diverse sample. This certain group of students was chosen due to the fact that FIME is the largest engineering school of the UANL and has the largest number of students participating in a study abroad program. This school has also been ranked as the top engineering school in Mexico by the National Association of Engineering Schools (ANFEI, Appendix V) and is one of the main contributors of engineers in the Mexican industry.

In *phase four*, once all data has been collected using the final survey instrument, the data will undergo a thorough quality verification process and descriptive analysis. Following this initial step, the gathered information will be subjected to regression analysis to establish the association between academic mobility experience and its comparison with individuals without such an experience. The aim is to ascertain which group exhibited greater development in intercultural competence, specifically between individuals who participated in an academic mobility program and those who did not.

The findings from this research will provide valuable insights into the impact of academic mobility programs on the development of intercultural competence and their transferability to international professional settings (Valls-Figuera et al., 2023)

## 6.4 Population, Sample, and Participants

The unit of analysis considered for this study are students at the undergraduate level from an engineering program offered by the School of Mechanical and Electrical Engineering, School of Agriculture, School of Earth Science, School of Chemical Science, School of Forest Science, and the School of Civil Engineering; who have taken part in an academic exchange program at a foreign university from 2019 – 2024; and students at FIME that did not partake in an academic mobility program.

From observing the data in Table 2.4.3.2. (International Students from the Universidad Autónoma de Nuevo León) it can be assumed that the average number of enrolled students in the past five years at a bachelor level is 123,674, and in those same years, an average of .25% of those students participated in an academic mobility program. The information in Table 1.3.1 (Graduate and Undergraduates Engineering Programs of Universidad Autónoma de Nuevo León) states that in 2022 there were 31,709 students in the schools in question; which is 25% of the total undergraduate population.

Based on the data presented in the tables, and assuming that all schools within the university had similar levels of activity, it can be estimated that prior to receiving information from the Academic Mobility Office at the Universidad Autónoma de Nuevo León, approximately 0.25% (79.3) of the 31,709 engineering students had participated in an academic exchange program at a foreign university.

The Archive Department of the Universidad Autónoma de Nuevo León lacks an up-to-date database, necessitating a ***non-probabilistic sampling*** approach due to the difficulty in reaching students. The information in the aforementioned databases was gathered while the graduates were still enrolled in the university, and in some cases, the data was obtained when they commenced their bachelor's degree studies. The characteristics of the population previously mentioned have peculiarities in which Creswell & Creswell (2018) suggest the use of a non-probabilistic method of survey application.

For this research, the unit of analysis will be students who are currently enrolled in the engineering programs offered by the schools previously mentioned and were part of an academic mobility program offered by the Universidad Autónoma de Nuevo León in a foreign institution during their academic career in the last five years and students in FIME's engineering programs of the UANL that did not have an academic mobility.

Therefore, due to the non-probabilistic method employed by this study, the survey was simultaneously administered to those who can be successfully contacted, and through a “snowball effect” other ex-alumni and students who are recommended, and meet the required characteristics for this study, will also be contacted.

The Academic Mobility offices at the Universidad Autónoma de Nuevo León maintain a database containing records of 135 students enrolled in engineering programs across six schools who have taken part in international exchange programs at foreign universities between 2019 and 2024 (Universidad Autónoma de Nuevo León, 2024). The percentages and number of students that each one of the six schools that contain the engineering programs at UANL have as participants in the exchange programs is shown in Table.6.4.1.

**Table 6.4.1: Students Participating in International Academic Mobility from each School that hosts and Engineering Program (2019 – 2024)**

| School  | Number of Students |     |
|---|--------------------|-----|
| School of Mechanical and Electrical Engineering | 76                 | 56% |
| School of Agriculture                           | 24                 | 18% |
| School of Chemical Science                      | 16                 | 12% |
| School of Forest Science                        | 10                 | 7%  |
| School of Civil Engineering                     | 7                  | 5%  |
| School of Earth Science                         | 2                  | 1%  |
| <b>TOTAL</b>                                    | <b>135</b>         |     |

*Source. Universidad Autónoma de Nuevo León's, Department of Academic Mobility Activity Report (2024)*

As it can be seen in table 6.4.1 the majority of students in engineering academic mobility from the University Autónoma de Nuevo León are from the School of Mechanical and Electrical

Engineering (FIME) with 76 students, followed by the Schools of Agriculture with 24 students out of the total 135 who have participated in these programs.

Table 6.4.2 presents the proportion of students and their respective percentages from each engineering program participating in the Academic Mobility programs at UANL from 2019 to 2024.

**Table 6.4.2: Engineering Programs Participation in Academic Mobility (2019 – 2024)**

| Program                                 | Number of Students |     |
|---|--------------------|-----|
| Mechatronics Engineer                   | 21                 | 16% |
| Industrial Management Engineer          | 14                 | 10% |
| Biomedical Engineer                     | 13                 | 10% |
| Engineering in Agricultural Business    | 10                 | 7%  |
| Mechanical and Management Engineer      | 9                  | 7%  |
| Engineer in Food Industries             | 8                  | 6%  |
| System Management Engineer              | 7                  | 5%  |
| Civil Engineer                          | 7                  | 5%  |
| Aeronautics Engineer                    | 7                  | 5%  |
| Electronics and Automatization Engineer | 5                  | 4%  |
| Software Technology Engineer            | 5                  | 4%  |
| Environmental Engineer                  | 4                  | 3%  |
| Engineering in Biotechnology            | 4                  | 3%  |
| Mechanical and Electrical Engineer      | 4                  | 3%  |
| Chemical Engineering                    | 4                  | 3%  |
| Manufacturing Engineer                  | 3                  | 2%  |
| Forestry Engineer                       | 3                  | 2%  |
| Agricultural Engineering                | 2                  | 1%  |
| Engineer in Natural Resource Management | 2                  | 1%  |
| Forestry Engineer                       | 2                  | 1%  |
| Mineralogist Geologist Engineer         | 2                  | 1%  |
| Materials Engineer                      | 1                  | 1%  |
| Electronics and Communications Engineer | 0                  | 0%  |
| Geophysical Engineer                    | 0                  | 0%  |
| Geologist Engineer                      | 0                  | 0%  |
| Petroleum Engineer                      | 0                  | 0%  |

*Source. Universidad Autónoma de Nuevo León's, Department of Academic Mobility Activity Report (2024)*

Based on table 6.4.2, no students from the Electronics and Communications Engineering, Geology Engineering, Geophysical Engineering, or Petroleum Engineering programs have taken part in Academic Mobility programs during the specified time frame. The data also reveals that the Mechatronics Engineering program had the most participants, followed by Biomedical Engineering and Industrial Management Engineering in that order.

The data from Table 6.4.3 illustrates the destinations chosen by students from the six schools mentioned earlier for academic exchange programs. Spain emerged as the top choice with 94 students, followed by France with 17 students, and Poland with 7 students. A full list of the students that participated in an academic mobility program can be seen in Appendix VI.

**Table 6.4.3: Destination of Engineering Students (2019 – 2024)**

| Country   | Number of Students |     |
|-----------|--------------------|-----|
| Spain     | 94                 | 70% |
| France    | 17                 | 13% |
| Poland    | 7                  | 5%  |
| Japan     | 4                  | 3%  |
| Chile     | 4                  | 3%  |
| Canada    | 3                  | 2%  |
| Ireland   | 2                  | 1%  |
| Colombia  | 2                  | 1%  |
| USA       | 1                  | 1%  |
| Argentina | 1                  | 1%  |

*Source. Universidad Autónoma de Nuevo León's, Department of Academic Mobility Activity Report (2024)*

The quantity of applied surveys is crucial in order to gather accurate and comprehensive data on the intercultural competencies of all the units of analysis in this study. To ensure that the data is solid, Cochran's (1977) sampling formula (Figure 6.3.1) was used to determine the minimum number of surveys to be collected for this study.

Cochran's formula for continuous data sample size aims to calculate the required minimum sample size for a study involving continuous rather than discrete data. The objective is typically to accurately estimate the population mean within a specific level of precision and ensure that



the results are statistically significant. This allows researchers to draw more reliable and generalizable conclusions from their studies, leading to greater confidence in the validity of their findings (Bartlett et al., 2001).

The formula for determining the sample size ( $n$ ) when the population standard deviation ( $\sigma$ ) is known, and the data are continuous is given by:

$$n_0 = \frac{(t^2)(s)^2}{(d)^2}$$

Where:

$n_0$  = Sample size (required sample size)

$s$  = Standard Deviation (the number of standard deviations from the mean corresponding to the desired confidence level)

$t$  = Alfa (the maximum allowable error in the estimation of the population mean)

$d$  = Variance (the maximum allowable error in the estimation of the population mean)

This formula presupposes that the distribution of the population from which the sample is taken follows a normal distribution and that the population size is considerably larger than the sample size (i.e., less than 5% of the population), making it possible to utilize an infinite population correction. Conversely, when the population is finite and the sample represents a significant portion of it, an adjustment to the formula can be implemented to account for this circumstance.

**Figure 6.3.1: Cochran's Sample Size Formula**

$$n_0 = \frac{(t^2)(s)^2}{(d)^2} \quad n_0 = \frac{(1.96)^2(.834)^2}{[(5)(0.05)]^2} = \frac{(3.8416)(.696)}{(.25)^2} =$$

$$\frac{(3.8416)(.696)}{0.0625} =$$

$$\frac{2.674}{.0625} = 42.8$$

$n_0$  = Sample size

$s$  = Standard Deviation

$t$  = Alfa (95%)

$d$  = Variance (Margin of Error)

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Source: W.G. Cochran (Cochran, 1977) "Sampling Techniques 3<sup>rd</sup> edition. New York: John Wiley & Sons.; Bartlett; Kotrlík & Higgins (2001) "Organizational Research: Determining Appropriate Sample Size in Survey Research". Information technology, learning, and performance journal, 19(1), 43.

## 6.5 Pilot Instrument Design

One of the main objectives of this research is to increase employability of engineering students of the different engineering programs of the UANL, and taking this into consideration, the survey measures areas that are important for a good development in the international workplace. According to Jürgen Deller and Günter K. Stahl (2015) the essential intercultural traits of intercultural competencies for success of a manager in an international workplace are shown in Table 6.4.1.; characteristics which will allow managers to effectively navigate cultural differences and adapt to diverse work environments. The essential traits that the authors mention, are the same that are mentioned by the authors in which the hypothesis is based on Barret, Byram, Lázár, Mompoin-Gaillard, & Philippou (2014); Deardorff, Darla (2011a); UNESCO (2013); Spitzberg, Brian & Changnon, Gabrielle (2009); and Hamilton, M. F., Richardson, B. J., & Shuford, B. (1998).

**Table 6.5.1: Empirically Derived Predictors of an Interculturally Competent Manager**

| Attitudes and Skills    | Behavioral Indicators   |
|-------------------------|---|
| Tolerance for ambiguity | Demonstrates ease in uncertain or intricately challenging circumstances, refrains from advocating for a specific resolution, responds with composure to unfamiliar business associates, remains composed during challenging scenarios, and so on. |
| Behavioral flexibility  | Demonstrates rapid adaptability to feedback, generates innovative solutions to problems, shows willingness to compromise and revise previous decisions, and congruently aligns verbal statements with nonverbal gestures.                         |
| Goal orientation        | Participates actively in meetings, does not shy away from challenges, works to overcome language barriers, respects time constraints, strives to address obstacles, and so on.  |
| Sociability             | Initiates interaction with the overseas counterpart, arranges new meetings, inquiries about the partner's personal history, engages in conversation, displays a friendly demeanor towards the partner, and exchanges relevant information.        |
| Cultural empathy        | Considers the circumstances of the local partner, exercises suitable discretion, presents arguments from the perspective of a national in the host country, and acknowledges the partner's contribution with empathy.                             |
| Nonjudgmentalness       | Expressing positive regard for the host culture, refraining from generalizations, avoiding humor at the expense of nationals from the host country, and objectively highlighting the distinctive aspects of the host country.                     |
| Communication skills    | Attempts to clarify uncertainties and misconceptions, offers relevant input, inquiries about comprehension, establishes guidelines for the interaction, condenses contributions, etc.   |

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*Source: Jürgen Deller and Günter K. Stahl (2015) "Assessment Centers". SAGE Encyclopedia of Intercultural Competence. SAGE Publications Inc.*

The instrumentation for this study includes a questionnaire that measures intercultural competencies. This questionnaire (Appendix IV) is designed to gather data on the participants' level of intercultural competence. The questionnaire consists of multiple items that assess the three constructs that conform ICC that listed in the hypothesis (Figure 1.6.1), including the dimensions within each of the constructs that are listed in Figure 1.6.2 (Graphic Representation of the Operative Hypothesis).

For *Attitude*, the dimensions that are assessed include value for cultural diversity; respect for culture; openness; tolerance; curiousness to learn from other cultures; and cultural humility.

In the construct *Knowledge and Understanding*, the dimensions that were considered were internal diversity and heterogeneity of cultural groups; awareness of one's and other assumptions; knowledge of beliefs, values and practices; and communicative awareness.

Within the construct *Skills*, the dimensions measured were multiperspectivity; empathy; cognitive flexibility; behavior adaptation; and linguistic skills.

As previously described, the survey done for this study, Appendix IV, was applied to students with or without an international academic mobility from one of the six engineering schools of the UANL. The survey had demographic questions in the beginning and a self-assessment test that contained questions taken from Fantini & Tirmizi Appendix G (2006). The rest of the questionnaire applied was created after an in-depth literature review and using the works of different authors including Cox & Blake (1991); Bennett J. M. (1993); Jackson & Ruderman (1995); Tervalon & Murray-García (1998); Mackie & Smith (2002); Gudykunst & Kim (2003); Cultural Intelligence Center (2005); Fantini & Tirmizi (2006); Ang & Van Dyne, (2008); Dervin (2010); Deardorff (2011a) (2017); Thomas, et al. (2015); Calahan (2017); Lankester & Alexopoulos (2021); Raewf & Mahmood (2021); Fisher, et al. (2022).

The questions aimed at assessing the level of interculturality utilize a Likert scale ranging from one to five, where one represents strong disagreement, two represents disagreement, three indicates neither agreement nor disagreement, four signifies agreement, and five represents strong agreement.

#### 6.5.1 Mobility – Non-Mobility Students & Graduate Instruments Validation by Experts

The development of the quantitative instrument involved an iterative process of multiple rounds of review and refinement by subject matter experts. This was done to ensure the clarity, objectivity, and alignment of the questions with the research objectives. The experts who participated in the development and refinement of the questionnaires were academics and researchers in the field of international relations and education. Their feedback was

incorporated to refine the wording and structure of the questions, as well as to validate the correspondence between the questions and the research objectives. A brief overview of the experts who provided feedback for the instrument development is as follows:

*Moises Hinojosa PhD.,* Professor at the School of Mechanical and Electrical Engineering at Universidad Autónoma de Nuevo León with 25 years of experience in Research in the field of mechanical behavior of materials as well as in methodologies in STEM higher education. He is a member of the SNII and the Mexican Academy of Sciences. He teaches in the undergraduate and graduate programs in Materials Engineering and serves as the Secretary of International Relations of School of Mechanical and Electrical Engineering – UANL.

*María Hernández PhD.,* Holds a bachelor's degree in psychology, a master's degree in industrial and organizational psychology, and a Doctorate in Psychology, with a focus on Industrial and Organizational Psychology, from the Faculty of Psychology at the Autonomous University of Nuevo León, graduating with Cum Laude distinction.

Co-founder of the Mexican Council for Professional Certification in Psychology, member of the Association of Psychologists of Nuevo León and member of the Academic Network for Research and Intervention in Health Psychology. She has served for over 20 years as responsible in the areas of Human Resources in Industry and the Education sector. She has been a professor at UANL in the Faculties of Psychology and Mechanical and Electrical Engineering. She is currently the Administrative Coordinator of Academic and Administrative Management of the Graduate Studies at the Faculty of Mechanical and Electrical Engineering of the Autonomous University of Nuevo León in Mexico.

Due to her distinguished career as an educator and researcher, and particularly for her work on Positive Mental Health in university communities, she has been honored for her contribution to Psychology with the 2022 State Psychology Award from the Association of Psychologists of Nuevo Leon.

Published works worth of note:

Employability in engineering, a study from the perception of employers. LACCEI, 2021.

Leadership and employability in engineering: a study with future graduates. Institutional and Linkage Projects. Page 158. Year VII, No. 14, July-December 2019. ISSN: 2448-6906

*Gerardo Tamez González, Ph.D.*, is the former dean of the School of Political Science and International Relations at the Universidad Autónoma de Nuevo León. He has an extensive publication record, including 13 books, 14 book chapters, and 7 articles in reputable publishers and journals. Additionally, he has presented at numerous national and international conferences. Currently, he serves as the director of all undergraduate programs at the university.

*David García Waldman PhD.*, provided feedback on the instrument development, he holds a Doctor of Philosophy degree with a focus on International Relations, Business, and Diplomacy from the Autonomous University of Nuevo León. They currently serve as the Academic Deputy Director of the Undergraduate Studies System and is a full-time professor at the institution, holding a desirable PRODEP profile. Additionally, they are a member of the consolidated academic body UANL-CA-319 International Markets and Regional Studies and the National System of Researchers. Their research expertise lies in the areas of Knowledge Management and International Relations.

*Gabriela Mata Sánchez PhD.*, Coordinator of Research and Academic Coordinator of the Doctorate in Philosophy with a focus on International Relations, Business and Diplomacy. Her publications include the coordination of the book "Current and prospective international relations: implications for Mexico", which concentrates a series of academic works that analyze the political, social, economic and commercial aspects of the country's foreign relations. Her most recent articles include "Social legitimacy, reputation and interest groups as elements

of corporate diplomacy", published in the *Revista Relaciones Internacionales* of UNAM; She has also collaborated on book chapters, such as "The role of UNESCO in the promotion of art and culture in International Relations", which appears in the work *International Relations: cultural diplomacy, art and foreign policy*, edited by the Mexican Association of International Studies.

#### 6.5.2 Pilot Instrument Application to Mobility

The pilot survey was administered during the January – June 2024 semester to students enrolled in engineering programs at the UANL who had no prior international academic mobility experience, as well as those who had participated or were currently engaged in an international academic exchange program.

After collecting thirty-seven responses from students that have participated or are currently in an academic exchange programs and one hundred thirty students that did not have an international experience, the gathered data was organized and inputted into IBM SPSS 25 software for assessment.

The analysis aimed to establish the reliability and validity of the pilot survey tool, which included twenty-two demographic queries, eight self-assessment questions, and ninety-nine inquiries assessing three core aspects of intercultural competence: *Attitude; Knowledge and Understanding; and Skills*.

This research conducted a confirmatory factorial analysis of the components that make up the three constructs. The main objective was to eliminate items that did not demonstrate strong factor loadings or that did not clearly load onto the expected factors. Factorial analysis includes a number of fundamental test.

One of the tests principal is the Kaiser-Meyer-Olkin test which measures the sampling adequacy, with values ranging from 0 to 1 (García et al., 2018). An acceptable result of Kaise-Meyer Olkin (KMO) test is typically considered to be 0.6 or higher (Sullivan, 1994; Wang & Lee, 2019; Dizaj & Khangahi, 2021). When the Kaiser-Meyer-Olkin test value is less than 0.6, it suggests that the correlations between the constructs are relatively strong. This implies that

the data is appropriate for factor analysis, as the factor analysis method is likely to generate distinct and reliable factors. In other words, a KMO value below 0.6 indicates that the constructs are sufficiently correlated, enabling the factor analysis to extract meaningful and reproducible factors from the data. (Matsunga, 2010).

The reduction of items is a helpful way to bring the KMO higher (Matsunga, 2010; Kang, 2013). By removing items that do not load well or do not load onto the expected factors, an improved factor structure can often be achieved. Satisfactory KMO values oscillate between Excellent (above 0.90); Very good (from 0.80 to 0.90); Good (.70 - .80); Mediocre (0.50 - 0.70); and unacceptable (below 0.50) (Field, 2009)

#### 6.5.2.1 Factor Analysis and Reliability test

After administering the survey to the 167 participants, the internal consistency, reliability and a reduction of the number of questions of the intercultural competence survey was evaluated through Cronbach's alpha calculations and factorial analysis. The results indicated a Cronbach's alpha of .994 (Table 6.5.2.1.1) and a KMO of .954 (Table 6.5.2.1.2), suggesting excellent internal consistency reliability; the factorial analysis supported the validity of the survey instrument, identifying the three key factors of intercultural competence as outlined in the instrument.

The final instrument was reduced to twenty-two demographic queries, eight self-assessment questions, and sixty-one inquiries assessing three core aspects of intercultural competence, a total of ninety-one. This same final instrument was administered to the remaining students who had experienced academic mobility at the other five UANL schools with engineering programs, as well as the students at FIME who did not have the opportunity to study abroad.

As shown in Table 6.5.2.1.1, after the necessary reduction of survey items, the *Attitude* construct demonstrated the highest level of internal consistency reliability, as measured by a Cronbach's alpha coefficient of .982. This indicates that the items within the *Attitude* construct have a very high degree of inter-relatedness and coherence, suggesting that they are effectively measuring the same underlying construct. The *Skills* construct had the second



highest Cronbach's alpha coefficient of .981, also exhibiting excellent internal consistency. In contrast, the *Knowledge and Understanding* construct exhibited the lowest internal consistency reliability, with a Cronbach's alpha coefficient of .968, though this value still indicates a very high level of reliability. The slightly lower Cronbach's alpha for the *Knowledge and Understanding* construct may suggest that the items within this construct have a slightly more diverse range of content or are measuring a more multifaceted underlying construct compared to the more unidimensional *Attitude* and *Skills* constructs. The table also presents the Cronbach's alpha coefficient for the dimensions that comprise each of the constructs.

**Table 6.5.2.1.1: Instrument's Cronbach Alpha Results of Students**

| Construct/Dimension                                     | Reliability Statistics<br>Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | Items     | Reliability     |
|---|--|--|-----------|-----------------|
| <b>Attitude</b>   | <b>0.982</b>                               | <b>0.982</b>                                 | <b>22</b> | <b>Approved</b> |
| Value Cultural Diversity                                | 0.943                                      | 0.945  | 3         |                 |
| Respect of Cultures                                     | 0.891                                      | 0.892  | 4         |                 |
| Openness  | 0.897                                      | 0.898  | 3         |                 |
| Toleration  | 0.930                                      | 0.930  | 4         |                 |
| Curiousness To Learn From Other Cultures                | 0.940                                      | 0.940  | 4         |                 |
| Cultural Humility                                       | 0.937                                      | 0.938  | 4         |                 |
| <b>Knowledge and Understanding</b>                      | <b>0.968</b>                               | <b>0.968</b>                                 | <b>15</b> | <b>Approved</b> |
| Internal Diversity and Heterogeneity of Cultural Groups | 0.903                                      | 0.903  | 4         |                 |
| Awareness of One's and Other's Assumptions              | 0.925                                      | 0.924  | 4         |                 |
| Knowledge of Beliefs, Values and Practices              | 0.917                                      | 0.917  | 4         |                 |
| Communicative Awareness                                 | 0.885                                      | 0.887  | 3         |                 |
| <b>Skills</b>   | <b>0.981</b>                               | <b>0.981</b>                                 | <b>20</b> | <b>Approved</b> |
| Multiperspectivity                                      | 0.943                                      | 0.943  | 4         |                 |
| Empathy   | 0.926                                      | 0.928  | 4         |                 |
| Cognitive Flexibility                                   | 0.926                                      | 0.927  | 4         |                 |
| Behavior Adaptation                                     | 0.941                                      | 0.941  | 4         |                 |
| Linguistic Skills                                       | 0.908                                      | 0.909  | 4         |                 |
| <b>Instrument</b>                                       | <b>0.944</b>                               | <b>0.944</b>                                 | <b>61</b> | <b>Approved</b> |

Source: Own work. Data obtained from IBM SPSS.

Table 6.5.2.1.2 presents the results of the Kaiser-Meyer-Olkin and Bartlett's test for each construct of the pilot instrument, following the reduction of survey items. As shown, the *Attitude* construct, consisting of 22 items, exhibited a highly acceptable KMO value of .965, indicating the data was appropriate and well-suited for factor analysis. This suggests a high degree of common variance among the constructs, making the data suitable for reliable factor extraction and interpretation.

**Table 6.5.2.1.2: Instrument's KMO and Bartlett Test of Students**

|   |                    | Construct    |                             |              | Instrument   |
|---|--------------------|--------------|-----------------------------|--------------|--------------|
|   |                    | Attitude     | Knowledge and Understanding | Skills       |              |
| Kaiser-Meyer-Olkin Measure of Sample Adequacy |                    | <b>0.965</b> | <b>0.955</b>                | <b>0.953</b> | <b>0.954</b> |
| Bartlett's Test of Sphericity                 | Approx. Shi-Square | 4542.680     | 2551.682                    | 4232.922     | 12876.747    |
|   | df                 | 231          | 105                         | 190          | 1596         |
|   | Sig.               | 0            | 0.000                       | 0.000        | 0.000        |

Source: Own work. Data obtained from IBM SPSS.

The *Knowledge and Understanding* construct yielded a KMO value of .955 and encompassed 15 survey items. Similarly, the *Skills* construct, comprising 20 items, yielded a Kaiser-Meyer-Olkin value of .953, also suggesting the data was suitable and appropriate for factor analysis. These high KMO values across the constructs indicate that the constructs are sufficiently correlated, enabling the factor analysis to extract meaningful and reproducible factors from the data.

#### 6.5.2.1.1 Factor Analysis of the Attitude Construct

The confirmatory factor analysis findings offered a thorough and comprehensive evaluation. These analyses verified the underlying factor structure of the survey instrument and assessed the validity and reliability of the measured constructs. The details were generated from IBM's SPSS statistical software. Table 6.5.1.1.1 presents the codes and dimension names that were included in the analysis.

**Table 6.5.2.1.1.1: Attitude Construct Dimensions Code Description**

| Code  | Description                              |
|-------|--|
| AVCD  | Value Cultural Diversity                 |
| ARC   | Respect of Cultures                      |
| AO    | Openness                                 |
| AT    | Toleration                               |
| ACLOC | Curiousness To Learn From Other Cultures |
| ACH   | Cultural Humility                        |

Source: Own work.

The initial survey for the *Attitude* construct contained 37 items. After analyzing the data and removing several items, the item reduction was done in order to achieve communalities over 0.5, which is a common goal in achieving an optimal factor structure. The item reduction process was undertaken to enhance the overall factor structure and ensure the constructs were well-defined, accurately representing the underlying dimensions of intercultural competence being measured. The following items were removed from the initial survey for the Attitude construct, which originally contained 37 items: AVCD5, AVCD5, ARC4, AO2, AO5, AO6, AO7, AT3, ACLOC5, ACLOC6, ACLOC7, ACLOC8, ACLOC9, ACH3, and ACH4. This resulted in a 22-item measure of the construct. The details regarding the values can be found in Table 6.5.2.1.1.2.

**Table 6.5.2.1.1.2: Attitude Construct – Communalities Table – Students with Academic Mobility**

| Communalities |         |            |
|---------------|---------|------------|
|               | Initial | Extraction |
| AVCD1         | 1.000   | 0.728      |
| AVCD2         | 1.000   | 0.783      |
| AVCD3         | 1.000   | 0.711      |
| ARC1          | 1.000   | 0.664      |
| ARC2          | 1.000   | 0.782      |
| ARC3          | 1.000   | 0.708      |
| ARC5          | 1.000   | 0.462      |
| AO1           | 1.000   | 0.656      |
| AO3           | 1.000   | 0.701      |
| AO4           | 1.000   | 0.824      |
| AT1           | 1.000   | 0.761      |
| AT2           | 1.000   | 0.753      |
| AT4           | 1.000   | 0.762      |
| AT5           | 1.000   | 0.714      |
| ACALOC1       | 1.000   | 0.772      |
| ACALOC2       | 1.000   | 0.778      |
| ACALOC3       | 1.000   | 0.687      |
| ACALOC4       | 1.000   | 0.794      |
| AHC1          | 1.000   | 0.740      |
| AHC2          | 1.000   | 0.679      |
| AHC5          | 1.000   | 0.774      |
| AHC6          | 1.000   | 0.808      |

Extraction Method: Principal Component Analysis.

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Source: Own work. Data obtained from IBM SPSS.

The total variance explained was determined through a Varimax rotation, which revealed that 72.9% of the variance in the data was accounted for by the extracted factors, as shown in Table 6.5.2.1.1.3. This indicates that the factor structure derived from the analysis was able to explain a substantial proportion of the overall variability present in the original data set.

**Table 6.5.2.1.1.3: Attitude Construct – Total Variance Explained – Students with Academic Mobility**

| Component | Total Variance Explained |                                      |              | Extraction Sums of Squared Loadings |               |              |
|-----------|--------------------------|--------------------------------------|--------------|-------------------------------------|---------------|--------------|
|           | Total                    | Initial Eigenvalues<br>% of Variance | Cumulative % | Total                               | % of Variance | Cumulative % |
| 1         | 16.040                   | 72.910                               | 72.910       | 16.040                              | 72.910        | 72.910       |
| 2         | 0.926                    | 4.210                                | 77.120       |                                     |               |              |
| 3         | 0.638                    | 2.900                                | 80.020       |                                     |               |              |
| 4         | 0.544                    | 2.473                                | 82.493       |                                     |               |              |
| 5         | 0.466                    | 2.117                                | 84.610       |                                     |               |              |
| 6         | 0.389                    | 1.768                                | 86.378       |                                     |               |              |
| 7         | 0.381                    | 1.732                                | 88.110       |                                     |               |              |
| 8         | 0.304                    | 1.381                                | 89.491       |                                     |               |              |
| 9         | 0.296                    | 1.344                                | 90.835       |                                     |               |              |
| 10        | 0.285                    | 1.296                                | 92.131       |                                     |               |              |
| 11        | 0.230                    | 1.046                                | 93.177       |                                     |               |              |
| 12        | 0.220                    | 1.001                                | 94.178       |                                     |               |              |
| 13        | 0.187                    | 0.852                                | 95.030       |                                     |               |              |
| 14        | 0.179                    | 0.814                                | 95.843       |                                     |               |              |
| 15        | 0.168                    | 0.761                                | 96.605       |                                     |               |              |
| 16        | 0.142                    | 0.644                                | 97.249       |                                     |               |              |
| 17        | 0.136                    | 0.617                                | 97.865       |                                     |               |              |
| 18        | 0.121                    | 0.550                                | 98.415       |                                     |               |              |
| 19        | 0.105                    | 0.479                                | 98.894       |                                     |               |              |
| 20        | 0.102                    | 0.465                                | 99.360       |                                     |               |              |
| 21        | 0.081                    | 0.366                                | 99.726       |                                     |               |              |
| 22        | 0.060                    | 0.274                                | 100.000      |                                     |               |              |

Extraction Method: Principal Component Analysis.

*Source: Own work. Data obtained from IBM SPSS.*

As shown in Table 6.5.2.1.1.4, the confirmatory factor analysis conducted using SPSS software revealed a single-component structure for the construct being examined. This single-component structure suggests that the items within the construct are all measuring a single, underlying dimension or factor. This is an indication that the items are highly correlated, and the construct exhibits a high degree of internal consistency and one-dimensionality. The single-component structure provides evidence that the items are effectively measuring the same overarching construct as intended.

**Table 6.5.2.1.1.4: Attitude Construct – Rotated Component Matrix – Students with Academic Mobility**

**Rotated Component  
Matrix<sup>a</sup>**

a. Only one component was extracted. The solution cannot be rotated.

Source: Own work. Data obtained from IBM SPSS.

**6.5.2.1.2 Factor Analysis test of the Knowledge and Understanding Construct**

The dimensions and associated codes that were included in the confirmatory factor analysis for the Knowledge and Understanding construct are presented in Table 6.5.2.1.2.1. This table provides a detailed overview of the specific dimensions that were analyzed as part of the confirmatory factor analysis process for the *Knowledge and Understanding* construct.

**Table 6.5.2.1.2.1: Knowledge and Understanding Construct Dimensions Code Description**

| Code  | Description   |
|-------|---|
| KUIDG | Internal Diversity and Heterogeneity of Cultural Groups |
| KUAOA | Awareness of One's and Other's Assumptions              |
| KUBVP | Knowledge of Beliefs, Values and Practices              |
| KUCA  | Communicative Awareness                                 |

Source: Own work.

The initial *Knowledge and Understanding* construct included 26 items. After analyzing the data and removing several items, the item reduction process was undertaken to optimize the factor structure by achieving communalities above 0.5, a common goal. This item reduction aimed to enhance the overall factor structure and ensure the constructs were well-defined, accurately representing the underlying dimensions of intercultural competence. The following

items were removed from the initial 26-item survey for the *Knowledge and Understanding* construct: KUIDG2, KUAOA1, KUAOA2, KUBVP1, KUBVP2, KUCA1, KUCA2, KUCA3, KUCA6, KUCA7, and KUCA9. The reduction resulted in a 15-item measurement of the construct. The details regarding the values can be found in Table 6.5.2.1.2.2.

**Table 6.5.2.1.2.2: Knowledge and Understanding Construct Dimensions – Communalities**  
**Table – Students with Academic Mobility**

|        | Communalities |            |
|--------|---------------|------------|
|        | Initial       | Extraction |
| KUIDG1 | 1.000         | 0.636      |
| KUIDG3 | 1.000         | 0.739      |
| KUIDG4 | 1.000         | 0.829      |
| KUIDG5 | 1.000         | 0.854      |
| KUAOA3 | 1.000         | 0.876      |
| KUAOA4 | 1.000         | 0.834      |
| KUAOA5 | 1.000         | 0.701      |
| KUAOA6 | 1.000         | 0.750      |
| KUBVP3 | 1.000         | 0.724      |
| KUBVP4 | 1.000         | 0.776      |
| KUBVP5 | 1.000         | 0.735      |
| KUBVP6 | 1.000         | 0.726      |
| KUCA4  | 1.000         | 0.747      |
| KUCA5  | 1.000         | 0.787      |
| KUCA8  | 1.000         | 0.705      |

Extraction Method: Principal Component Analysis.

---

*Source: Own work. Data obtained from IBM SPSS.*

As shown in Table 6.5.2.1.2.3, a Varimax rotation revealed that the extracted factors accounted for 76.12% of the total variance in the data. This indicates that the factor structure derived from the analysis was able to explain a substantial proportion of the overall variability present in the original data set.

**Table 6.5.2.1.2.3: Knowledge and Understanding Construct – Total Variance Explained – Students with Academic Mobility**

| Component | Total Variance Explained |               |              |                                     |               |              |                                   |               |              |
|-----------|--------------------------|---------------|--------------|-------------------------------------|---------------|--------------|-----------------------------------|---------------|--------------|
|           | Initial Eigenvalues      |               |              | Extraction Sums of Squared Loadings |               |              | Rotation Sums of Squared Loadings |               |              |
|           | Total                    | % of Variance | Cumulative % | Total                               | % of Variance | Cumulative % | Total                             | % of Variance | Cumulative % |
| 1         | 10.400                   | 69.331        | 69.331       | 10.400                              | 69.331        | 69.331       | 5.829                             | 38.860        | 38.860       |
| 2         | 1.018                    | 6.787         | 76.118       | 1.018                               | 6.787         | 76.118       | 5.589                             | 37.258        | 76.118       |
| 3         | 0.589                    | 3.926         | 80.043       |                                     |               |              |                                   |               |              |
| 4         | 0.450                    | 3.001         | 83.044       |                                     |               |              |                                   |               |              |
| 5         | 0.391                    | 2.605         | 85.649       |                                     |               |              |                                   |               |              |
| 6         | 0.356                    | 2.376         | 88.025       |                                     |               |              |                                   |               |              |
| 7         | 0.287                    | 1.915         | 89.939       |                                     |               |              |                                   |               |              |
| 8         | 0.262                    | 1.745         | 91.684       |                                     |               |              |                                   |               |              |
| 9         | 0.240                    | 1.602         | 93.285       |                                     |               |              |                                   |               |              |
| 10        | 0.236                    | 1.577         | 94.862       |                                     |               |              |                                   |               |              |
| 11        | 0.208                    | 1.386         | 96.248       |                                     |               |              |                                   |               |              |
| 12        | 0.192                    | 1.282         | 97.530       |                                     |               |              |                                   |               |              |
| 13        | 0.149                    | 0.994         | 98.524       |                                     |               |              |                                   |               |              |
| 14        | 0.122                    | 0.815         | 99.339       |                                     |               |              |                                   |               |              |
| 15        | 0.099                    | 0.661         | 100.000      |                                     |               |              |                                   |               |              |

Extraction Method: Principal Component Analysis.

*Source: Own work. Data obtained from IBM SPSS.*

The Varimax rotation analysis revealed that the *Knowledge and Understanding* construct is composed of three distinct components. The first component comprises the items KUIDG55, KUAOA3, KUIDG54, KUAOA4, KUAOA6, KUIDG3, and KUAOA5. The second component includes the items KUCA4, KUCA5, KUBVP6, KUBVP65, KUCA8, KUBVP64, KUBVP63, and KUIDG1. The detailed data supporting this factor structure is presented in the rotated components matrix shown in Table 6.5.2.1.2.4

**Table 6.5.2.1.2.4: Knowledge and Understanding Construct – Rotated Component Matrix – Students with Academic Mobility**

| Rotated Component Matrix <sup>a</sup> |           |       |
|---------------------------------------|-----------|-------|
|                                       | Component |       |
|                                       | 1         | 2     |
| KUIDG5                                | 0.879     |       |
| KUAOA3                                | 0.843     | 0.406 |
| KUIDG4                                | 0.836     |       |
| KUAOA4                                | 0.826     |       |
| KUAOA6                                | 0.751     | 0.431 |
| KUIDG3                                | 0.677     | 0.530 |
| KUAOA5                                | 0.608     | 0.575 |
| KUCA4                                 |           | 0.845 |
| KUCA5                                 | 0.431     | 0.775 |
| KUBVP6                                |           | 0.755 |
| KUBVP5                                | 0.425     | 0.744 |
| KUCA8                                 |           | 0.741 |
| KUBVP4                                | 0.556     | 0.683 |
| KUBVP3                                | 0.560     | 0.640 |
| KUIDG1                                | 0.487     | 0.631 |

Extraction Method: Principal Component Analysis.  
Rotation Method: Varimax with Kaiser Normalization.<sup>a</sup>  
a. Rotation converged in 3 iterations.

Source: Own work. Data obtained from IBM SPSS.



### 6.5.2.1.3 Factor Analysis test of the Skills Construct

Table 6.5.2.1.3.1 provides a detailed overview of the specific dimensions and associated codes that were analyzed as part of the confirmatory factor analysis process for the *Skills* construct. This table presents the various dimensions that were evaluated, including Multiperspectivity, Empathy, Cognitive Flexibility, Behavioral Adaptability, and Linguistic Skills. The associated codes for each of these dimensions are also included, allowing for a comprehensive understanding of the specific aspects of the *Skills* construct that were examined through the confirmatory factor analysis.

**Table 6.5.2.1.3.1: Skills Construct Dimensions Code Description**

| Code | Description           |
|------|-----------------------|
| SM   | Multiperspectivity    |
| SE   | Empathy               |
| SCF  | Cognitive Flexibility |
| SBA  | Behavior Adaptation   |
| SLS  | Linguistic Skills     |

---

*Source: Own work.*

The first survey measuring the *Skills* construct encompassed 31 items. Following data analysis and the removal of several items, a process of item reduction was conducted to optimize the factor structure by attaining communalities exceeding 0.5. The item reduction process for the *Skills* construct involved removing several items from the initial 37-item survey due to their failure to meet the accepted values. Specifically, the following items were removed: SM2, SM6, SM7, SE2, SE6, SCF2, SBA1, SBA2, SBA3, SLS3, and SLS5. This reduction resulted in a 20-item measurement of the construct. The relevant values are presented in Table 6.5.2.1.3.2.

**Table 6.5.2.1.3.2: Skills Construct – Communalities Table – Students with Academic Mobility**

| <b>Communalities</b> |         |            |
|----------------------|---------|------------|
|                      | Initial | Extraction |
| SM1                  | 1.000   | 0.755      |
| SM3                  | 1.000   | 0.826      |
| SM4                  | 1.000   | 0.806      |
| SM5                  | 1.000   | 0.761      |
| SE1                  | 1.000   | 0.777      |
| SE3                  | 1.000   | 0.707      |
| SE4                  | 1.000   | 0.715      |
| SE5                  | 1.000   | 0.684      |
| SCF1                 | 1.000   | 0.747      |
| SCF3                 | 1.000   | 0.769      |
| SCF4                 | 1.000   | 0.737      |
| SCF5                 | 1.000   | 0.726      |
| SBA4                 | 1.000   | 0.733      |
| SBA5                 | 1.000   | 0.771      |
| SBA6                 | 1.000   | 0.811      |
| SBA7                 | 1.000   | 0.792      |
| SLS1                 | 1.000   | 0.683      |
| SLS2                 | 1.000   | 0.634      |
| SLS4                 | 1.000   | 0.662      |
| SLS6                 | 1.000   | 0.678      |

Extraction Method:  
Principal Component  
Analysis.

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*Source: Own work. Data obtained from IBM SPSS.*

As illustrated in Table 6.5.2.1.3.3, a Varimax rotation analysis demonstrated that the extracted factors explained 73.87% of the total variance within the data. This factor structure derived from the analysis accounted for a considerable proportion of the overall variability present in the original data set, suggesting that it effectively captured a substantial amount of the underlying variability.

**Table 6.5.2.1.3.3: Skills Construct – Total Variance Explained – Students with Academic Mobility**

| Component | Total Variance Explained |               |              |                                     |               |              |
|-----------|--------------------------|---------------|--------------|-------------------------------------|---------------|--------------|
|           | Initial Eigenvalues      |               |              | Extraction Sums of Squared Loadings |               |              |
|           | Total                    | % of Variance | Cumulative % | Total                               | % of Variance | Cumulative % |
| 1         | 14.774                   | 73.868        | 73.868       | 14.774                              | 73.868        | 73.868       |
| 2         | 0.749                    | 3.744         | 77.612       |                                     |               |              |
| 3         | 0.679                    | 3.394         | 81.006       |                                     |               |              |
| 4         | 0.595                    | 2.975         | 83.981       |                                     |               |              |
| 5         | 0.418                    | 2.092         | 86.073       |                                     |               |              |
| 6         | 0.367                    | 1.837         | 87.910       |                                     |               |              |
| 7         | 0.332                    | 1.661         | 89.571       |                                     |               |              |
| 8         | 0.315                    | 1.573         | 91.144       |                                     |               |              |
| 9         | 0.271                    | 1.357         | 92.501       |                                     |               |              |
| 10        | 0.212                    | 1.062         | 93.563       |                                     |               |              |
| 11        | 0.203                    | 1.015         | 94.578       |                                     |               |              |
| 12        | 0.180                    | 0.901         | 95.479       |                                     |               |              |
| 13        | 0.155                    | 0.777         | 96.256       |                                     |               |              |
| 14        | 0.154                    | 0.770         | 97.026       |                                     |               |              |
| 15        | 0.138                    | 0.688         | 97.715       |                                     |               |              |
| 16        | 0.125                    | 0.624         | 98.339       |                                     |               |              |
| 17        | 0.114                    | 0.569         | 98.908       |                                     |               |              |
| 18        | 0.092                    | 0.462         | 99.369       |                                     |               |              |
| 19        | 0.074                    | 0.371         | 99.740       |                                     |               |              |
| 20        | 0.052                    | 0.260         | 100.000      |                                     |               |              |

Extraction Method: Principal Component Analysis.

*Source: Own work. Data obtained from IBM SPSS.*

The confirmatory factor analysis detailed in Table 6.5.2.1.3.4, which was conducted using SPSS software, uncovered a unidimensional structure for the construct under investigation. This single-factor solution suggests that the constituent items all measure a common, underlying dimension or factor. This indicates a high degree of interrelatedness among the items, as well as a high level of internal consistency and one-dimensionality within the construct. The single-factor structure provides evidence that the items effectively assess the same overarching construct as intended.

**Table 6.5.2.1.3.4: Skills Construct – Rotated Component Matrix – Students with Academic Mobility**

**Rotated Component  
Matrix<sup>a</sup>**

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a. Only one component was extracted. The solution cannot be rotated.

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*Source: Own work. Data obtained from IBM SPSS.*

## **6.6 Final Instruments Application**

All data gathered was done through a “snowball” effect due to the percentage of obsolete contact information from the head offices of the university. A letter was submitted to the Secretary of Internationalization requesting data and feedback on the university's international academic mobility programs. The letter included a request to distribute an online survey link to students who have participated in an international academic exchange, study abroad, or other global learning program between the years of 2019 and 2024. This survey aimed to gather valuable insights and perspectives from students who have had the opportunity to engage in intercultural academic experiences during this five-year period.

A new round of data collection took place for students that did not partake in international academic mobility programs. This new round of data collection yielded one hundred thirty-seven responses from students that either did not wish to participate in a study abroad program or did not get the opportunity.

### **6.6.1 Final Instrument Application for Mobility and Non-Mobility Students**

From the inception of this research, it was recognized that obtaining data from students who had studied abroad in years prior to 2023-2024 would be challenging. This challenge was due to the difficulty in accessing and reaching out to students who had participated in international

academic mobility programs in the past. As mentioned in the methodology section of the quantitative study, this non-probabilistic investigation utilized a snowball sampling approach to attempt to reach students with international academic mobility experiences from previous years. This approach involved leveraging existing connections and networks to identify and invite eligible participants to take part in the study.

Due to the challenges mentioned earlier, such as the difficulty in accessing and reaching out to students who had participated in international academic mobility programs in the past, and the difficulty in obtaining a larger number of participants, it was decided not to conduct a separate final instrument application. Instead, it was opted to remove the items that did not demonstrate strong factor loadings or did not clearly load onto the expected factors during the factor analysis of the collected data. This approach allowed to refine the survey instrument and improve its validity and reliability based on the actual responses from the study participants, rather than relying on a separate pilot test.

After the analysis of the student aimed instrument, there was an elimination of questions due to its lack of consistency. The final instrument was reduced to twenty-two demographic queries, eight self-assessment questions, and sixty-one inquiries assessing three core aspects of intercultural competence, a total of ninety-one. This same final instrument was used on the students that had the experience of an academic mobility in the six schools of the UANL that have engineering programs, as well as some students at FIME that did not have the opportunity to study abroad.

The final survey instrument was completed by a total of 167 students, with 37 participants (22% of the sample) having prior international academic mobility experience and 130 (78% of the sample) without such experience. The total number of students who had engaged in international academic mobility programs between 2019 and 2024 was 153, indicating that only 24% of the eligible student population participated in the current study. This highlights the challenges in reaching and engaging students with past international mobility experiences, which may limit the representativeness of the sample and the generalizability of the findings.

Table 6.6.1.3 details the number of participants contributed by each school. The first column lists the names of the schools hosting engineering programs at Universidad Autónoma de Nuevo León. The second column indicates the number of students with academic mobility from each school who participated in the study. The third column presents the proportion of participants from each school who had prior international academic mobility experiences. The fourth column specifies the total number of students from each school who engaged in international academic mobility programs between 2019 and 2024. The fifth column shows the percentage of study participants from each school's total population of students with prior international academic mobility experiences. The final column provides the number of non-mobility students who participated in the quantitative survey.

**Table 6.6.1.3: Students Sample participation from each School (2019 – 2024)**

| School  | Students with Mobility that Participated in Study | % of Participating Students with Mobility | Total number of Students that had Mobility | % of Students that had Mobility and Participated in the Study | Students without Mobility |
|---|---|---|--|---|---------------------------|
| School of Mechanical and Electrical Engineering | 34  | 92%                                       | 76   | 45%   | 130                       |
| School of Agriculture                           | 1   | 3%  | 24   | 4%  | -                         |
| School of Chemical Science                      | 2   | 5%  | 16   | 13%   | -                         |
| School of Forest Science                        | -   | -   | 10   | -   | -                         |
| School of Civil Engineering                     | -   | -   | 7  | -   | -                         |
| School of Earth Science                         | -   | -   | 2  | -   | -                         |
| <b>TOTAL</b>                                    | <b>37</b>   | <b>100%</b>                               | <b>135</b>                                 | <b>27%</b>  | <b>130</b>                |

*Source: Own work.*

As shown in Table 6.6.1.4, the participant sample consisted of 113 male students, accounting for approximately two-thirds of the total participants, and 54 female students, making up about one-third of the sample. Additionally, the table indicates that the most prevalent age range among the participants was 21 to 23 years old, suggesting that the majority of the sample were young adults pursuing their undergraduate studies.

**Table 6.6.1.4: Gender and Ages of Participating Students Sample**

|        | Mobility | Non-Mobility | Age Range | Frequency |
|--------|----------|--------------|-----------|-----------|
| Male   | 22       | 91           | 18 - 20   | 37        |
| Female | 15       | 39           | 21 - 23   | 107       |
|        |          |              | 24 - 26   | 17        |
|        |          |              | 27 - 29   | 2         |
|        |          |              | 30 +      | 4         |

*Source: Own work.*

The data indicates that the majority of students with prior international academic experiences were originally from the state of Nuevo Leon, accounting for the largest regional representation. The second highest proportion of participants with international mobility came from the state of Coahuila, comprising 11% of the sample. Furthermore, as shown in Table 6.6.1.5, 83% of the students without any international academic mobility were also originally from Nuevo Leon. This suggests that the substantial presence of participants from Nuevo Leon is likely attributable to the location of the Universidad Autónoma de Nuevo León.

**Table 6.6.1.5: State of Origin of Participating Students Sample**

| State            | Mobility  | %           | Non-Mobility | %           |
|------------------|-----------|-------------|--------------|-------------|
| CDMX             | 0         | 0%          | 1            | 1%          |
| Coahuila         | 4         | 11%         | 3            | 2%          |
| Durango          | 1         | 3%          | 1            | 1%          |
| Estado de México | 1         | 3%          | 3            | 2%          |
| Hidalgo          | 1         | 3%          | 1            | 1%          |
| Jalisco          | 2         | 5%          | 2            | 2%          |
| Michoacán        | 1         | 3%          | 0            | 0%          |
| Morelos          | 1         | 3%          | 0            | 0%          |
| Nuevo León       | 23        | 62%         | 108          | 83%         |
| San Luís Potosí  | 1         | 3%          | 3            | 2%          |
| Tabasco          | 1         | 3%          | 0            | 0%          |
| Tamaulipas       | 0         | 0%          | 6            | 5%          |
| Veracruz         | 1         | 3%          | 1            | 1%          |
| Zacatecas        | 0         | 0%          | 1            | 1%          |
| <b>TOTAL</b>     | <b>37</b> | <b>100%</b> | <b>130</b>   | <b>100%</b> |

*Source: Own work.*

As shown in Table 6.6.1.6, the majority of participants, regardless of their prior international experience, reported English as their second language. French was the second most commonly spoken language among the sample. Additionally, the data indicates that other languages such as German, Japanese, Korean, Portuguese, and Mandarin Chinese were also represented among the participants, although to a lesser degree compared to English and French.

**Table 6.6.1.6: Languages Spoken of Participating Students Sample**

| Language   | Mobility | %   | Non-Mobility | %   |
|------------|----------|-----|--------------|-----|
| Chinese    | 1        | 3%  | 1            | .8% |
| English    | 35       | 95% | 95           | 73% |
| French     | 14       | 38% | 6            | 5%  |
| German     | 3        | 8%  | 2            | 2%  |
| Japanese   | 1        | 3%  | 1            | .8% |
| Korean     | -        | -   | 1            | .8% |
| Portuguese | -        | -   | 1            | .8% |

*Source: Own work. \*Some students speak more than one language. Note: Percentages based on 37 mobility students and 130 non-mobility students.*

According to Table 6.6.1.7, a total of 30 students, representing a significant proportion of the study participants, reported the ability to speak two or more languages in addition to their native language. This multilingual capacity was not evenly distributed, as 18 of these students had prior international academic mobility experiences, while the remaining 11 students did not have such experiences.

The data suggests that students with international mobility were more likely to exhibit multilingualism, potentially due to increased exposure and opportunities to learn additional languages during their time abroad. Conversely, the 11 students without prior international mobility experiences who still reported multilingual abilities may have acquired these language skills through other means, such as formal language instruction, independent study, or personal connections.



The prevalence of multilingual participants, particularly among those with international academic mobility, highlights the valuable linguistic diversity present within the study sample. This multilingual capability can be seen as an asset, as it may enable these students to navigate and engage more effectively in intercultural settings, both during and after their academic journeys. The data underscores the importance of promoting international mobility opportunities to foster linguistic and cultural exchange among university students.

**Table 6.6.1.7: Participating Students Sample that Speak two or more languages (excluding native tongue)**

| Mobility | %   | Non-Mobility | %  |
|----------|-----|--------------|----|
| 18       | 49% | 11           | 9% |

*Source: Own work. Note: Percentages based on 37 mobility students and 130 non-mobility students.*

Table 6.6.1.8 reveals that of the 37 participants with prior international academic mobility experiences, 10 were from the private school system, while 27 were from public schools. Conversely, for the students without any international mobility, 115 were from private schools, and 15 were from public schools. This suggests that participants from private school backgrounds were less likely to have had international academic mobility experiences compared to their public-school counterparts.

This finding is surprising and contrary to the expected pattern, as one would typically anticipate participants from private school backgrounds to have greater access to international academic mobility opportunities. The root causes underlying this phenomenon warrant further investigation in a dedicated research study. Additional research is needed to explore the factors that may be influencing this unexpected distribution of international mobility experiences across public and private school backgrounds.

**Table 6.6.1.8: Education of Participating Students Sample Prior to Entering Undergraduate Program**

|         | Mobility | %   | Non-Mobility | %   |
|---------|----------|-----|--------------|-----|
| Public  | 27       | 73% | 15           | 12% |
| Private | 10       | 27% | 115          | 88% |

*Source: Own work. Note: Percentages based on 37 mobility students and 130 non-mobility students.*

Table 6.6.1.9 indicates that among the participants with prior international academic mobility experiences, 30% came from families earning more than 50,000 pesos, 22% from those earning 20,001 to 30,000 pesos, and 19% from families within the 10,001 to 20,000 pesos income range. In contrast, the non-mobility participant sample showed that 36% were from families earning 10,001 to 20,000 pesos, 23% from those earning 20,001 to 30,000 pesos, and 15% from families with an income of 10,000 pesos or less. These findings should be considered in the context of the exchange rate information from Banxico, consulted on November 21, 2024 (\$1U.S. Dollar = \$20.37 Pesos). The household income levels reported by the participants can be anticipated, as they are enrolled at a public university.

The results presented in this section provide valuable insights into the demographic characteristics and academic mobility experiences of the student participants at Universidad Autónoma de Nuevo León. Analyzing this data can help inform institutional policies and support mechanisms to enhance international academic mobility opportunities for a more diverse student population. This study contributes to the understanding of the factors that influence student mobility and the challenges faced by universities in promoting internationalization efforts.

**Table 6.6.1.9: Monthly Household Income of Participating Students Sample**

| Monthly Household Income | Mobility | %   | Non-Mobility | %   |
|--------------------------|----------|-----|--------------|-----|
| \$0 - \$10,000           | 2        | 5%  | 20           | 15% |
| \$10,001 - \$20,000      | 7        | 19% | 47           | 36% |
| \$20,001 - \$30,000      | 8        | 22% | 30           | 23% |
| \$30,001 - \$40,000      | 5        | 14% | 11           | 8%  |
| \$40,001 - \$50,000      | 4        | 11% | 10           | 8%  |
| >\$50,000                | 11       | 30% | 12           | 9%  |

*Source: Own work. Note: Percentages based on 37 mobility students and 130 non-mobility students.*

*\*Income displayed in Mexican Pesos.*

Table 6.6.1.10 provides further insights into the financial resources that enabled the 37 participants with prior international academic mobility experiences to access such opportunities, despite the relatively low household income data presented in Table 6.6.1.9. The findings reveal a diverse array of funding sources that these students leveraged to support their international mobility.

The majority of these students, 24 out of the 37 participants, were able to finance their international mobility through a combination of personal income or family contributions, and scholarship or grant support. This suggests that these students actively sought out and secured external funding sources to complement their own financial resources, which allowed them to overcome potential barriers posed by their household income levels.

Furthermore, the data shows that 11 of the participants were able to fund their international mobility solely through scholarship or grant support, without relying on personal income. This indicates that these students were successful in obtaining sufficient financial aid to cover the costs associated with their academic experiences abroad. Conversely, only 2 participants reported relying solely on their own personal income to finance their international mobility, highlighting the importance of scholarship and grant support in facilitating access to these opportunities.

The diversity of funding strategies employed by the participants with international mobility experiences underscores the crucial role that financial support mechanisms, such as scholarships and grants, play in enabling students from a range of socioeconomic backgrounds to participate in international academic programs. This finding has important implications for the university's efforts to promote and expand access to international mobility opportunities for a more diverse student population.

**Table 6.6.1.10: Funding of Participating Students Sample with Academic Mobility**

| Funding     | Frequency |
|-------------|-----------|
| Own Income  | 2         |
| Scholarship | 11        |
| Both        | 24        |

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*Source: Own work.*

## 6.7 Data Quality and Description

### 6.7.1 Mobility and Non-Mobility Student Data Quality and Description

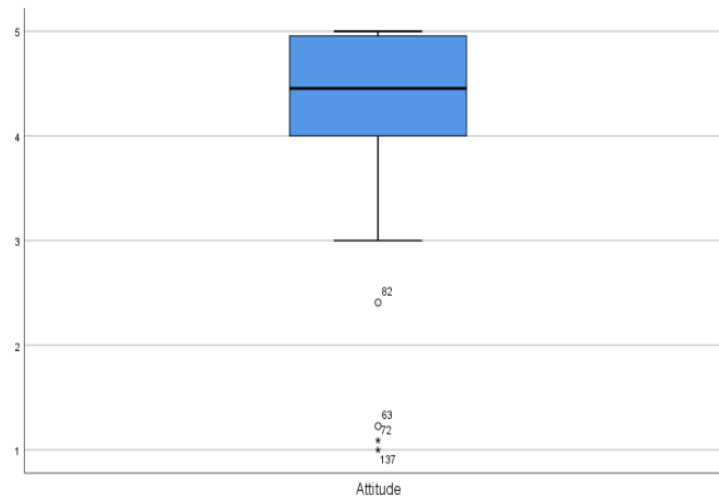
#### 6.7.1.1 Data Quality of the Final Instrument

Extreme data points that deviate substantially from the majority of the observations are considered outliers. These atypical data can be problematic as they may not be representative of the construct being measured or may not accurately reflect the ability under examination. The issue is that even a small number of outliers can sometimes skew the overall group findings (Denis & Chartier, 2010).

This study utilized boxplot analyses to identify atypical data points that were designated as outliers. Typically, values falling outside the whiskers of the boxplot are considered outliers. The boxplot was performed on each construct independently.

The analysis identified four survey participants 63, 72, 82, and 137 (Figure 6.7.1.1.1) as outliers for the *Attitude* construct. These participants reported scores that were markedly lower than the median value, indicating their responses were atypical and not representative of the typical participant. (Baker & Montalto, 2019; Corrêa et al., 2022).

**Figure 6.7.1.1.1: Boxplot of the Attitude Construct**

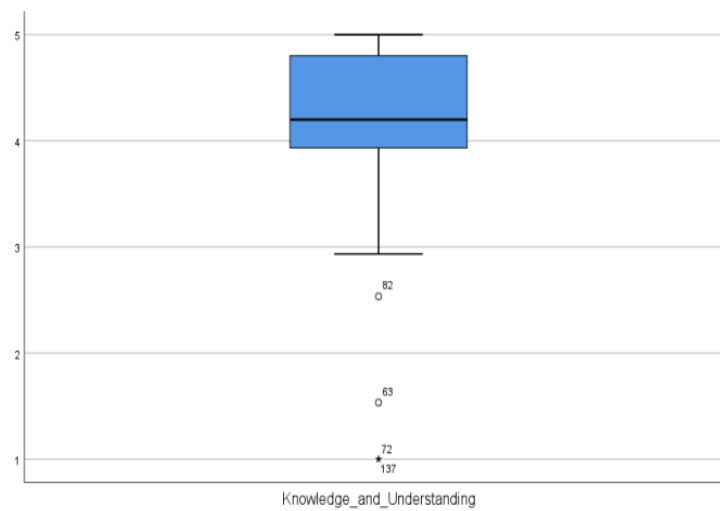


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Source: Own work. Data obtained from IBM SPSS.

Additionally, in the *Knowledge and Understanding* construct, four cases were identified where participants scored below the median value. The outlying cases for this construct were participants 63, 72, 82, and 137 (Figure 6.7.1.1.2).

**Figure 6.7.1.1.2: Boxplot of the Knowledge and Understanding Construct**

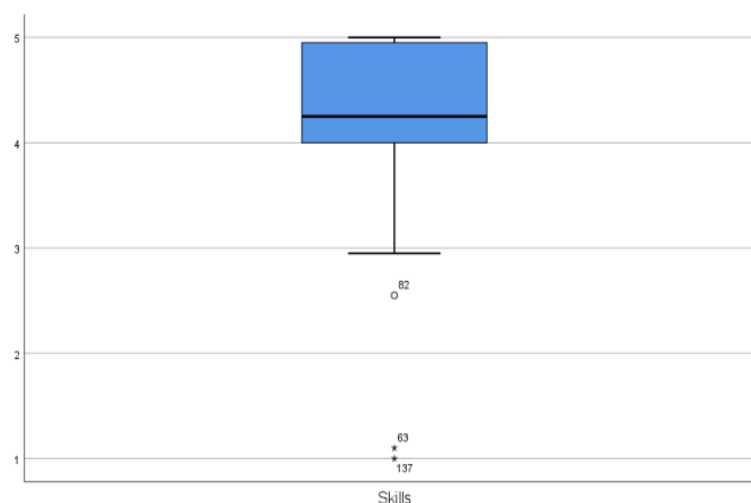


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Source: Own work. Data obtained from IBM SPSS.

Lastly, for the construct *Skills*, three outlying data points were identified. The cases found were participants 63, 72, 82, and 137 (Figure 6.7.1.1.3). These participants reported scores on the Skills construct that were substantially below the median value, indicating atypical responses not reflective of the average participant.

**Figure 6.7.1.1.3: Boxplot of the Skills Construct**




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Source: Own work. Data obtained from IBM SPSS.

The findings reveal that the same four participants were identified as outliers across the *Attitude* and *Knowledge and Understanding* constructs, while three of these cases were also outliers on the Skills construct. This consistency in outlier status across multiple aspects of intercultural competence suggests that these participants provided atypical responses that deviate substantially from the typical participant profile (Grubbs, 1969; Castellano, 2015; Thiese et al., 2015). These outlying data points warrant further investigation to understand the factors contributing to their divergent responses, as they may provide valuable insights into the range of perspectives and experiences among the study participants.

It is worth noting that participants one – thirty-seven had international experience, and participants thirty-eight to one hundred sixty-seven who did not engage in academic mobility.

#### 6.7.1.2 Data Description of Descriptive Statistics

Descriptive statistical analyses were conducted to thoroughly investigate the general patterns and tendencies observed across the various scale items and dimensions. This type of in-depth analysis helps to provide a comprehensive understanding of the overall trends and distributions present within the collected data. The descriptive statistics offer valuable insights into how the data deviates from the average values and the overall distribution characteristics within the measured parameters (Fisher & Marshall, 2009; Rendón-Macías et al., 2016).

The analysis was performed on the scale items and dimensions comprising the three constructs examined in this study. The items, constructs, and dimensions are described through the calculation of the arithmetic mean ( $\bar{x}$ ) and standard deviation ( $\sigma$ ). The results of the descriptive statistics are presented below.

The items in the *Attitude* construct were designed to measure participants' curiosity and openness, their readiness to suspend disbelief about other cultures and beliefs about their own culture, their willingness to seek out or engage in opportunities to interact with others, and their interest in discovering diverse perspectives on familiar and unfamiliar phenomena across cultures and cultural practices. Consequently, the indicators for the *Attitude* construct exhibited a mean of 4.38, with a standard deviation of  $\pm 0.822$ , suggesting a relatively high level of curiosity, openness, and willingness to engage with diverse perspectives and cultural practices among the study participants. The detailed descriptive statistics for the entire *Attitude* construct are presented in the Table General Statistics Description Summary (Table 6.7.1.17).

The *Attitude* construct in this study encompasses six distinct components: Valuing Cultural Diversity, which represents the presence of people with diverse group affiliations and cultural significance within a social system (Cox T. , 1993); Respecting Other Cultures, which involves understanding the culture surrounding a person or group (Johnson J. , 2000); Openness, referring to a willingness to explore new ideas (Foronda et al., 2016); Tolerance, the readiness of individuals to accept and respect differences among people from various cultures, races,



ethnicities, religions, and backgrounds (UNESCO, 1995); Curiosity to Learn About Other Cultures, denoting an individual's interest in exploring and comprehending different cultural traditions, customs, and practices (Mikhaylov, 2016; Sobkowiak, 2019); and Cultural Humility, a process that ensures one remains open to realities beyond their own and continuously seeks knowledge while being flexible to new perspectives within their own cultural frame of reference (Tervalon & Murray-García, 1998).

The first dimension of the construct is *Valuing Cultural Diversity*. As shown in Table 6.7.1.2, the data indicates that the perceived impact of cultural diversity on educational experiences and societal enrichment had the highest mean score of 4.51 with a standard deviation of  $\pm 0.743$ , making it the most strongly endorsed indicator within the construct. The second highest mean was for the indicator assessing respondents' beliefs that cultural diversity fosters social cohesion and promotes cross-cultural dialogue and learning, which averaged 4.46 with a standard deviation of  $\pm 0.774$ . The indicator with the lowest mean of 4.41 and a standard deviation of  $\pm 0.852$  was the belief that cultural diversity engenders innovation and problem-solving.

**Table 6.7.1.2: Statistic Description of the Valuing Cultural Diversity Dimension from the Attitude Construct**

| Item  | Code  | Min. | Max. | Mean        | Std. Dev.    |
|---|-------|------|------|-------------|--------------|
| Cultural diversity strengthens our educational experiences and enriches society as a whole.   | AVDC1 | 1    | 5    | <b>4.51</b> | <b>0.743</b> |
| Cultural diversity harbors social cohesion and promotes cross-cultural dialogue and learning. | AVDC2 | 1    | 5    | 4.46        | 0.774        |
| Cultural diversity foments innovation and problem-solving.                                    | AVDC3 | 1    | 5    | <b>4.41</b> | <b>0.852</b> |

*Source: Own work. Data obtained from IBM SPSS.*

The second dimension of the construct is *Respect other Cultures*. The data suggests that respect for other cultures is considered a highly significant component of being a global citizen, with a mean score of 4.51 and a standard deviation of  $\pm 0.820$ , making it the most strongly endorsed indicator within this dimension. The second highest mean was for the indicator evaluating participants' beliefs that they should respect the cultural practices and traditions of

individuals from diverse backgrounds, even when those differ from their own perspectives, which averaged 4.40 with a standard deviation of  $\pm 0.829$ . Third, participants reported that they go out of their way to appreciate and understand the cultural heritage of individuals from diverse national backgrounds, with an average mean of 4.36 and a standard deviation of  $\pm 0.816$ . The indicator with the lowest mean score of 4.18 and a standard deviation of  $\pm 0.845$  was the participants' ability to identify and avoid engaging in conversations that promote stereotypical views (Table 6.7.1.3).

**Table 6.7.1.3: Statistic Description of the Respecting other Cultures Dimension from the Attitude Construct**

| Item   | Code | Min. | Max. | Mean        | Std. Dev.    |
|--|------|------|------|-------------|--------------|
| I have respect for the practices and traditions of people with diverse cultural backgrounds, even when they oppose my own. | ARC1 | 1    | 5    | 4.40        | 0.829        |
| I go out of my way to appreciate and understand the cultural heritage of people from different countries.                  | ARC2 | 1    | 5    | 4.36        | 0.816        |
| It is my belief that the respect for other cultures is a fundamental aspect for being a global citizen.                    | ARC3 | 1    | 5    | <b>4.51</b> | <b>0.820</b> |
| I can recognize and avoid conversations that reinforce stereotypes.  | ARC5 | 1    | 5    | <b>4.18</b> | <b>0.845</b> |

*Source: Own work. Data obtained from IBM SPSS.*

Next, the Openness dimension of the construct is examined. According to the data presented in Table 6.7.1.4, participants demonstrated a willingness to understand differences in the behaviors, values, attitudes, and styles of members of the host community when visiting or residing in other countries. This indicator had the highest mean score of 4.37 and a standard deviation of  $\pm 0.810$ , suggesting it was the most strongly endorsed aspect within the Openness construct. The second highest mean was for the indicator that participants reported a strong willingness to engage with members of the host culture when traveling or residing in other countries, which averaged 4.32 with a standard deviation of  $\pm 0.865$ . The indicator with the lowest mean value of 4.28 and a standard deviation of  $\pm 0.883$  suggested that participants demonstrated a willingness to adapt their behaviors and assume diverse roles appropriate to the contextual demands of various situations.

**Table 6.7.1.4: Statistic Description of the Openness Dimension from the Attitude Construct**

| Item  | Code | Min. | Max. | Mean        | Std. Dev.    |
|---|------|------|------|-------------|--------------|
| I am willing to interact with host culture members when I live/visit other countries (I didn't avoid them or primarily seek out my compatriots.                 | AO1  | 1    | 5    | 4.32        | 0.865        |
| I am willing to take on various roles appropriate to different situations (e.g., in the family, as a volunteer, etc.).  | AO3  | 1    | 5    | <b>4.28</b> | <b>0.883</b> |
| I demonstrate a willingness to try to understand differences in the behaviors, values, attitudes, and styles of host members when I live/visit other countries. | AO4  | 1    | 5    | <b>4.37</b> | <b>0.810</b> |

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*Source: Own work. Data obtained from IBM SPSS.*

The fourth dimension of the construct is *Tolerance*. The analysis suggests that the participants a strong willingness to set aside their own preconceptions and recognize the complexities involved in cross-cultural communication and interaction with individuals from diverse national or cultural backgrounds, which was identified as the most prominent aspect within this construct, exhibiting a mean score of 4.34 and a standard deviation of  $\pm 0.834$ . The second highest mean was for the indicator that assessed participants' readiness to accommodate diverse modes of perception, expression, interaction, and conduct when residing in a foreign setting, which averaged 4.32 with a standard deviation of  $\pm 0.807$ . Third, participants demonstrated a willingness to address their emotional responses and frustrations when engaging with the host culture during visits to other countries, with an average mean of 4.28 and a standard deviation of  $\pm 0.813$ . The indicator reflecting the participants' lowest level of tolerance was for cultural differences that challenged their own beliefs and values, which exhibited the lowest mean score of 4.23 with a standard deviation of  $\pm 0.848$  (Table 6.7.1.5).

**Table 6.7.1.5: Statistic Description of the Tolerance Dimension from the Attitude Construct**

| Item  | Code | Min. | Max. | Mean        | Std. Dev.    |
|---|------|------|------|-------------|--------------|
| I demonstrate willingness to deal with my emotions and frustrations with the host culture when I live/visit other countries (in addition to the pleasures it offered).              | AT1  | 1    | 5    | 4.28        | 0.813        |
| I demonstrate a willingness to deal with different ways of perceiving, expressing, interacting, and behaving when I live/visit other countries.                                     | AT2  | 1    | 5    | 4.32        | 0.807        |
| I am willingness to suspend judgment and appreciate the complexities of communicating and interacting interculturally with people from different countries or cultural backgrounds. | AT4  | 1    | 5    | <b>4.34</b> | <b>0.834</b> |
| I have a tolerance to cultural differences, even if they challenge my own beliefs and values .  | AT5  | 1    | 5    | <b>4.23</b> | <b>0.848</b> |

Source: Own work. Data obtained from IBM SPSS.

The fifth dimension of the *Attitude* construct is *Curiousness to Learn about Other Cultures*. The analysis indicates that the most salient aspect was participants' belief that cultivating curiosity towards diverse cultures can be a positive contributor to enhancing their professional and personal success, as evidenced by the average score of  $X=4.47$  and a standard deviation of  $\sigma=\pm.767$ . The second highest mean was for the indicator assessing participants' enjoyment of engaging with individuals from diverse cultural backgrounds, which averaged  $X=4.47$  with a standard deviation of  $\sigma=\pm.802$ . Additionally, students reported a tendency to engage with individuals from diverse cultural backgrounds and learn from their hosts while residing in or visiting other countries, evidenced by an average score of  $X=4.39$  and a standard deviation of  $\sigma=\pm.813$ . The lowest indicator was showing interest in exploring new cultural aspects when residing in or interacting with individuals from diverse cultural backgrounds exhibited a mean score of 4.35 with a standard deviation of  $\pm.806$  (Table 6.7.1.6).

**Table 6.7.1.6: Statistic Description of the Curiousness to Learn of Other Cultures Dimension from the Attitude Construct**

| Item  | Code   | Min. | Max. | Mean        | Std. Dev.    |
|---|--------|------|------|-------------|--------------|
| When I live/visit other countries or interact with people from a different cultural background, I am willing to learn from my hosts, their language, and their culture.   | ACAOC1 | 1    | 5    | 4.39        | 0.813        |
| When I live/visit other countries or interact with people from a different cultural background, I demonstrate willingness to show interest in new cultural aspects (e.g., to understand the values, history, traditions, etc.). | ACAOC2 | 1    | 5    | <b>4.35</b> | <b>0.806</b> |
| Being curious of other cultures can be a source to positively improve my professional and personal success.   | ACAOC3 | 1    | 5    | <b>4.47</b> | <b>0.767</b> |
| I enjoy interacting with people from different cultures.  | ACAOC4 | 1    | 5    | 4.42        | 0.802        |

*Source: Own work. Data obtained from IBM SPSS.*

*Cultural Humility* represents the final dimension of the construct. The indicator that exhibited the highest mean was participants' recognition and evaluation of their own cultural norms, biases, and perspectives, with an average score of  $X=4.50$  and a standard deviation of  $\sigma=\pm.743$ . As the second highest, participants exhibited a strong understanding of the distinctions and parallels between their native language/culture and that of the host community, which had a mean score of  $X=4.44$  and a standard deviation of  $\sigma=\pm.781$ . Thirdly, participants demonstrated a willingness to thoughtfully consider the ethical implications of their decisions and actions when engaging in other cultural contexts, with an average mean score of  $X=4.37$  and a standard deviation of  $\sigma=\pm.771$ . The lowest mean score of the construct was for participants' awareness of their own cultural rules and biases, averaging a mean of  $X=4.33$  and a standard deviation of  $\sigma=\pm.743$  (Table 6.7.1.7).

**Table 6.7.1.7: Statistic Description of the Cultural Humility Dimension from the Attitude Construct**

| Item  | Code | Min. | Max. | Mean        | Std. Dev.    |
|---|------|------|------|-------------|--------------|
| I know of the importance of cultural humility (awareness of one's own culture).   | ACH1 | 1    | 5    | <b>4.50</b> | <b>0.743</b> |
| I am aware of my own cultural rules and biases.   | ACH2 | 1    | 5    | <b>4.33</b> | <b>0.832</b> |
| I demonstrate willingness to deal with the ethical implications of my choices when I live/visit other countries (in terms of decisions, consequences, results, etc.). | ACH5 | 1    | 5    | 4.37        | 0.771        |
| I realize the importance of differences and similarities across my own and the host language and culture.   | ACH6 | 1    | 5    | 4.44        | 0.781        |

*Source: Own work. Data obtained from IBM SPSS.*

The construct *Knowledge and Understanding* encompasses an individual's comprehension of how a specific country conceptualizes and prioritizes key societal concerns, such as appropriate conduct, individual liberties, group affiliation and its concomitant responsibilities, as well as obligations to the state.

The items in this construct were designed to assess participants' comprehension of the internal diversity and heterogeneity within cultural groups; the perceived cultural differences between an individual and another (Jackson S. , 1992; Cox T. , 1993; Kapur, 2020). Their awareness of their own and others' assumptions; recognition and comprehension of the implicit or explicit beliefs, attitudes, and expectations that individuals hold about themselves and others (Hofstede G. , 2001; Bennett M., 2013; Bennett J. M., 2015). The significance they place on possessing knowledge about the beliefs, values, and practices of diverse cultural groups; comprehensive awareness and comprehension of the cultural, religious, and social beliefs, values, and practices of oneself and others (UNESCO, 2013). The importance they ascribe to communicative awareness; an individual's aptitude to discern and comprehend the subtle complexities of verbal and nonverbal communication within diverse social and cultural settings (Lustig & Koester, 2010; UNESCO, 2013).

The indicators for the *Knowledge and Understanding* construct exhibited a mean of 4.19, with a standard deviation of  $\pm 0.849$ , indicating a relatively high level of awareness regarding the diversity and heterogeneity that can exist within and across cultural groups, encompassing differences in beliefs, values, customs, language, ethnicity, race, gender, sexual orientation, socioeconomic status, and other characteristics. Furthermore, the participants exhibited a high level of importance placed on knowledge of diverse cultural beliefs, values, and practices. The comprehensive descriptive statistics for the Knowledge and Understanding construct are summarized in the General Statistics Description Summary table (Table 6.7.1.17).

The first dimension of the construct is *Internal Diversity and Heterogeneity of Cultural groups*. As shown in table 6.7.1.8, the data suggest that participants consider awareness of the internal diversity and heterogeneity within cultural groups to be highly crucial for effective cross-cultural communication. This indicator exhibited the highest score within the dimension, with a mean of  $\bar{x}=4.29$  and a standard deviation of  $\sigma=\pm 0.929$ . The second highest scoring item was that the participants demonstrated an awareness that individuals belonging to the same cultural group may hold divergent beliefs, values, and practices, with a mean of  $\bar{x}=4.23$  and a standard deviation of  $\sigma=\pm 0.862$ . The indicator with a standard deviation ( $\sigma=\pm 0.869$ ) greater than the previous item, but the same mean ( $\bar{x}=4.23$ ), was that acknowledging the existence of differences within cultural groups can promote understanding, inclusivity, and the avoidance of stereotypes. The indicator that reflected the lowest level of participant ability was the one assessing their difficulty in discussing and contrasting their own behavioral patterns with those of the host culture, which exhibited a mean score of  $\bar{x}=4.13$  and a standard deviation of  $\sigma=\pm 0.823$  (Table 6.7.1.8).

**Table 6.7.1.8: Statistic Description of the Internal Diversity and Heterogeneity of Cultural Groups Dimension of the Knowledge and Understanding Construct**

| Item  | Code   | Min. | Max. | Mean        | Std. Dev.    |
|---|--------|------|------|-------------|--------------|
| I could discuss and contrast various behavioral patterns in my own culture with those in the host country when I lived/visited other countries.                                 | KUIDG1 | 1    | 5    | <b>4.13</b> | <b>0.823</b> |
| I believe that being aware of the internal diversity of a cultural group is very important to execute an effective cross-cultural communication.                                | KUIDG3 | 1    | 5    | <b>4.29</b> | <b>0.829</b> |
| Acknowledging that there is a difference within groups will help promote understanding and inclusivity and avoid stereotypes in the way.  | KUIDG4 | 1    | 5    | 4.23        | 0.869        |
| When I have an intercultural interaction, I approach it with the understanding that individuals from the same cultural groups may have different beliefs, values and practices. | KUIDG5 | 1    | 5    | 4.23        | 0.862        |

*Source: Own work. Data obtained from IBM SPSS.*

The second dimension is *Awareness of One's and Other's Assumptions*. The indicator with the highest mean score ( $\bar{x}=4.25$ ), exhibiting a standard deviation of  $\sigma=\pm.869$ , was that the participants demonstrated an awareness of how their personal experiences had shaped their own preconceptions and biases regarding cultural differences. In second place, the participants exhibited a strong understanding that their personal values and beliefs influenced how they approached and resolved ethical dilemmas, as evidenced by a mean score of  $\bar{x}=4.17$  and a standard deviation of  $\sigma=\pm.896$ . The third highest scoring item within the construct was that participants demonstrated the ability to describe common interactional behaviors among the people of the host country in social and professional settings, with an average mean of  $\bar{x}=4.15$  and a standard deviation of  $\sigma=\pm.869$ . The lowest indicator, with an average mean of  $\bar{x}=4.13$  and a standard deviation of  $\sigma=\pm.922$ , reflected participants' awareness of the dangers in generalizing individual behaviors as representative of the entire cultural group. Participants had a high level of understanding regarding how their personal experiences and beliefs influenced their perceptions of cultural differences. They demonstrated an awareness of their own biases and the importance of avoiding generalizations about entire cultural groups based on individual behaviors. Participants also exhibited a strong ability to describe common interactional norms in social and professional settings of the host country (Table 6.7.1.9).



**Table 6.7.1.9: Statistic Description of the Awareness of One's and Other's Assumptions Dimension of the Knowledge and Understanding Construct**

| Item   | Code   | Min. | Max. | Mean        | Std. Dev.    |
|--|--------|------|------|-------------|--------------|
| When I lived/visited other countries, I realized the importance of dangers of generalizing individual behaviors as representative of the whole culture.                      | KUAOA3 | 1    | 5    | <b>4.13</b> | <b>0.922</b> |
| When I lived/visited other countries, I realized the importance of my personal values that affected my approach to ethical dilemmas and their resolution.                    | KUAOA4 | 1    | 5    | 4.17        | 0.896        |
| I could describe common interactional behaviors among the people of the host country in social and professional areas (e.g., family roles, teamwork, problem solving, etc.). | KUAOA5 | 1    | 5    | 4.15        | 0.869        |
| I am aware of how my own experiences have shaped my personal rules or biases about cultural differences.   | KUAOA6 | 1    | 5    | <b>4.25</b> | <b>0.868</b> |

Source: Own work. Data obtained from IBM SPSS.

The third dimension of the construct is *Knowledge of Beliefs, Values, and Practices*. Within this aspect, the indicator with the highest mean score ( $x=4.28$ ) and a standard deviation of  $\sigma=\pm.787$  demonstrated the participants' proactive engagement in learning about the beliefs, customs, and traditions of diverse cultural groups. The participants exhibited a strong awareness of how they applied their cultural knowledge in cross-cultural interactions, with an average mean score of  $x=4.22$  and a standard deviation of  $\sigma=\pm.792$ . The third highest indicator reflected the participants' tendency to verify the accuracy of their cultural knowledge as they interacted with individuals from diverse cultural backgrounds, with an average mean score of  $x=4.21$  and a standard deviation of  $\sigma=\pm.790$ . The indicator that revealed the participants' ability to differentiate the complex beliefs, values, communication styles, customs, politics, and history of other cultural groups had the lowest scoring mean of  $x=4.18$  and a standard deviation of  $\sigma=\pm.831$ . This suggests that while participants were highly engaged in learning about diverse cultures, they still faced challenges in fully comprehending the depth and nuance of other cultural systems (Table 6.7.1.10).

**Table 6.7.1.10: Statistic Description of the Knowledge of Beliefs, Values and Practices Dimension of the Knowledge and Understanding Construct**

| Item  | Code   | Min. | Max. | Mean        | Std. Dev.    |
|---|--------|------|------|-------------|--------------|
| I differentiate the complex beliefs, values, communication styles, customs, politics, history and economics of other cultural groups. | KUBVP3 | 1    | 5    | <b>4.18</b> | <b>0.831</b> |
| I am conscious of the cultural knowledge I apply to cross-cultural interactions.  | KUBVP4 | 1    | 5    | 4.22        | 0.792        |
| I check the accuracy of my cultural knowledge as I interact with people from different cultures.                                      | KUBVP5 | 1    | 5    | 4.21        | 0.790        |
| I actively seek out opportunities to learn about the beliefs and traditions of different cultural groups.                             | KUBVP6 | 1    | 5    | <b>4.28</b> | <b>0.797</b> |

*Source: Own work. Data obtained from IBM SPSS.*

The final dimension of the construct is *Communicative Awareness*. Participants demonstrated a high level of proficiency in tailoring their use of pauses and silence to appropriately fit diverse multicultural settings, as evidenced by the elevated mean score of 4.19 and standard deviation of  $\pm 0.821$  for this indicator. The second highest indicator reflected the participants' capacity to modify their nonverbal behavior to suitably accommodate varying multicultural contexts, exhibiting an average mean score of  $x=4.16$  and a standard deviation of  $\sigma=\pm 0.843$ . The lowest indicator revealed the participants' ability to adjust their verbal behavior, such as accent and tone, when engaged in multicultural interactions, which exhibited an average mean score of  $x=4.11$  and a standard deviation of  $\sigma=\pm 0.928$  (Table 6.7.1.11).

**Table 6.7.1.11: Statistic Description of the Communicative Awareness Dimension of the Knowledge and Understanding Construct**

| Item  | Code  | Min. | Max. | Mean        | Std. Dev.    |
|---|-------|------|------|-------------|--------------|
| I change my verbal behavior (e.g., accent, tone) when a multi-cultural interaction requires it. | KUCA4 | 1    | 5    | <b>4.11</b> | <b>0.928</b> |
| I use pause and silence differently to suit different multi-cultural situations.                | KUCA5 | 1    | 5    | <b>4.19</b> | <b>0.821</b> |
| I change my nonverbal behavior when a multi-cultural situation requires it.                     | KUCA8 | 1    | 5    | 4.16        | 0.843        |

*Source: Own work. Data obtained from IBM SPSS.*

The third and final construct is *Skills*, which encompasses a collection of abilities enabling effective intercultural engagement. The dimensions for this construct are multiperspectivity, empathy, cognitive flexibility, behavior adaptation, and linguistic skills.

The items in this construct sought to evaluate the participants' abilities in multiperspectivity, which refers to an individual's diverse viewpoints on how the world functions and how these viewpoints can vary from others, continuing to be shaped and influenced by the perspective from which they are analyzed (Hanvey, 1975); empathy, the capacity to adopt another person's position or exhibit an openness to differing customs and values (Van der Zee & van Oudenhoven, 2000); cognitive flexibility, the capacity to alter and adjust one's thought processes based on the given situation or context (Barret et al., 2014); behavior adaptation, the ability of an individual to modify their conduct to align with the expectations of other cultures (Pusch, 2009); and linguistic skills, which denote the extent to which individuals can communicate fluently and accurately in the language required for cross-cultural interactions (Shannon & Begley, 2008).

The first dimension of the construct is *Multiperspectivity*. The data indicates that the highest scoring indicator for this dimension was the participants' demonstrated ability to accept and comprehend the existence of diverse perspectives and worldviews, which is a crucial skill for effective problem-solving and decision-making in cross-cultural settings. This was evidenced by an average mean score of  $\bar{x}=4.37$  and a standard deviation of  $\sigma=\pm.764$ . The second highest indicator revealed the participants' propensity to actively strive to understand and appreciate the viewpoints of individuals from diverse cultural backgrounds, as reflected in a mean score of  $\bar{x}=4.28$  and a standard deviation of  $\sigma=\pm.812$ . Additionally, the third highest indicator showcased the participants' capacity to adopt multiple perspectives when engaged in intercultural interactions, with a mean score of  $\bar{x}=4.26$  and a standard deviation of  $\sigma=\pm.776$ . However, the lowest indicator within this dimension was the participants' ability to contrast their own worldview with that of the host culture, which exhibited a mean score of  $\bar{x}=4.19$  and a standard deviation of  $\sigma=\pm.799$ . This suggests that while the participants displayed a strong grasp of the importance of understanding diverse perspectives and actively seeking to

comprehend different viewpoints, they had slightly lower scores in their capacity to explicitly compare their own worldview with that of the host culture, indicating an area for potential improvement (Table 6.7.1.12).

**Table 6.7.1.12: Statistic Description of the Multiperspectivity Dimension of the Skills Construct**

| Item   | Code | Min. | Max. | Mean        | Std. Dev.    |
|--|------|------|------|-------------|--------------|
| I was able to contrast the host culture's view of the world from my own.   | SM1  | 1    | 5    | <b>4.19</b> | <b>0.799</b> |
| I believe that being able to accept and understand that there are different perspectives and views of the world, is a key aspect for problem-solving and decision-making, when there are individuals from different backgrounds involved in the situation. | SM3  | 1    | 5    | <b>4.37</b> | <b>0.764</b> |
| I am able to adopt multiple perspectives when interacting in an intercultural situation.   | SM4  | 1    | 5    | 4.26        | 0.776        |
| I actively seek to understand and appreciate the perspective of individuals with a different cultural background.  | SM5  | 1    | 5    | 4.28        | 0.812        |

*Source: Own work. Data obtained from IBM SPSS.*

The second dimension of the construct is *Empathy*. Within this dimension, the highest indicator reflected the participants' empathetic and receptive approach towards comprehending the feelings, viewpoints, and experiences of individuals from diverse cultural backgrounds, as evidenced by an average mean score of  $x=4.38$  and a standard deviation of  $\sigma=\pm.774$ . Additionally, the participants demonstrated a tendency to act in a supportive manner that acknowledges the feelings and perspectives of individuals from diverse cultural backgrounds, as indicated by an average mean score of  $x=4.34$  ( $\sigma=\pm.757$ ). The participants also exhibited a notable ability to adopt the perspective of individuals from other cultural backgrounds, enabling them to better comprehend those individuals' experiences, as evidenced by an average mean score of  $x=4.28$  ( $\sigma=\pm.862$ ). However, the lowest indicator in this dimension was the participants' level of engagement in seeking out opportunities to interact with individuals from other cultural groups to further develop their empathy, with an average mean of  $x=4.20$  ( $\sigma=\pm.847$ ). The previous data, shown in Table 6.7.1.13, indicates there may be room for the participants to be even more proactive in immersing themselves in diverse cultural experiences to continuously enhance their empathic abilities.

**Table 6.7.1.13: Statistic Description of the Empathy Dimension of the Skills Construct**

| Item  | Code | Min. | Max. | Mean        | Std. Dev.    |
|---|------|------|------|-------------|--------------|
| I act in a supportive way that recognizes the feelings of other cultural groups.  | SE1  | 1    | 5    | 4.34        | 0.757        |
| I actively put myself in the position of individuals from other cultural backgrounds to have a better understanding of the experiences. | SE3  | 1    | 5    | 4.28        | 0.862        |
| I am empathetic towards the feelings and perspectives, with a strive to understand, of individuals from other cultural backgrounds.     | SE4  | 1    | 5    | <b>4.38</b> | <b>0.774</b> |
| I constantly look for opportunities to engage with individuals from other cultural backgrounds to develop empathy.                      | SE5  | 1    | 5    | <b>4.20</b> | <b>0.847</b> |

Source: Own work. Data obtained from IBM SPSS.

The third dimension of the *Skills* factor is *Cognitive Flexibility*. The highest indicator revealed the participants' belief in the existence of diverse valid approaches to thinking and problem-solving, and their openness to exploring these alternatives. This item exhibited an average score of  $\bar{x}=4.34$  and a standard deviation of  $\sigma=\pm.781$ . The second highest indicator was the participants' demonstration of flexibility when engaging with individuals from the host culture, with a mean score of  $\bar{x}=4.23$  and a standard deviation of  $\sigma=\pm.797$ . Furthermore, the students demonstrated the ability to adapt their cultural knowledge as they engaged with individuals from unfamiliar cultural backgrounds, exhibiting an average score of  $\bar{x}=4.22$  and a standard deviation of  $\sigma=\pm.795$ . The last indicator examined revealed a lower score for the participants' confidence in socializing with locals in an unfamiliar cultural context. This item exhibited the same mean score as the previous indicator, but a higher standard deviation of  $\sigma=\pm.839$ , suggesting more variability in the participants' levels of confidence in this area (Table 6.7.1.14).

**Table 6.7.1.14: Statistic Description of the Cognitive Flexibility Dimension of the Skills Construct**

| Item  | Code | Min. | Max. | Mean        | Std. Dev.    |
|---|------|------|------|-------------|--------------|
| I believe that there are multiple valid ways of thinking and problem-solving, and I am willing to explore them. | SCF1 | 1    | 5    | <b>4.34</b> | <b>0.781</b> |
| I adjust my cultural knowledge as I interact with people from a culture that is unfamiliar to me                | SCF3 | 1    | 5    | <b>4.22</b> | <b>0.795</b> |
| I am confident that I can socialize with locals in a culture that is unfamiliar to me.                          | SCF4 | 1    | 5    | <b>4.22</b> | <b>0.839</b> |
| I demonstrated flexibility when interacting with persons from the host culture.                                 | SCF5 | 1    | 5    | 4.23        | 0.797        |

*Source: Own work. Data obtained from IBM SPSS.*

The fourth dimension, *Behavior Adaptation*, revealed participants' strong commitment to enhancing their understanding and respect for the cultural norms and expectations of individuals from diverse backgrounds. As shown on Table 6.7.1.15, this was evidenced by the highest indicator's mean score of  $\bar{x}=4.35$  ( $\sigma=\pm.736$ ). Participants also demonstrated a high degree of adaptability in modifying their behavior to communicate effectively in the foreign country, as needed for different situations, with a mean score of  $\bar{x}=4.31$  ( $\sigma=\pm.760$ ). Furthermore, participants exhibited confidence in their capacity to manage the stresses associated with adjusting to an unfamiliar cultural context, as indicated by a mean score of  $\bar{x}=4.28$  ( $\sigma=\pm.760$ ). However, the lowest score was observed for participants' demonstrated ability to engage appropriately in diverse social situations within the host culture, with a mean of  $\bar{x}=4.23$  ( $\sigma=\pm.821$ ).

**Table 6.7.1.15: Statistic Description of the Behavior Adaptation Dimension of the Skills Construct**

| Item   | Code | Min. | Max. | Mean        | Std. Dev.    |
|--|------|------|------|-------------|--------------|
| I demonstrated a capacity to interact appropriately in a variety of different social situations in the host culture.   | SBA4 | 1    | 5    | <b>4.23</b> | <b>0.821</b> |
| I am sure I can deal with the stresses of adjusting to a culture that is new to me.  | SBA5 | 1    | 5    | 4.28        | 0.760        |
| I am willing to adapt my behavior to communicate appropriately in the foreign country (e.g., in non-verbal and other behavioral areas) as needed for different situations. | SBA6 | 1    | 5    | 4.31        | 0.760        |
| I constantly seek to better respect and understand the behavioral expectations of individuals from different cultural backgrounds.   | SBA7 | 1    | 5    | <b>4.35</b> | <b>0.736</b> |

*Source: Own work. Data obtained from IBM SPSS.*

The final dimension of the construct is *Linguistic Skills*. The data indicates the participants' strong inclination to learn additional languages in order to enhance their intercultural communication skills, as evidenced by the highest mean score of  $x=4.41$  ( $\sigma=\pm.800$ ) for this indicator. Students strongly believe that possessing robust linguistic abilities serves as a vital tool for bridging cultural divides and promoting international collaboration, as evidenced by the average mean score of  $x=4.37$  and a standard deviation of  $\sigma=\pm.802$ . The third highest indicator within this dimension showcases the participants' consistent pursuit of opportunities to practice and augment their linguistic skills through interactions with individuals from diverse language backgrounds, as evidenced by an average mean score of  $x=4.18$  and a standard deviation of  $\sigma=\pm.816$ . The lowest indicator reflects the participants' belief that they have developed robust linguistic skills enabling effective communication across diverse languages, which enhances their ability to forge connections with individuals from varying cultural backgrounds. This item exhibited an average mean score of  $x=4.14$  and a standard deviation of  $\sigma=\pm.887$  (Table 6.7.1.16).

**Table 6.7.1.16: Statistic Description of the Linguistic Skills Dimension of the Skills Construct**

| Item   | Code | Min. | Max. | Mean        | Std. Dev.    |
|--|------|------|------|-------------|--------------|
| I have developed solid linguistic skills that allow me to have an effective communication in different languages, which enhances my ability to have a connection with individuals from different cultural backgrounds. | SLS1 | 1    | 5    | <b>4.14</b> | <b>0.887</b> |
| I constantly seek opportunities to practice and increase my linguistic skills through interactions with individuals who speak a different language.  | SLS2 | 1    | 5    | 4.18        | 0.816        |
| I am willing to learn additional languages to enhance my intercultural communication abilities.  | SLS4 | 1    | 5    | <b>4.41</b> | <b>0.800</b> |
| I am a firm believer that having solid linguistic skills is an important tool for bridging cultural divides and fostering international cooperation.   | SLS6 | 1    | 5    | 4.37        | 0.802        |

*Source: Own work. Data obtained from IBM SPSS.*

Table 6.7.1.17 displays a summary of the constructs that make up the independent construct Intercultural Competence. The *Attitude* construct had the highest average mean of  $\bar{x}=4.37$  and a standard deviation of  $\sigma=\pm.812$ .

Table 6.7.1.17 provides a comprehensive summary of the constructs that make up the independent construct, Intercultural Competence. The *Attitude* construct exhibited the highest average mean score of  $\bar{x}=4.37$ , with a standard deviation of  $\sigma=\pm.812$ . This suggests that the participants displayed a strong and consistent positive attitude towards intercultural interactions and experiences.

Within the *Attitude* construct, the dimension that scored the highest average mean ( $\bar{x}=4.46$ ) was Valuing Cultural Diversity, with a standard deviation of  $\sigma=\pm.790$ . This indicates that the participants highly valued the differences and richness that diverse cultural perspectives bring, and actively sought to understand and appreciate them.

The next highest-scoring dimensions were Curiousness To Learn From Other Cultures ( $\bar{x}=4.41$ ;  $\sigma=\pm.797$ ), Cultural Humility ( $\bar{x}=4.41$ ;  $\sigma=\pm.782$ ), Respect of Cultures ( $\bar{x}=4.36$ ;  $\sigma=\pm.828$ ), and Openness ( $\bar{x}=4.32$ ;  $\sigma=\pm.853$ ). These findings demonstrate that the participants had a genuine interest in learning about other cultures, were humble and willing to learn from those with



different backgrounds, respected the diversity of cultural norms and practices, and maintained an open and receptive mindset towards intercultural interactions.

The lowest-scoring dimension within the *Attitude* construct was Toleration ( $x=4.29$ ;  $\sigma=\pm.826$ ). While still exhibiting a relatively high mean score, this suggests that the participants may have had slightly less consistent levels of tolerance towards cultural differences and could potentially benefit from further developing this aspect of their intercultural competence.

**Table 6.7.1.17: General Statistics Description Summary**

| Construct / Dimension                                   | N          | Min.        | Max.        | Mean        | Std. Deviation |
|---|------------|-------------|-------------|-------------|----------------|
| <b>Attitude</b>   | <b>167</b> | <b>4.18</b> | <b>4.51</b> | <b>4.37</b> | <b>0.812</b>   |
| Value Cultural Diversity                                | 167        | 4.41        | 4.51        | 4.46        | 0.790          |
| Respect of Cultures                                     | 167        | 4.18        | 4.51        | 4.36        | 0.828          |
| Openness  | 167        | 4.28        | 4.37        | 4.32        | 0.853          |
| Toleration  | 167        | 4.23        | 4.34        | 4.29        | 0.826          |
| Curiousness To Learn From Other Cultures                | 167        | 4.35        | 4.47        | 4.41        | 0.797          |
| Cultural Humility                                       | 167        | 4.33        | 4.50        | 4.41        | 0.782          |
| <b>Knowledge and Understanding</b>                      | <b>167</b> | <b>4.11</b> | <b>4.29</b> | <b>4.19</b> | <b>0.849</b>   |
| Internal Diversity and Heterogeneity of Cultural Groups | 167        | 4.13        | 4.29        | 4.22        | 0.846          |
| Awareness of One's and Other's Assumptions              | 167        | 4.13        | 4.25        | 4.17        | 0.889          |
| Knowledge of Beliefs, Values and Practices              | 167        | 4.18        | 4.28        | 4.22        | 0.803          |
| Communicative Awareness                                 | 167        | 4.11        | 4.19        | 4.15        | 0.864          |
| <b>Skills</b>   | <b>167</b> | <b>4.14</b> | <b>4.41</b> | <b>4.28</b> | <b>0.799</b>   |
| Multiperspectivity                                      | 167        | 4.19        | 4.37        | 4.27        | 0.788          |
| Empathy   | 167        | 4.20        | 4.38        | 4.30        | 0.810          |
| Cognitive Flexibility                                   | 167        | 4.22        | 4.34        | 4.25        | 0.803          |
| Behavior Adaptation                                     | 167        | 4.23        | 4.35        | 4.29        | 0.769          |
| Linguistic Skills                                       | 167        | 4.14        | 4.41        | 4.27        | 0.826          |

Source: Own work. Data obtained from IBM SPSS.

As shown in Table 6.7.1.17, the *Skills* construct, which is the second highest component of the independent variable, exhibits an average mean score of  $x=4.28$  and a standard deviation of  $\sigma=\pm.799$ . This indicates that the participants demonstrated a strong overall level of skills related to intercultural competence.

Within this *Skills* construct, the dimension with the highest average mean of  $x=4.30$  and a standard deviation of  $\sigma=\pm.810$  is Empathy. This suggests that the participants had a well-developed capacity to understand and share the feelings of individuals from diverse cultural

backgrounds. This empathetic orientation likely enabled them to navigate and adapt to unfamiliar cultural contexts more effectively.

The *Skills* construct's other dimensions are ranked as follows in descending order: Behavior Adaptation, Multiperspectivity, Linguistic Skills, and Cognitive Flexibility. The high scores for Behavior Adaptation ( $\bar{x}=4.29$ ;  $\sigma=\pm.769$ ) and Multiperspectivity ( $\bar{x}=4.27$ ;  $\sigma=\pm.788$ ) reveal the participants' ability to modify their conduct to communicate effectively across cultures, as well as their capacity to consider multiple cultural perspectives. Meanwhile, the participants' strong Linguistic Skills ( $\bar{x}=4.27$ ;  $\sigma=\pm.826$ ) enabled them to bridge cultural divides through language proficiency. The lower score for Cognitive Flexibility ( $\bar{x}=4.25$ ;  $\sigma=\pm.803$ ), though still relatively high, this finding suggests an area of potential growth for enhancing the participants' intercultural competence development.

The third-ranked construct is *Knowledge and Understanding*, exhibiting an average mean of  $\bar{x}=4.19$  and a standard deviation of  $\sigma=\pm.849$  (Table 6.7.1.17). This suggests that the participants demonstrated a strong overall level of knowledge and understanding related to intercultural competence.

Within this construct, the dimension with the highest average mean ( $\bar{x}=4.22$ ) and a standard deviation of  $\sigma=\pm.803$  is Knowledge of Beliefs, Values, and Practices. This indicates that the participants had a well-developed understanding of the diverse beliefs, values, and cultural practices of individuals from different backgrounds. They were able to comprehend and appreciate the nuances and complexities inherent in various cultural worldviews.

Sharing the same mean but with a standard deviation of  $\sigma=\pm.846$  is the Internal Diversity and Heterogeneity of Cultural Groups dimension. This reflects the participants' recognition that cultural groups are not monolithic, but rather composed of individuals with diverse perspectives, experiences, and identities within a shared cultural context. This understanding likely enabled them to avoid over generalizations and engage more effectively with the multifaceted nature of intercultural interactions.

This is followed by Awareness of One's and Others' Assumptions ( $\bar{x}=4.17$ ;  $\sigma=\pm.889$ ), which suggests the participants possessed the ability to critically examine their own biases and preconceptions, as well as recognize the assumptions held by individuals from different cultural backgrounds. This self-awareness and openness to different perspectives is a key aspect of developing intercultural competence.

The lowest score is for Communicative Awareness, with an average mean of  $\bar{x}=4.15$  and a standard deviation of  $\sigma=\pm.864$ . While still relatively high, this finding indicates that the participants may have had slightly less consistent understanding of the nuances of effective intercultural communication, such as nonverbal cues, conversational norms, and linguistic differences. This could represent an area for potential growth and further development.

## **6.8 Hypothesis Test**

The objective of this research was to analyze how the attitude, knowledge, understanding, and skills gained through academic mobility at a foreign university impact the global labor market readiness of engineering students from the Universidad Autónoma de Nuevo León. The purpose is to provide decision-makers with information needed to shape academic programs according to the cognitive skills required by modern companies, and to promote the significance of international experience for students.

The general hypothesis of the investigation states that:

Attitude, knowledge and understanding, and skills acquired through academic mobility at a foreign university<sup>h1</sup> impact the global labor market employability of students in engineering programs at the Universidad Autónoma de Nuevo León<sup>h2</sup>.

h1- Intercultural Competence: The study sought to investigate whether students who participated in international academic mobility had developed more extensive and deeper intercultural competence, including skills such as enhanced cultural awareness, adaptability, and communication abilities, compared to those who did not have such an experience. As

indicated in Table 6.7.2.1, the data revealed a notable difference in the average scores on various indicators of intercultural competence between the two groups of students, suggesting that international academic mobility plays a significant role in fostering these critical global skills.

According to Table 6.7.2.1, the attitude component of the independent variable, intercultural competence, exhibits a 0.38 difference between students who participated in academic mobility and those who did not. This suggests that international academic mobility plays a significant role in fostering critical global skills such as enhanced cultural awareness, adaptability, and communication abilities.

Additionally, the data in the referenced table demonstrates a notable 0.44 discrepancy in the Knowledge & Understanding aspect between the participants who engaged in international academic mobility and those who did not. This suggests that such mobility experiences significantly contribute to the development of students' knowledge and understanding in the context of the study.

Furthermore, the data in the referenced table demonstrates a 0.45 divergence in the Skills construct between the students who participated in international academic mobility and those who did not. This indicates that such mobility experiences significantly contribute to the development of students' competencies in this domain, such as multiperspectivity, empathy, cognitive flexibility, behavior adaptation and linguistic skills.

**Table 6.7.2.1: Attitude, Knowledge and Understanding Group Description and Hypothesis T-Test**

| Group Statistics                   |     |     |      |                |                 |
|------------------------------------|-----|-----|------|----------------|-----------------|
| Did you have an Academic Mobility? |     | N   | Mean | Std. Deviation | Std. Error Mean |
| Attitude                           | No  | 130 | 4.29 | 0.672          | 0.059           |
|                                    | Yes | 37  | 4.67 | 0.684          | 0.112           |
| Knowledge & Understanding          | No  | 130 | 4.10 | 0.678          | 0.059           |
|                                    | Yes | 37  | 4.54 | 0.705          | 0.116           |
| Skills                             | No  | 130 | 4.18 | 0.636          | 0.056           |
|                                    | Yes | 37  | 4.63 | 0.746          | 0.123           |

*Source: Own work. Data obtained from IBM SPSS.*

Table 6.7.2.2 proves that the construct attitude, the difference between the means on the international experience students and those who didn't 'partake on academic mobility by the significant level due to it being lower than ( $p < .05$ ) being .003. This confirms that there are significant differences between the students with mobility and those without it.

**Table 6.7.2.2: Attitude, Knowledge and Understanding Independent Sample Description and Hypothesis T-Test**

|                           |                             | Independent Samples Test                |       |                              |        |                 |                 |                       |   |          |
|---------------------------|-----------------------------|---|-------|------------------------------|--------|-----------------|-----------------|-----------------------|---|----------|
|                           |                             | Levene's Test for Equality of Variances |       | t-test for Equality of Means |        |                 |                 |                       |   |          |
|                           |                             | F                                       | Sig.  | t                            | df     | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference |          |
| Attitude                  | Equal variances assumed     | 2.388                                   | 0.124 | -3.065                       | 165    | 0.003           | -0.38529        | 0.12569               | -0.63345                                  | -0.13712 |
|                           | Equal variances not assumed |   |       | -3.035                       | 57.278 | 0.004           | -0.38529        | 0.12696               | -0.63949                                  | -0.13108 |
| Knowledge & Understanding | Equal variances assumed     | 0.689                                   | 0.408 | -3.480                       | 165    | 0.001           | -0.44335        | 0.12739               | -0.69488                                  | -0.19183 |
|                           | Equal variances not assumed |   |       | -3.405                       | 56.354 | 0.001           | -0.44335        | 0.13021               | -0.70417                                  | -0.18254 |
| Skills                    | Equal variances assumed     | 0.211                                   | 0.647 | -3.661                       | 165    | 0.000           | -0.45127        | 0.12325               | -0.69463                                  | -0.20791 |
|                           | Equal variances not assumed |   |       | -3.350                       | 51.825 | 0.002           | -0.45127        | 0.13470               | -0.72158                                  | -0.18096 |

Source: Own work. Data obtained from IBM SPSS.

As shown in Table 6.7.2.2, the data indicates a statistically significant difference ( $p < .05$ ) in the construct of attitude between students who had international experience through academic mobility programs and those who did not. The difference in mean values between the two groups is significant at the  $p < .003$  level, suggesting that participation in academic mobility is associated with distinct attitudinal outcomes compared to non-participation.

Likewise, a statistically significant difference was observed for the knowledge and understanding construct, with a p-value less than .001. This finding suggests that students who participated in academic mobility programs demonstrated a greater level of knowledge and understanding compared to those who did not have such international experience. The significant difference in this construct underscores the transformative impact that international mobility can have on enhancing students' academic knowledge and their overall comprehension of diverse cultural perspectives and global issues.

Furthermore, the analysis revealed a statistically significant difference in the skills construct, with a p-value less than 0.001. This finding indicates that students who participated in academic mobility programs demonstrated a higher level of essential skills compared to those without such international experience.

## CHAPTER 7: RESULT ANALYSIS AND DISCUSSION

### 7.1 Qualitative Results

#### 7.1.1 Academic Expert's opinions on Dependent and Independent Construct

As a summary of the answers given on the *Attitude* construct, interviewees broadly believe that demonstrating genuine respect and appreciation for cultural differences is essential for cultivating an inclusive, collaborative work environment where employees from diverse backgrounds feel valued and empowered to contribute their unique perspectives.

This mindset enables one to recognize and set aside personal biases, remain curious and adaptable, and engage with colleagues as equal partners. A culturally humble graduate comprehends that their thought processes and behaviors are shaped by their cultural upbringing, and they are eager to learn about and adapt to alternative viewpoints and practices. Cultural humility is vital for success in a global company, where teams comprise individuals with vastly different worldviews, values, and communication styles.

Fostering an inclusive, collaborative work culture that celebrates diversity is critical for driving business success, as it facilitates cooperation, understanding, and harmony among colleagues from diverse contexts, promoting a positive and productive work environment. Embracing cultural differences and learning to navigate them through open-mindedness, empathy, and practice is crucial for a higher education graduate to thrive in a multicultural setting.

Summarizing the view on the academic experts concerning the *Knowledge and Understanding* construct, they support the idea that multinational corporations must deeply comprehend diverse cultural contexts to avoid the detrimental operational and workplace effects of unfounded assumptions or oversimplified stereotyping.

Thorough cultural evaluation allows organizations to align strategies, policies, and operations with local expectations and sensibilities, mitigating the financial risks of cultural misunderstandings. Effective global communication necessitates a nuanced grasp of cultural norms, values, and practices.

Aspiring graduates should demonstrate familiarity with the historical, religious, political, and social customs of their prospective employers' regions, as well as comprehensive knowledge of relevant political, economic, societal, technological, and legal frameworks, to thrive in the interconnected global economy.

Concerning the *Skills* construct, according to the interviewed academic experts, the ability to adapt and navigate diverse cultural environments is crucial in the dynamic global business landscape. Adaptable employees can readily embrace novel challenges, assimilate diverse working styles, and skillfully navigate unfamiliar cultural environments.

Crucially, they recognize that language use is intrinsically linked to the cultural context from which it emerges, as it reflects a society's distinct values, norms, and contextual frameworks. Attaining proficiency in a language's nuances and intricacies necessitates a profound comprehension of the underlying cultural factors that mold its structural elements, idiomatic expressions, and patterns of usage.

Cultivating diverse skillsets and the ability to excel in multicultural work environments empowers graduates to develop the creative problem-solving capabilities and adaptable mindset necessary for navigating the complexities of the interconnected global landscape.

Organizations and academic institutions proactively recruit graduates who demonstrate adaptability, flexibility, and the ability to function effectively across diverse contexts, respond to unforeseen challenges, and leverage their extensive contextual knowledge and cross-cultural competencies to contribute value in their roles. Graduates who possess robust intercultural capabilities paired with innovative and flexible cognitive orientations can deliver significant worth to their employers, thereby propelling business expansion, innovation, and productive international operations.

Respecting the *Global Employability* variable, according to the interviewees, engagement in academic mobility programs endows graduates with enhanced versatility and the capacity to effectively navigate varied cultural environments. The immersive international experiences gained through academic mobility programs instill graduates with enhanced versatility and the



capacity to effectively navigate varied cultural contexts. This immersion fosters a more refined understanding of cross-cultural dynamics, enabling the development of practical competencies in intercultural communication and collaboration.

Cultivating a graduate's open and adaptable mindset, comprehensive intercultural knowledge, and diverse practical skillset substantially improves their employability and worth within the global job market. These multifaceted capabilities are crucial for graduates to flourish in the dynamic, intercultural environments of international organizations, positioning them as indispensable assets primed to catalyze innovation, growth, and effective transnational operations.

According to the academic experts, cultivating genuine adaptability is paramount, enabling graduates to fluidly modify their conduct and communication to collaborate effectively with colleagues and stakeholders across diverse cultural contexts. Equally crucial are robust intercultural communication capabilities, empathy to bridge cultural divides, and a fundamental respect for alternative viewpoints and modes of being.

#### 7.1.2 Employers' opinions on Dependent and Independent Variables

Regarding the *Attitude* construct, the experts emphasize that cultural competence, including respect, humility, and understanding of diverse cultures, is crucial for higher education graduates seeking employment in global companies.

Cultivating competencies like open-mindedness, empathy, and the ability to navigate complex multicultural environments enables graduates to contribute to the success of global enterprises. Employers value candidates with cultural intelligence, including knowledge of different cultural contexts and a drive to continuously learn and adapt.

Experiences abroad can help graduates develop a more global, empathetic vision and enhance their adaptability. Tolerance, which involves actively respecting and appreciating cultural differences, is an essential competency. Developing tolerance through open dialogue and a willingness to compromise enables graduates to navigate the challenges of a global workplace.

Key attitudinal qualities for global employment include strong communication, open and adaptable mindset, respect for diversity, integrity, empathy, and Intercultural competence, which enable graduates to thrive in dynamic, interconnected settings.

The interviewees discuss the *Knowledge and Understanding* construct, addressing the following aspects. Sending employees to work in unfamiliar international locations can undermine their confidence and productivity, negatively impacting the company's operations and performance. To avoid this, companies should proactively foster a culture of diversity, inclusion, and cultural tolerance.

Making assumptions and relying on stereotypes can lead to communication issues, hinder collaboration, and expose the company to problems, affecting its global competitiveness. Celebrating diversity and promoting inclusivity are essential for corporations to thrive in the interconnected global marketplace.

Conducting a comprehensive cultural assessment provides valuable insights that help corporations deeply understand the local context and adaptively tailor their strategies. By embracing cultural sensitivity, empathy, and responsiveness, corporations can navigate cross-cultural challenges and achieve sustainable growth in the global marketplace.

Effective communication with individuals from other countries requires a multifaceted approach that combines cultural knowledge, language proficiency, and refined communication skills. Developing cultural awareness, demonstrating empathy, and cultivating an open and tolerant mindset are key to bridging cultural differences and establishing productive professional relationships across international boundaries.

According to the interviewees, employers also expressed views on the *Skills* construct relevant to global employability. Graduates entering the global workforce require a diverse set of key capabilities to thrive in the increasingly interconnected and dynamic business landscape. These essential skills include cultural adaptability, openness to change, strong communication, proficiency in multiple languages, and deep cross-cultural fluency.

Employees with high cultural intelligence are invaluable assets that can significantly enhance collaboration, innovation, and overall competitiveness for global companies. To succeed in this complex environment, graduates must cultivate an interdisciplinary mindset, an accelerated learning capacity, and specialized skills such as proficiency in intercultural negotiation, adept use of the latest technologies, and effective crisis management.

By developing this comprehensive and versatile skillset, graduates can confidently navigate the diverse, rapidly evolving, and inherently challenging global business landscape, positioning themselves as indispensable assets primed to drive innovation, growth, and productive international operations.

Employers emphasized that in relation to the dependent variable of *Global Employability*, that participation in academic mobility programs can enhance a student's flexibility, adaptability, and cultural sensitivity for working with diverse cultures. These programs provide direct exposure to diverse practices, leading to personal growth, a global mindset, and improved communication skills. However, graduates may struggle to fully apply these skills in a company's specific cultural context.

Employers value intercultural competence, language fluency beyond just Spanish, and the ability to apply international experiences locally. Key competencies for global employability include cultural adaptability, cross-cultural knowledge, versatile skills, and the ability to collaborate and innovate within an international workplace. Measurable indicators of a successful graduate include language proficiency, relevant training, and global company experience.

Possessing a deep understanding of cultural knowledge, encompassing the intricacies of communication styles, social norms, and diverse belief systems, is paramount for effective collaboration and interaction within the global business landscape. Cultivating comprehensive cultural competence enables seamless engagement, facilitates the establishment of professional relationships, and ultimately contributes to the success of international business

ventures. Overall, a combination of positive attitude, comprehensive knowledge, and practical skills significantly boosts a graduate's employability in global companies.

## **7.2 Quantitative Results**

The quantitative findings of the study reveal that students who participated in the academic mobility program at the Universidad Autónoma de Nuevo León demonstrated a significant enhancement in the development of their intercultural competence. Specifically, the students exhibited marked improvements across the three key constructs that comprise intercultural competence: *Attitude, Knowledge and Understanding and Skills*.

The data analysis showed significant differences in means that corroborate that the international mobility students outperformed their peers who did not participate in the program in terms of their deeper understanding of cultural differences, enhanced ability to effectively communicate and interact with individuals from diverse backgrounds, and more positive and open-minded dispositions towards cultural diversity.

These findings suggest that immersion in a foreign cultural context, whether through short-term academic mobility, internships, or extended living abroad, can facilitate the development of higher levels of intercultural competence among students. This enhanced intercultural competence can then prove invaluable as these individuals enter the labor market.

The *Attitude* construct resulted with the highest mean, showing that students that had an abroad experience had a better development of the analyzed dimensions of the construct and identifying the importance of valuing diversity, being curious to learn of other cultures, cultural humility, respecting other cultures, and openness.

The results indicated that the *Attitude* construct had the highest mean score, suggesting that students who participated in the international mobility program demonstrated more positive and open-minded dispositions towards intercultural differences. This included a better development of the analyzed dimensions of the Attitude construct, such as the importance of

valuing diversity, being curious to learn about other cultures, exhibiting cultural humility, respecting other cultures, and maintaining an open-minded approach.

The findings suggest that the participants exhibited a strong overall level of skills related to intercultural competence, with the *Skills* construct being the second most prominent among the three constructs examined. The international mobility program seemed to foster enhanced capabilities in empathy, behavioral adaptation, multiperspectivity, linguistic skills, and cognitive flexibility.

The findings further revealed that students with international experiences demonstrated a strong overall level of knowledge and understanding pertaining to intercultural competence, as evidenced by the third highest mean observed for the *Knowledge and Understanding* construct. This suggest that the mobility students demonstrated a strong grasp and appreciation of the nuances and complexity inherent in diverse cultural perspectives. Within the construct the dimensions that were analyzed are the following ranked from highest to lowest means: knowledge of beliefs, values and practices; internal diversity and heterogeneity of cultural groups; awareness of one's and others' assumptions; and communicative awareness.

### **7.3 Qualitative, Quantitative, and Literature Review Triangulation**

According to the data acquired through the interview protocol with employers and academics, their perspectives on graduate employability are very similar. Both groups acknowledge the importance of skills like willingness to learn, problem-solving, and practical experience, as well as the need for graduates to cultivate a range of competencies beyond just subject knowledge. The same is also suggested according to a study by Joseph Rios et al. (2020), which examined 142,000 job postings, the key non-technical skills that employers sought in prospective employees were oral communication, written communication, collaboration, problem-solving, social intelligence, professionalism, adaptability, service orientation, continuous learning, and cultural sensitivity. This aligns closely with the perspectives expressed by the expert interviewees in the current research.

According to the expert interviewees, cultivating cultural competence, which encompasses respect, humility, and understanding of diverse cultures, is essential for graduates seeking employment in global organizations. The interviewees emphasize that key attitudinal qualities include respect for diversity, integrity, and empathy. Furthermore, the quantitative study indicates that the highest mean was observed in the *Attitude* construct, which encompasses the aforementioned dimensions of intercultural competence.

Both the academic and employers agree that respecting other cultures embracing cultural diversity is critical for the success of global companies. Incorporating diverse perspectives enriches decision-making, problem-solving, and innovation. Demonstrating respect and appreciation for cultural differences fosters an inclusive, collaborative work environment where employees feel valued and empowered. This reduces misunderstandings, conflicts, and barriers to teamwork. As stated by Johnson et al. (1996), demonstrating empathy when interacting with individuals or groups from diverse cultural backgrounds is essential for a productive and successful exchange, as it forms the foundation of trust between the involved parties.

Conversely, a lack of cultural humility can create a hostile atmosphere, hindering professional development. For graduates aspiring to work in global companies, cultivating cultural humility is paramount. This mindset enables recognizing and setting aside biases, maintaining curiosity and adaptability, and engaging with colleagues as equal partners. Cultural humility and tolerance facilitate seamless cross-cultural collaboration, fueling innovation and organizational success. Experts unanimously emphasize that respecting and valuing other cultures is a crucial competence for global employability. Developing robust cultural competence equips individuals to navigate complex multicultural environments, understand diverse market needs, and contribute to the company's global success. Graduates must proactively cultivate an open, unbiased understanding of diverse cultures, moving beyond superficial stereotypes. These advanced competencies empower graduates to tackle cross-cultural challenges with innovative, culturally sensitive solutions that drive the success of global enterprises.

The comments done by both set of interviewees match those done by Rakowska & de Juana-Espinosa (2021), Raewf & Mahmood (2021) who suggests that embracing cultural diversity enables societies to leverage diverse perspectives, knowledge, and experiences, fostering social cohesion, cross-cultural dialogue, and a more inclusive society. According to research by Luijters, van der Zee, and Otten (2008), when employees in a work group appreciate diversity, the perceived differences in their values do not necessarily result in lower levels of group identification. In such cases, the organization views diversity as a valuable asset, accommodates ambiguities, and imposes minimal behavioral constraints. Greblikaite & Daugeliene (2010) state that contemporary organizations must navigate cultural diversity within their workforce, a direct consequence of the increasing globalization and migration of the labor force. Other authors who support the theory of respecting cultural diversity are Cox & Blake (1991), Erlen (1998), Johnson J. (2000), Pless & Maak (2004), Byram & Dervin (2008), ; Grigoryan & Schwartz (2020), Çelik, Keser, & Körcük Yapıcı (2021).

Academic and employer data confirms that cultural humility and appreciation for diverse cultural perspectives are essential competencies for recent graduates pursuing employment in global organizations. Graduates must cultivate an open-minded attitude, proactively learn from other cultures, and recognize the inherent limitations of any single cultural framework. Developing cultural humility fosters deep mutual respect, enhances cross-cultural communication and collaboration, and promotes an inclusive work environment. The prior confirmation on cultural humility supports the studies done by Tervalon & Murray-García, (1998), Davis et al. (2010), Davis et al. (2011), Hook et al. (2013), Foronda et al. (2016), Montayre et al. (2017), Byrne et al. (2019), O'Brien et al. (2019), Hughes et al. (2020), Markey et al. (2021), Zhu et al. (2021), Verkuyten, Yogeeswaran, & Adelman (2022).

Employers value candidates with cultural intelligence, encompassing comprehensive knowledge of cultural contexts, the ability to gather and analyze cultural information, and critical qualities like analytical thinking and empathy. As stated by Johnson et al. (1996), demonstrating empathy when interacting with individuals or groups from diverse cultural backgrounds is essential for a productive and successful exchange, as it forms the foundation

of trust between the involved parties. The quantitative results revealed that empathy was the highest-ranked dimension within the *Skills* construct, suggesting that this competency likely facilitated participants' ability to navigate and adapt to unfamiliar cultural environments more effectively.

Meaningful international experiences can help graduates develop a global, empathetic worldview, flexibility, and self-awareness to challenge biases and build trust-based relationships worldwide. Ultimately, cultural humility enables individuals to recognize and reflect on their own biases, leading to more open, respectful, and empathetic interactions, which is indispensable for success in the global business landscape. The opinions of the interviewees concur with the research done by Fischer et al. (2022) highlighted that the capacity to effectively navigate and collaborate with individuals from diverse cultural backgrounds has emerged as a vital skill in the contemporary globalized employment landscape. As asserted by scholar Gary Dessler (2020), professionals with well-developed intercultural competencies possess a distinct competitive edge in the global business arena and can make invaluable contributions to the leadership of multinational corporations.

The data acquired states that multinational corporations must develop a comprehension of varied cultural contexts to avoid the detrimental effects of unfounded assumptions or stereotyping. Newberg & Waldman, (2006) state that recognizing our preconceptions is crucial, as they can significantly influence how we perceive, judge, and interact with others. If an individual harbors negative assumptions about a particular group, they may be more inclined to discriminate against or treat them unfairly.

Likewise, being cognizant of others' assumptions is important, as these can shape their perceptions and interactions with us. Reiss (2012), believes that recognizing and reflecting on one's own preconceptions and biases can enable individuals to identify and address them, thereby facilitating more effective conflict resolution. Furthermore, awareness of assumptions and biases can contribute to creating a more inclusive and supportive environment for individuals from diverse backgrounds by prompting recognition and challenge of these preconceptions. The quantitative data indicated that although the *Knowledge and*



*Understanding* factor mean was ranked in third place, participants demonstrated strong awareness of their own and others' underlying assumptions. They exhibited the capacity to critically analyze their personal biases and preconceptions, as well as recognize the assumptions held by individuals from diverse cultural backgrounds.

Effective global communication and collaboration necessitate a grasp of cultural norms, values, and practices. The ability to adapt and navigate diverse cultural environments is vital in the dynamic global business landscape, empowering graduates to hone creative problem-solving and an adaptable mindset. According to Craig Shealy (2016), the differences in beliefs and values across cultures should be anticipated and not disregarded. Rather, they should be learned and cultivated through experiences, support from skilled facilitators, and examining these variances. This process can help individuals develop intercultural sensitivity, enabling them to successfully understand the nature of diverse groups during multicultural interactions.

Understanding the beliefs, values, and practices of one's coworkers is crucial for fostering a diverse and inclusive work environment. By appreciating the cultural, religious, and social backgrounds of colleagues, individuals can cultivate a more welcoming and supportive workplace. For instance, knowledge of employees' religious practices can help ensure that work schedules and policies do not conflict with these observances. Likewise, comprehending the cultural values and beliefs of co-workers can mitigate unintentional offenses and misunderstandings. This awareness can also facilitate more effective (Luijters et al., 2008; Reiss, 2012; R. Delecta & Raman, 2015; Raewf & Mahmood, 2021).

Both set of participants in the qualitative study concur that successful global communication necessitates a multifaceted strategy that integrates cultural knowledge, language proficiency, and refined communication capabilities. The ability to communicate effectively in multicultural settings is an indispensable competency for professionals operating within the interconnected global economy. Shannon and Begley (2008) posit that individuals proficient in multiple languages possess a structured framework enabling them to better comprehend the fundamental values of diverse cultures and should have more knowledge of specific aspects of other cultures. Winter's (2010) research affirms that proficiency in multiple

languages enables more seamless collaboration within interdisciplinary teams operating in international contexts, facilitating effective communication processes. The quantitative findings revealed that the linguistic skills component within the broader *Skills* construct exhibited a high mean value, suggesting that individuals' language proficiency is enhanced through immersion in a foreign cultural context.

Specifically, the data showed that participants who engaged in international experiences, such as study abroad programs or foreign internships, demonstrated significantly higher levels of proficiency in multiple languages compared to those who did not have such opportunities. This suggests that cultural immersion plays a key role in developing and refining one's multilingual abilities, which can then be leveraged to facilitate more effective communication and collaboration within diverse, interdisciplinary teams operating in global contexts.

Adaptable employees are essential for global companies, according to employers and academics, possessing the ability to quickly respond to changes, learn new skills, and effectively navigate diverse cultural contexts. Their flexibility and intercultural agility are crucial in the dynamic global business environment, enabling them to seamlessly adjust to shifting markets, emerging technologies, and evolving operational requirements.

Hu et al., (2018) states that the capacity for cognitive flexibility is a vital competency for successfully navigating the intricacies of multicultural settings. In the context of a diverse workplace, research by Legare et al. (2018) indicates that it is crucial for individuals to comprehend and appreciate diverse perspectives, effectively communicate across cultural boundaries, and devise innovative solutions to challenges. For Harvey & Griffith (2002), individuals with cognitive flexibility can adjust their communication styles to align with the cultural norms of their colleagues, transitioning between direct and indirect approaches as appropriate. This ability to adapt their communication is crucial for cultivating strong relationships and fostering effective teamwork in a multicultural work environment. The quantitative findings indicated that students who participated in academic mobility programs demonstrated significantly higher mean levels of Behavior Adaptation, Multiperspectivity, Linguistic Skills, and Cognitive Flexibility compared to those without international experience.

Specifically, the study revealed that students with international academic experience exhibited greater adaptability in their behaviors, a more multifaceted perspective on issues, stronger linguistic proficiency, and greater flexibility in their cognitive processing, in contrast to their peers who lacked such global exposure.

Adaptable employees can readily embrace new challenges, assimilate alternative working methods, and navigate unfamiliar cultural environments. This versatility makes them invaluable contributors, allowing them to identify opportunities, overcome obstacles, and drive innovation. Cultivating adaptability, flexibility, and an open-minded attitude is key for graduates to thrive in the rapidly evolving global business landscape and become valuable assets for international organizations.

The opinions on adaptability by the interviewees concur with Margaret Pusch (2009), who states that an adaptive individual can constantly change their perspective into different cultural worldviews and at the same time shift their behavior into an appropriate or accepted way depending on the culture. This is done through the correct usage of empathy, behavioral adaptability, cognitive flexibility and tolerance.

Concerning academic mobility, both set of experts believe that programs enhance graduates' versatility and cultural awareness, fostering intercultural competencies. Cultivating open mindsets, comprehensive intercultural knowledge, and diverse skills improves graduates' global employability. Key competencies include adaptability, intercultural communication, empathy, and respect for diverse cultures. Cultural competence is essential for employment in global companies, which should promote diversity and inclusion.

However, employers state that graduates may struggle to fully apply these capabilities within a company's unique culture. Employers value the increased intercultural competence, but graduates must demonstrate the ability to apply their skills in practical, business-oriented ways. Academic mobility programs equip students with a valuable toolkit, but graduates must continue developing and adapting these skills to maximize career opportunities in multinational organizations.

According to Abdullah Atalar's (2020) perspective, the primary motivation for implementing student exchange programs is that organizations seek to employ individuals who possess the necessary skills to enhance their competitiveness in the global market and achieve success. These skills include the ability to interact effectively with people from diverse cultural and national backgrounds. Research by Earley and Ang (2003) also suggests that international experiences, such as short-term study abroad or work in another country, are associated with higher motivational cultural intelligence.

According to Fielden et al. (2007), studying abroad or engaging with diverse perspectives in educational contexts can enhance students' academic learning. This exposure to new concepts, methodologies, and modes of thinking can improve their analytical capabilities and foster originality. Furthermore, immersion in diverse cultures supports personal development by expanding students' worldviews, cultivating empathy, and promoting receptiveness to novel ideas. This enables individuals to gain deeper self-awareness and insights into others.

Mitchell, Tracy-Ventura, and Huensch (2020) assert that study abroad experiences constitute a particularly valuable opportunity for the development of linguistic, personal, and sociocultural competencies within individuals. International academic mobility provides a context in which the advancement of language proficiency can be discerned.

Employers prioritize intercultural competence, multilingual fluency, and the ability to leverage international experiences locally. Key competencies for global employability encompass cultural adaptability, cross-cultural expertise, diverse skills, and the capacity for international collaboration and innovation. Cultivating deep cultural knowledge and comprehensive cultural proficiency is paramount for effective global interaction.

Overall, a blend of positive disposition, comprehensive knowledge, and practical abilities enhances a graduate's employability in global enterprises. Effective global communication requires a comprehensive approach blending cultural knowledge, language skills, and refined communication abilities. Developing cultural awareness, empathy, and an open mindset are key to bridging cultural divides and establishing productive professional relationships

internationally. Employers emphasize that graduates need a diverse set of capabilities to thrive in the interconnected, dynamic global business landscape, including cultural adaptability, openness to change, strong communication, multilingual proficiency, and deep cross-cultural fluency. Graduates must cultivate an interdisciplinary mindset, accelerated learning, and specialized skills to confidently navigate the diverse.

The quantitative data revealed exceptionally high average scores across the three key constructs examined, which collectively encompass the previously discussed intercultural competencies. These robust findings suggest that the participants demonstrated a profound grasp of the essential attitudes, knowledge, and skills required for effectively engaging with and supporting diverse student populations. The uniformly elevated mean scores underscore the transformative potential of immersive intercultural experiences, such as short-term international internships and study abroad programs, to profoundly shape the intercultural competence of aspiring educators and other child development professionals.

#### **7.4 Hypothesis Confirmation**

The general hypothesis of the investigation states that:

Attitude, knowledge and understanding, and skills acquired through academic mobility at a foreign university<sup>H1</sup> impact the global labor market employability of students in engineering programs at the Universidad Autónoma de Nuevo León<sup>H2</sup>.

H1: Confirmed by Quantitative

The components of Intercultural Competence, comprising *Attitude, Knowledge and Understanding*, and *Skills*, exhibited significant variations between individuals who experienced short-term international immersion and those who did not have that opportunity. Specifically, those who participated in short-term international immersion programs demonstrated greater development across the key domains of intercultural competence.

Academic mobility participants exhibited more positive and open attitudes towards cultural differences, developing a deeper, more nuanced understanding of diverse cultural perspectives, practices, and worldviews. These individuals also displayed enhanced interpersonal skills, enabling them to engage in more effective cross-cultural communication and interaction. Concluding that having an immersive experience of living and working in a foreign cultural context facilitates a more comprehensive and robust development of intercultural competence.

H2. Confirmed by employers and academics.

Employers have highlighted that engagement in academic mobility initiatives can foster students' flexibility, adaptability, and cultural awareness when collaborating with diverse cultures, which corresponds to the dependent variable of global employability. These programs offer direct exposure to varied practices, cultivating personal development, a global perspective, and enhanced communication capabilities.

Additionally, they emphasize the necessity of maintaining a thorough comprehension of cultural dynamics, encompassing communication patterns, social conventions, and diverse belief systems, for effective collaboration and engagement within the global business landscape.

Employers in the global market assert that developing extensive cultural proficiency facilitates fluid collaboration, promotes the formation of professional networks, and consequently supports the success of international business initiatives. Furthermore, a harmonious blend of positive disposition, extensive understanding, and practical capabilities significantly enhances a graduate's employability prospects within multinational organizations.

## **CHAPTER 8: CONCLUSIONS AND PROPOSALS**

Globalization has brought forth a series of significant changes to the academia and industry, precipitated by the interconnectivity between different societies and organizations.

In today's globalized business landscape, employers have a pressing need for employees who possess effective intercultural communication and collaboration skills. This underscores their requirement for graduates equipped with a distinct set of abilities to successfully operate the complexities of cross-cultural interaction and cooperation.

Enterprises employ a multitude of international business approaches, such as import/export, joint ventures, offshore production, and participation in global value chains, among other strategies (Keller-Bacher & Zerfass, 2019).

These activities happen through the interaction between individuals from different cultural backgrounds that might bring forth intercultural conflict. To effectively address these conflicts, individuals must possess or cultivate intercultural competence. Successful navigation of such conflicts requires open-minded, positive, and proactive individuals with the capacity to shift perspectives, a willingness to relinquish a rigid, egocentric mindset, and active engagement with those who are dissimilar (Winter, 2010).

The modern business activities utilized by global companies previously mentioned have had a profound impact on educational policies, as countries seek to respond to the global changes through various policies (So et al., 2013).

Higher education institutions hold a significant responsibility in educating and preparing students. They should collaborate closely with local and federal government officials, especially public institutions like the UANL, through a multi-track diplomatic strategy involving foreign governments and higher education institutions. This approach will enable the development and implementation of strategic initiatives to enhance student outcomes. Actions that aim to equip future graduates with a set of abilities, that make up intercultural

competence, that will help them to operate successfully within multicultural and diverse teams in their professional endeavors within the globalized economy.

Higher education institutions can foster intercultural competence in their students through academic mobility initiatives. Immersion in a foreign cultural context provides an invaluable opportunity for students to acquire meaningful cultural awareness, linguistic proficiency, and experience acclimating to a milieu distinct from their own.

The study showed that academic mobility in a foreign country resulted in a better development of intercultural competence compared to students that did not have the opportunity to have an international experience.

Academic mobility programs, such as study abroad and student exchange, enable students to step outside of their comfort zones and engage with diverse cultures, customs, and ways of thinking. These experiences challenge students to adapt, communicate effectively, and develop a deeper understanding and appreciation for cultural differences. By exposing students to new perspectives and ways of life, academic mobility initiatives can cultivate the open-mindedness, flexibility, and interpersonal skills that are essential for thriving in a globalized world.

Additionally, the expansion of study abroad programs that are regionally focused could help develop students' global competencies that are beneficial for both national competitiveness and regional cooperation. These targeted study abroad programs allow students to develop a more profound comprehension of a unique cultural, political, and economic dynamics of specific regions, creating graduates that can effectively navigate and collaborate with organizations that are a priority of the local and national agenda.

Higher education institutions must equitably prepare all of their students to be ready for the current job market. This includes not only technical knowledge but also the development of essential interpersonal competencies, such as intercultural proficiency. To address this challenge, for students that do not have the opportunity for an abroad stay, universities should consider integrating more comprehensive intercultural competence training into their



academic programs and providing students with opportunities to engage in intercultural interactions to foster the development of this competence. This can be achieved through implementing an on-campus internationalization initiative, which may include offering more courses taught in English, hosting seminars and Collaborative Online International Learning classes with foreign professors and maintaining a strong program to attract a significant international student population.

The study presented concerning findings regarding the students who had the opportunity to study abroad. It revealed that 73% of the students with such experiences attended the public school system, which is noteworthy because one would expect students from private schools to have higher incomes, potentially enabling them to participate in short-term study abroad programs. This assumption is corroborated by the observation that 88% of the students who did not have an international experience attended private schools.

The data indicates that while 30% of the mobile students' families have a monthly income exceeding \$50,000 (US\$2,454.5), which is a substantial sum, but this may not translate to significant purchasing power when exchanged into currencies with higher values compared to the Mexican peso. Additionally, 22% of these students come from households with incomes ranging from \$20,001 to \$30,000 (US\$981.9-US\$1,472.8). This suggests that there are organizations actively supporting students to gain international experiences that can enhance their academic and professional trajectories.

These findings underscore the importance of increasing access to academic mobility programs for all students, regardless of their socioeconomic background. Universities, governments, and private organizations should collaborate to design and implement policies and funding mechanisms that promote equity and inclusion in international educational experiences.

It is important to mention that this research is not representative of all the academic mobility students due to the difficulty of contacting them. Additional research would be necessary to further explore the relationships between academic mobility, intercultural competence

development, and career outcomes to provide a more comprehensive understanding of this topic.

Furthermore, it is necessary to investigate why students from higher-income families do not participate in academic mobility programs. This also suggests the need for further psychological investigation to understand the underlying reasons why students from higher-income families may be less inclined to participate in academic mobility programs.

Nevertheless, the results of this study provide valuable insights into the potential benefits of academic mobility and the critical need to address equity and inclusion in access to these transformative experiences. The findings underscore the importance of ensuring that all students, regardless of their socioeconomic background, have the opportunity to participate in international educational experiences that can enhance their academic and professional trajectories. Collaborative efforts between universities, governments, and private organizations are essential to designing and implementing policies and funding mechanisms that promote equal access to these enriching programs.

In conclusion, this research highlights the significant role that academic mobility can play in developing intercultural competence, which is an essential skill for success in today's globalized workforce. Academic mobility programs, such as study abroad and student exchange, provide students with invaluable opportunities to immerse themselves in foreign cultural contexts, acquire meaningful cultural awareness, linguistic proficiency, and experience acclimating to environments distinct from their own. These transformative experiences cultivate the open-mindedness, flexibility, and interpersonal skills that are crucial for thriving in a globalized world.

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## APPENDIX

### APPENDIX I: Agreements Registered at the International Relations Department of The Universidad Autónoma de Nuevo León with other Institutions and Organisms

| Organization/Institutions   | Countries      |
|---|----------------|
| University of Liège   | Belgium        |
| University of Antwerp   | Belgium        |
| University of Sao Paulo (Thesis Joint Guardianship: Nursing)  | Brazil         |
| State University of Mato Grosso (General Agreement)   | Brazil         |
| State University of Campinas (General Agreement)  | Brazil         |
| Federal University of Pelotas (General Agreement)   | Brazil         |
| Federal University of Santa Catarina  | Brazil         |
| Federal University of São João del Rei (General Agreement)  | Brazil         |
| Paulista University (General Agreement)   | Brazil         |
| University of Manitoba (Letter of Understanding)  | Canada         |
| University of Ottawa  | Canada         |
| University of Saskatchewan (Letter of Understanding)  | Canada         |
| University of Western Ontario (Specific: Double Degree School of Chemical Science)                        | Canada         |
| University of Sherbrooke (Specific: Student Exchange)   | Canada         |
| University of Sherbrooke (Specific: Lecture)  | Canada         |
| University of Sherbrooke (Specific: Doctoral Thesis Joint Guardianship)                                   | Canada         |
| University of Sherbrooke (General Agreement)  | Canada         |
| World Trade Centre (Reciprocity Agreement)  | Canada         |
| University of Management and Finance of Prague  | Czech Republic |
| Universidad Central de Chile (General Agreement)  | Chile          |
| Universidad de Chile (General Agreement)  | Chile          |
| Universidad de Concepción (General Agreement)   | Chile          |
| Universidad de la Serena (General Agreement)  | Chile          |
| Universidad de Santo Tomás (General Agreement)  | Chile          |
| Universidad de Valparaíso (Specific: Student Exchange Académica)  | Chile          |
| Universidad de Bío-Bío (General Agreement)  | Chile          |
| Universidad Mayor de Chile (General Agreement)  | Chile          |
| Universidad San Sebastián (Specific: Student Exchange Académica)  | Chile          |
| Universidad San Sebastián (General Agreement)   | Chile          |
| Municipal Government of Quzhou (Letter of Understanding in the area of Green Technology and Industry 4.0) | China          |

| Organization/Institutions   | Countries |
|---|-----------|
| Nanjing University of Chinese Medicine (General Agreement)  | China     |
| Nanjing University of Finance and Economics (Letter of Intent)  | China     |
| Shanghai University of International Business and Economics (General Agreement)                         | China     |
| Sichuan International Studies University (General Agreement)  | China     |
| Southwest University of Science and Technology (General Agreement)                                      | China     |
| University of Traditional Medicine of Tianjin China (Specific: School of Medicine)                      | China     |
| University of International Business and Economics of China (Specific: Center of Asian Studies)         | China     |
| University of International Business and Economics of China (Specific: Confucius Institute at the UANL) | China     |
| Corporación Universitaria de La Costa (General Agreement)   | Colombia  |
| Escuela de Administración y Mercadotecnia del Quindío (General Agreement)                               | Colombia  |
| Escuela Nacional del Deporte  | Colombia  |
| Fundación Universitaria Konrad Lorenz (General Agreement)   | Colombia  |
| Fundación Universitaria Uniempresarial  | Colombia  |
| Institución Universitaria Colegios de Colombia (General Agreement)                                      | Colombia  |
| Instituto Técnico Central de Colombia   | Colombia  |
| Universidad Pedagógica y Tecnológica de Colombia (General Agreement)                                    | Colombia  |
| Universidad Cooperativa de Colombia (Specific: School of Communications Science)                        | Colombia  |
| Universidad de Cartagena (General Agreement)  | Colombia  |
| Universidad de El Bosque  | Colombia  |
| Universidad Industrial de Santander   | Colombia  |
| Universidad de la Guajira   | Colombia  |
| Universidad de los Andes  | Colombia  |
| Universidad de Manizales (General Agreement)  | Colombia  |
| Universidad de San Buenaventura (Specific: Student Exchange for Chemical Clinical Biologist)            | Colombia  |
| Universidad de San Buenaventura (General Agreement)   | Colombia  |
| Universidad de Rosario  | Colombia  |
| Universidad de Rosario (Specific: Student Exchange)   | Colombia  |
| Universidad Distrital Francisco José de Caldas (Specific: School of Forest Science)                     | Colombia  |
| Universidad Distrital Francisco José de Caldas (General Agreement)                                      | Colombia  |
| Universidad EAFIT (General Agreement)   | Colombia  |
| Universidad EAFIT (Specific: School of Physics and Mathematical Science)                                | Colombia  |
| Universidad Externado de Colombia (General Agreement)   | Colombia  |
| Universidad Pedagógica y Tecnológica de Colombia (Specific: School of Philosophy)                       | Colombia  |

| Organization/Institutions  | Countries          |
|--|--------------------|
| Universidad de Santiago de Cali  | Colombia           |
| Universidad Simón Bolívar, Universidad de Boyacá, Universidad del Sinú (Specific: School of Mechanical and Electrical Engineering) | Colombia           |
| Universidad Estatal a Distancia de Costa Rica  | Costa Rica         |
| Universidad Nacional de Costa Rica (General Agreement)   | Costa Rica         |
| Centro Latinoamericano de Estudios Políticos (Specific: Center of Asian Studies)   | Cuba               |
| Centro Latinoamericano de Estudios Políticos (General Agreement)   | Cuba               |
| Instituto de Oncología y Radiobiología de la Habana  | Cuba               |
| Universidad Central de las Villas  | Cuba               |
| Ciego de Ávila University  | Cuba               |
| Universidad de Camagüey  | Cuba               |
| Universidad de Matanzas  | Cuba               |
| Universidad Pinar del Rio  | Cuba               |
| Universidad Iberoamericana   | Dominican Republic |
| Paris Institute of Technology Paris-Tech ( Mexfitec Project)   | France             |
| Casa Universitaria Franco – Mexicana   | France             |
| Centralesupélec  | France             |
| École d'Ingénieurs en Informatique et Systèmes d'Information pour la Santé (ISIS) de Castres                                       | France             |
| École Nationale Supérieure d'Ingénieurs en Informatique/Automatique/Énergie/Électronique (ENSIAME) de Valenciennes                 | France             |
| École Nationale Supérieure de Céramique Industrielle (ENSCI) de Limoges  | France             |
| Central School of Lille  | France             |
| Central School of Lyon   | France             |
| Central School of Marseille  | France             |
| Central School of Nantes   | France             |
| Superior School of Madera (Bois)   | France             |
| Instituts Nationaux des Sciences Appliquées Group (GINSAs). (General Agreement)  | France             |
| Central Schools Group (Specific: Student Exchange)   | France             |
| Hospital Centro Hospitalario Sainte-Anne de La República Francesa  | France             |
| IMT Mines Albi – Carmaux (Specific: Student Exchange)  | France             |
| Institut National des Sciences Appliquées Centre Val de Loire  | France             |
| Institut National des Sciences Appliquées de Rouen (Specific: Double Degree in Aeronautical Engineering)                           | France             |
| Institut National des Sciences Appliquées de Lyon  | France             |
| Institut National des Sciences Appliquées de Lyon (Specific : Double Degree in Engineering)  | France             |
| Institut National des Sciences Appliquées de Rennes  | France             |



| Organization/Institutions   | Countries |
|---|-----------|
| Institut National des Sciences Appliquées de Rouen  | France    |
| Institut National des Sciences Appliquées de Strasbourg   | France    |
| Institut National des Sciences Appliquées de Toulouse   | France    |
| Institut National des Sciences Appliquées de Toulouse (Specific: Double Degree in Engineering)                                | France    |
| Institut Polytechnique de Grenoble  | France    |
| Instituto Nacional de Salud e Investigación Médica de Francia – Centro de Investigación de Cordeliers (General Agreement)     | France    |
| Lycée des métiers Le Corbusier, Soissons (General Agreement)  | France    |
| Lycée Hôtelier International de Lille (General Agreement)   | France    |
| Lycée prouvé d'enseignement supérieur de Vichy (General Agreement)  | France    |
| Pôle Universitaire Européen de Toulouse   | France    |
| Aix Marseille University (Specific: Student Exchange School of Social Work, School of Architecture and School of Philosophy). | France    |
| Aix Marseille University (Specific: Student Exchange - postgraduate School of Architecture)                                   | France    |
| Aix Marseille University (General Agreement)  | France    |
| University of Bordeaux 1 (Thesis Joint Guardianship: School of Mechanical and Electrical Engineering)                         | France    |
| University of Lille (Confidentiality Annex)   | France    |
| University of Lille (Student Exchange Annex)  | France    |
| University of Lille (Specific: School of Medicine)  | France    |
| University of Lille (General Agreement)   | France    |
| University of Montpellier 1 (Specific: School of Sports Organization)   | France    |
| University of Nantes  | France    |
| University of Nantes (Thesis Joint Guardianship: Guillermo Mujica)  | France    |
| University of Nantes (Thesis Joint Guardianship: Martha Hernández)  | France    |
| University of Pau (Thesis Joint Guardianship Ing. Civil)  | France    |
| University of Toulon (General Agreement)  | France    |
| Federal University of Toulouse – Midi-Pyrénées  | France    |
| University of Toulouse III (Thesis Joint Guardianship FCFM)   | France    |
| University of Bordeaux (Specific: Student Exchange)   | France    |
| University of Bordeaux (General Agreement)  | France    |
| Universidad du Droit et de la Santé Lille 2   | France    |
| University of Grenoble Alpes  | France    |
| Universidad de Magdeburg  | Germany   |
| Servicio Alemán de Intercambio Académico (DAAD)   | Germany   |
| Technische Universität Hamburg – Hamburg  | Germany   |

| Organization/Institutions   | Countries |
|---|-----------|
| Technische Universität Neubrandenburg   | Germany   |
| Universität Gottingen (Scholl of Forest Science)  | Germany   |
| Universidad de Buenos Aires   | Argentina |
| Universidad de Buenos Aires (Specific: School of Economics)   | Argentina |
| Universidad de Congreso (Specific: Architecture)  | Argentina |
| Universidad de Congreso (Specific: Psychology)  | Argentina |
| Universidad de Congreso (General Agreement)   | Argentina |
| Universidad Nacional de la Plata  | Argentina |
| Universidad Nacional de Rio Cuarto  | Argentina |
| Universidad Nacional del Noreste de la Provincia de Buenos Aires (Programa de Intercambios)   | Argentina |
| Universidad Nacional del Noreste de la Provincia de Buenos Aires (Acuerdo General Agreement)  | Argentina |
| Universidad Nacional del Sur  | Argentina |
| Universidad San Carlos (General Agreement)  | Guatemala |
| Netaji Institute of Technology, New Delhi   | India     |
| Central University of Rajasthan (General Agreement)   | India     |
| University of Sambalpur   | India     |
| Kharazmi University (General Agreement)   | Iran      |
| Dublin City University (Letter of Intent)   | Ireland   |
| Trinity College Dublin (Letter of Intent)   | Ireland   |
| In Tavola Cooking Academy (General Agreement)   | Italy     |
| Kyushu University   | Japan     |
| Nagaoka University of Technology (Specific: Student Exchange)   | Japan     |
| Nagaoka University of Technology (General Agreement)  | Japan     |
| Nagaoka University of Technology (Parallel Program Civil Engineering)   | Japan     |
| Nagaoka University of Technology y Topy Industry  | Japan     |
| The University of Tokyo (Letter of Intent)  | Japan     |
| University of Nagoya (Specific: Student Exchange School of Mechanical and Electrical Engineering, School of Chemical Science)                                 | Japan     |
| Centro de Estudios de Justicia de las Américas, Poder Judicial del Estado de Nuevo León y el Instituto de Estudios Comparados en Ciencias Penales y Sociales. | Mexico    |
| Comisión Económica para América Latina y el Caribe de la ONU.   | ONU       |
| Universidad Alas Peruanas   | Peru      |
| Universidad Católica Santo Toribio de Magrovejo (General Agreement)   | Peru      |
| Universidad Científica del Sur  | Peru      |
| Universidad de Moquegua (General Agreement)   | Peru      |

| Organization/Institutions  | Countries   |
|--|-------------|
| Universidad de San Martín de Porres (Specific: CIDICS)   | Peru        |
| Universidad de San Martín de Porres (Specific: Double Degree School of Management and Accounting)                | Peru        |
| Universidad de San Martín de Porres (Specific; Student Exchange School of Management and Accounting)             | Peru        |
| Universidad de San Martín de Porres (General Agreement)  | Peru        |
| Universidad Santiago Antúnez   | Peru        |
| Poznan University of Technology (Specific Agreement)   | Poland      |
| Poznan University of Technology (General Agreement)  | Poland      |
| Wroclaw University of Science and Technology (Specific)  | Poland      |
| Wroclaw University of Science and Technology (General Agreement)   | Poland      |
| Universidad Interamericana de Puerto Rico (Specific)   | Puerto Rico |
| Universidad Interamericana de Puerto Rico (General Agreement)  | Puerto Rico |
| National Research University of Electronic Technology (Letter of Understanding)                                  | Russia      |
| Saint – Petersburg State University (Specific: Proyecto TOKAMAK School of Mechanical and Electrical Engineering) | Russia      |
| Saint – Petersburg State University (General Agreement)  | Russia      |
| Asociación Latinoamericana – Rusa ALAR   | Russia      |
| Busan University of Foreign Studies (General Agreement)  | South Korea |
| Hankuk University of Foreign Studies   | South Korea |
| Hanyang University   | South Korea |
| Korea Foundation   | South Korea |
| Sun Moon University  | South Korea |
| Asociación Universitaria Iberoamericana de Posgrado  | Spain       |
| Casa Asia (General Agreement)  | Spain       |
| Centro de Estudios Ambientales del Mediterráneo (General Agreement)  | Spain       |
| Centro de Investigaciones Energéticas Medioambientales y Tecnológicas CIEMAT (General Agreement)                 | Spain       |
| Fundación Carolina   | Spain       |
| Grupo Europeo de Magistrados para la Mediación de España (Specific Leyes)  | Spain       |
| IDCQ Hospitales y Sanidad (Specific Facultad de Medicina)  | Spain       |
| Instituto Catalán de Oncología   | Spain       |
| Instituto Cervantes  | Spain       |
| Instituto de Astrofísica de Canarias (Letter of Intent)  | Spain       |
| Instituto de Investigaciones Biomédicas “Alberto Sols”   | Spain       |
| L’Institut D’Investigació Biomédica de Bellvitge (Convenio General)  | Spain       |
| Universidad Autónoma de Barcelona (Specific School of Economics)   | Spain       |

| Organization/Institutions   | Countries |
|---|-----------|
| Universidad Autónoma de Barcelona (General Agreement)   | Spain     |
| Universidad Autónoma de Madrid  | Spain     |
| Universidad Camilo José Cela (General Agreement)  | Spain     |
| Universidad Castilla la Mancha (General Agreement)  | Spain     |
| Universidad Castilla la Mancha (Specific)   | Spain     |
| Universidad Complutense de Madrid   | Spain     |
| Universidad de Alicante (Specific: Ing. Civil)  | Spain     |
| Universidad de Almería (Specific: Movilidad)  | Spain     |
| Universidad de Almería (General Agreement)  | Spain     |
| Universidad de Barcelona (Thesis Joint Guardianship)  | Spain     |
| Universidad de Barcelona (General Agreement)  | Spain     |
| Universidad de Cantabria  | Spain     |
| Universidad de Extremadura (General Agreement)  | Spain     |
| Universidad de Girona (General Agreement)   | Spain     |
| Universidad de Granada (General Agreement)  | Spain     |
| Universidad de Islas Baleares   | Spain     |
| Universidad de Islas Baleares (Specific Agreement)  | Spain     |
| Universidad de Islas Baleares (Specific: Double Degree Doctorate School of Chemical Science)                  | Spain     |
| Universidad de la Laguna (Anexo: Facultad de Ciencias Forestales)   | Spain     |
| Universidad de la Laguna (Anexo: FIME)  | Spain     |
| Universidad de la Laguna (Specific: Student Exchange in Aerospace Science)                                    | Spain     |
| Universidad de la Laguna (GENERAL AGREEMENT)  | Spain     |
| Universidad de Las Palmas de Gran Canarias  | Spain     |
| Universidad de Málaga (General Agreement for Thesis Joint Guardianship)                                       | Spain     |
| Universidad de Málaga (General Agreement)   | Spain     |
| Universidad de Murcia (Specific School of Social Work)  | Spain     |
| Universidad de Murcia (General Agreement)   | Spain     |
| Universidad de Oviedo   | Spain     |
| Universidad de Salamanca (Specific: Doble Degree School of Political Science Facultad. de Ciencias Políticas) | Spain     |
| Universidad de Salamanca (General Agreement)  | Spain     |
| Universidad de Sevilla (Specific FOD)   | Spain     |
| Universidad de Sevilla (Specific: Student Exchange School of Sport Organization FOD)                          | Spain     |
| Universidad de Sevilla (General Agreement)  | Spain     |
| Universidad de Valencia   | Spain     |

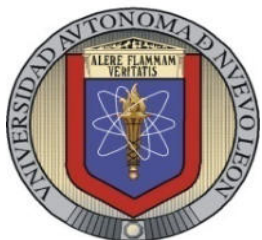
| Organization/Institutions  | Countries      |
|--|----------------|
| Universidad de Valencia (Specific: Student Exchange)                 | Spain          |
| Universidad de Zaragoza (Specific: Student Exchange)                 | Spain          |
| Universidad de Zaragoza (General Agreement)                          | Spain          |
| Universidad Internacional de Andalucía                               | Spain          |
| Universidad Miguel Hernández de Elche (Specific: Double Degree)      | Spain          |
| Universidad Miguel Hernández de Elche (General Agreement)            | Spain          |
| Universidad Pablo de Olavide de Sevilla                              | Spain          |
| Universidad Pablo de Olavide de Sevilla (Specific: Psicología)       | Spain          |
| Universidad Politécnica de Madrid                                    | Spain          |
| Universidad Politécnica de Madrid (Specific: Student Exchange)       | Spain          |
| Universidad Politécnica de Valencia (General Agreement)              | Spain          |
| Universidad Pública de Navarra (Specific: Student Exchange)          | Spain          |
| Universidad Pública de Navarra (General Agreement)                   | Spain          |
| Universidad Santiago de Compostela (General Agreement)               | Spain          |
| Universidad Santiago de Compostela (Mobility of personnel)           | Spain          |
| Universidad Santiago de Compostela (Specific: Student Exchange)      | Spain          |
| Karolinska Institutet  | Sweden         |
| Cranfield University (Letter of Understanding)                       | United Kingdom |
| University of Nottingham   | United Kingdom |
| University of Nottingham (Specific: Double Degree School of Biology) | United Kingdom |
| University of Aberdeen (Letter of Intent)                            | United Kingdom |
| Universidad de la República (General Agreement)                      | Uruguay        |
| Arkansas State University (Specific School of Sports Organization)   | USA            |
| Arkansas State University (General Agreement)                        | USA            |
| Arkansas State University (Agreement Protocol)                       | USA            |
| City University of Seattle (Specific: Management)                    | USA            |
| City University of Seattle (Specific: Psychology)                    | USA            |
| City University of Seattle (General Agreement)                       | USA            |
| Des Moines Area Community College (General Agreement)                | USA            |
| Duke University (General Agreement)                                  | USA            |
| Hamline University (General Agreement)                               | USA            |
| Northern Arizona University  | USA            |
| South Texas College (Specific Agreement)                             | USA            |

| Organization/Institutions   | Countries |
|---|-----------|
| South Texas College (Letter of Understanding)                             | USA       |
| St. Louis College of Pharmacy (Specific: School of Chemical Science)      | USA       |
| St. Louis College of Pharmacy (General Agreement)                         | USA       |
| Texas A&M International University (Specific: School of Chemical Science) | USA       |
| Texas A&M International University (General Agreement)                    | USA       |
| Texas A&M University at Kingsville (Specific: CIDEB)                      | USA       |
| Texas State University  | USA       |
| Tulane University, Law School   | USA       |
| University of Miami   | USA       |
| University of Texas at El Paso (General Agreement)                        | USA       |
| University of Texas at San Antonio  | USA       |
| University of Texas Rio Valley (General Agreement)                        | USA       |
| Leland Stanford Junior University   | USA       |
| University of Nuevo México (Specific: Student Exchange)                   | USA       |
| University of Idaho   | USA       |
| University of Texas at Arlington (Specific: School of Social Work)        | USA       |
| University of Texas at Austin (Specific: School of Social Work)           | USA       |
| West Virginia State University (General Agreement)                        | USA       |
| Western Illinois University   | USA       |
| Western New México University (Specific: FOD)                             | USA       |
| Western New Mexico University (General Agreement)                         | USA       |
| Organización de Estados Americanos (OEA)                                  | USA       |

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*Source: Centro de Internacionalización de la Universidad Autónoma de Nuevo León (UANL, 2022)*

## APPENDIX II: Qualitative Interview Instrument (Academics)



# UNIVERSIDAD AUTÓNOMA DE NUEVO LEÓN

## FACULTAD DE CIENCIAS POLÍTICAS Y

## RELACIONES INTERNACIONALES



### ACADEMICS

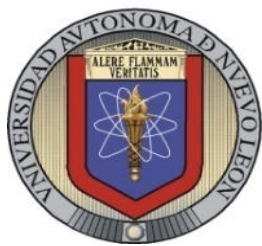
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Good afternoon Dr./Mr./Mrs./Ms. \_\_\_\_\_, my name is Issac Guzmán, and I am currently preparing to obtain a Ph.D. degree in International Relations, Business, and Diplomacy at the School of Political Science and International Relations at the Universidad Autónoma de Nuevo León. Dr. \_\_\_\_\_ gave me your contact information and told me that interviewing you would be very suitable for the qualitative section of my thesis. I would like to thank you for taking time out of your schedule for this interview, and I would also like to inform you that all the valuable information given will be used solely for academic purposes in the construction of my Ph.D. dissertation "Impact of International Academic Mobility in Multicultural Competence Acquisition for Global Employment Market Readiness of Students Enrolled in Engineering Programs at The Universidad Autónoma de Nuevo León".

The objective is to analyze the impact that having international academic mobility has in the acquisition of multicultural competence, as well as the importance of this competence on the readiness of the student for the global labor market. I would also like to let you know that due to your status as an expert in this line of investigation, all the information you provide will be very helpful and highly appreciated. Please feel free to extend your answers as long as possible. If you would like to read my dissertation once it is completed, I would be very honored to send you a digital copy.

| Construct                | Category                            | Item | Question  |
|--------------------------|-------------------------------------|------|---|
| Multicultural Competence | X=<br>Attitude                      | AAT1 | Why is valuing and respecting other cultures important when working in a global company? (Grigoryan & Schwartz, 2020)?  |
|                          |                                     | AAT2 | On many occasions, individuals do not have a critical self-reflection of their culture at an intrapersonal or interpersonal level. Why is cultural humility an important part of multicultural competence for a higher education graduate working in a global company? (Hughes et al., 2020)                        |
|                          |                                     | AAT3 | When living in a multicultural society there are differences in beliefs, convictions, and practices; and individuals are adherent to their own. Why would you say that tolerance is an important characteristic that a higher education graduate must possess to work at a global company? (Verkuyten et al., 2022) |
|                          |                                     | AAT4 | What attitudinal qualities are most important for a higher education graduate to compete for a job position in a global company? Why? (Deardorff, 2006)   |
|                          | X=<br>Knowledge and Understanding   | AKU1 | How could making assumptions or stereotyping one's own culture and other cultures affect the way a corporation conducts its business? (Lustig & Koester, 2010)  |
|                          |                                     | AKU2 | What is the importance of having a cultural assessment (beliefs, values, and practices) of the country where a corporation has operations? (Shealy, 2016)   |
|                          |                                     | AKU3 | Besides linguistic skills, what elements are key to being able to communicate effectively with an individual or group of individuals from another country? Why? (Braslauskas, 2021)   |
|                          |                                     | AKU4 | What knowledge and understanding of other cultures is essential for higher education graduates aspiring to a job vacancy within global companies? Why? (Hamilton et al., 1998)  |
|                          | X=<br>Skills                        | ASK1 | Why do you think that an employee with a high level of cultural adaptability is an important element in a global company? Why? (Stoermer et al., 2020)  |
|                          |                                     | ASK2 | Would you say that besides the linguistic skills of a foreign language, the use of said language is tied to the culture of that country? Why? (Ho, 2009)  |
|                          |                                     | ASK3 | Would teaching students how to integrate their knowledge across disciplines or cultural contexts help them stand out in the global labor market? Why? (Yershova et al., 2000)   |
|                          |                                     | ASK4 | What skills do you think are important for a higher education graduate to successfully operate within a global company? Why? (Rakowska & de Juana-Espinosa, 2021)   |
| Global Labor Market      | Y=<br>Global Labor Market Readiness | AGR1 | Would you say that a higher education graduate who participated in an academic mobility program, is more flexible to adapt and work with another culture in the future? Why? (Sarwari & Wahab, 2017)  |
|                          |                                     | AGR2 | Do you think that having successfully developed attitude, knowledge and understanding, and skills will increase the employability level within a global company of a higher education graduate? Why? (Rakowska & de Juana-Espinosa, 2021)   |
|                          |                                     | AGR3 | What are the most important competencies for a higher education graduate to possess to have a higher employability level within a global company? Why? (Rakowska & de Juana-Espinosa, 2021)   |





UNIVERSIDAD AUTÓNOMA DE NUEVO LEÓN

FACULTAD DE CIENCIAS POLÍTICAS Y

RELACIONES INTERNACIONALES

ACADÉMICOS

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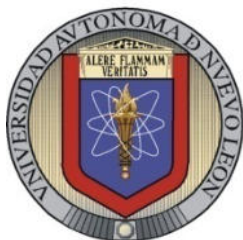


Buenas tardes Dr./Dra./Sr./Sra. \_\_\_\_\_, mi nombre es Issac Guzmán, actualmente me encuentro cursando el programa doctoral en Relaciones Internacionales, Negocios y Diplomacia dentro de la Facultad de Ciencias Políticas y Relaciones Internacionales de la Universidad Autónoma de Nuevo León. El Dr./Dra. \_\_\_\_\_ me brindo su información de contacto y me comento que usted sería una persona muy apropiada para la sección cualitativa de mi tesis. Quiero agradecerle enormemente que me brinde un poco de tiempo de su agenda para esta entrevista, también quisiera informarle que toda la valiosa información que usted me brinde, será utilizada meramente con fines académicos en la construcción de mi tesis doctoral “El Impacto de la Movilidad Académica Internacional en la Adquisición de la Competencia Multicultural para el Alistamiento al Mercado Laboral Global de Estudiantes Inscritos en Programas de Ingeniería dentro de la Universidad Autónoma de Nuevo León”.

El objetivo es conocer el impacto que tiene el tener una experiencia de una movilidad académica internacional en la adquisición de la competencia multicultural, así como la importancia que esta competencia tiene en el alistamiento al mercado laboral global de los estudiantes. Así mismo quisiera también comentarle que toda la información que usted brinde será de mucha importancia y enormemente apreciada dado a su estatus como experto en este tema y línea de investigación. Siéntase con la libertad de desarrollar sus respuestas lo más posible. Si usted quisiera leer mi tesis ya terminada, sería un honor enviarle una copia digital.

| Constructo                | Categoría   | Ítem | Pregunta  |
|---------------------------|---|------|---|
| Competencia Multicultural | X=<br>Actitud                                     | AAT1 | ¿Por qué es importante valorar y respetar otras culturas para trabajar en una compañía global? (Grigoryan & Schwartz, 2020)   |
|                           |   | AAT2 | En muchas ocasiones, los individuos no tienen una autorreflexión crítica sobre su cultura a nivel intrapersonal o interpersonal. ¿Por qué cree que la humildad cultural es una parte importante de la competencia multicultural para un graduado universitario laborando dentro de una compañía global? (Hughes et al., 2020)       |
|                           |   | AAT3 | Cuando se vive en una Sociedad multicultural, existen diferencias en las creencias, convicciones y prácticas; y los individuos se adhieren a las propias. ¿Por qué diría que la tolerancia es una característica importante que un graduado universitario debe poseer para trabajar en una empresa global? (Verkuyten et al., 2022) |
|                           |   | AAT4 | ¿Qué cualidades actitudinales son las más importantes para que un graduado universitario pueda competir por una posición laboral dentro de una compañía global? ¿Por qué? (Deardorff, 2006)   |
|                           | X=<br>Conocimiento                                | AKU1 | ¿Cómo podría afectar la forma en que una compañía opera al hacer suposiciones o estereotipar otras culturas o la propia? (Lustig & Koza, 2010)  |
|                           |   | AKU2 | ¿Cuál es la importancia de tener un diagnóstico cultural (creencias, valores y prácticas) del país en el cual una corporación opera? (Shealy, 2016)   |
|                           |   | AKU3 | Aunado a las habilidades lingüísticas, ¿qué otros elementos son clave para la comunicación efectiva con un individuo o grupo de individuos de otro país? ¿Por qué? (Braslauskas, 2021)  |
|                           |   | AKU4 | ¿Qué conocimientos de otras culturas deben poseer los aspirantes a una vacante dentro de una compañía global? ¿Por qué? (Hamilton et al., 1998)   |
|                           | X=<br>Habilidades                                 | ASK1 | ¿Por qué cree usted que un empleado con un alto nivel de adaptabilidad sería una pieza importante dentro de una compañía global? ¿Por qué? (Stoermer et al., 2020)  |
|                           |   | ASK2 | ¿Usted diría que aparte de las habilidades lingüísticas de un idioma extranjero, el uso de ese idioma está vinculado a la cultura de ese idioma? ¿Por qué? (Ho, 2009)   |
|                           |   | ASK3 | ¿El enseñar a un alumno como integrar su conocimiento en otras disciplinas y otros contextos culturales podría ayudarles a sobresalir en el mercado laboral global? ¿Por qué? (Yershova et al., 2000)   |
|                           |   | ASK4 | ¿Qué habilidades cree que son importantes que posea un graduado universitario para que este opere exitosamente dentro de una compañía global? ¿Por qué? (Rakowska & de Juana-Espinosa, 2021)  |
| Mercado Laboral Global    | Y=<br>Alistamiento para el Mercado Laboral Global | AGR1 | ¿Diría usted que un graduado universitario que participó en un programa de movilidad académica es más flexible para adaptarse o trabajar con otras culturas en el futuro? (Sarwari & Wahab, 2017)   |
|                           |   | AGR2 | ¿Cree usted que el haber desarrollado exitosamente la actitud, el conocimiento y habilidades en un graduado universitario incrementa su nivel de empleabilidad dentro de una compañía global? ¿Por qué? (Rakowska & de Juana-Espinosa, 2021)  |
|                           |   | AGR3 | ¿Cuáles son las competencias más importantes que un graduado universitario debe poseer para tener un nivel más alto de empleabilidad dentro de una compañía global? ¿Por qué? (Rakowska & de Juana-Espinosa, 2021)  |

APPENDIX III: Qualitative Interview Instrument (Employers)



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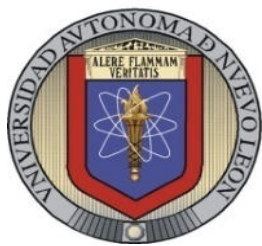
EMPLOYERS

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Good afternoon Dr./Mr./Mrs./Ms. \_\_\_\_\_, my name is Issac Guzmán, and I am currently preparing to obtain a Ph.D. degree in International Relations, Business, and Diplomacy at the School of Political Science and International Relations at the Universidad Autónoma de Nuevo León. Dr. \_\_\_\_\_ gave me your contact information and told me that interviewing you would be very suitable for the qualitative section of my thesis. I would like to thank you for taking time out of your schedule for this interview, and I would also like to inform you that all the valuable information given will be used solely for academic purposes in the construction of my Ph.D. dissertation "Impact of International Academic Mobility in Multicultural Competence Acquisition for Global Employment Market Readiness of Students Enrolled in Engineering Programs at The Universidad Autónoma de Nuevo León".

The objective is to analyze the impact that having international academic mobility has in the acquisition of multicultural competence, as well as the importance of this competence on the readiness of the student for the global labor market. I would also like to let you know that due to your status as an expert in this line of investigation, all the information you provide will be very helpful and highly appreciated. Please feel free to extend your answers as long as possible. If you would like to read my dissertation once it is completed, I would be very honored to send you a digital copy.

| Construct                | Category                            | Item | Question  |
|--------------------------|-------------------------------------|------|---|
| Multicultural Competence | X=<br>Attitude                      | EAT1 | Would you say that valuing and respecting other cultures is an important competence that a higher education graduate must have to work in a global company? Why? (Grigoryan & Schwartz, 2020)   |
|                          |                                     | EAT2 | On many occasions, individuals do not have a critical self-reflection of their culture at an intrapersonal or interpersonal level. Why is cultural humility an important part of multicultural competence for a higher education graduate working in a global company? (Hughes et al., 2020)                        |
|                          |                                     | EAT3 | When living in a multicultural society there are differences in beliefs, convictions, and practices; and individuals are adherent to their own. Why would you say that tolerance is an important characteristic that a higher education graduate must possess to work at a global company? (Verkuyten et al., 2022) |
|                          |                                     | EAT4 | What attitudinal qualities are most important for a higher education graduate to compete for a job position in a global company? Why? (Deardorff, 2006)   |
|                          | X=<br>Knowledge and Understanding   | EKU1 | How could making assumptions or stereotyping one's own culture and other cultures affect the way a corporation conducts its business? (Lustig & Koester, 2010)  |
|                          |                                     | EKU2 | What is the importance of having a cultural assessment (beliefs, values, and practices) of the country where a corporation has operations? (Shealy, 2016)   |
|                          |                                     | EKU3 | Besides linguistic skills, what elements are key to being able to communicate effectively with an individual or group of individuals from another country? Why? (Braslauskas, 2021)   |
|                          |                                     | EKU4 | What knowledge and understanding of other cultures is essential for higher education graduates aspiring to a job vacancy within global companies? Why? (Hamilton et al., 1998)  |
|                          | X=<br>Skills                        | ESK1 | Why do you think that an employee with a high level of cultural adaptability is an important element in a global company? Why? (Stoermer et al., 2020)  |
|                          |                                     | ESK2 | Would you say that besides the linguistic skills of a foreign language, the use of said language is tied to the culture of that country? Why? (Ho, 2009)  |
|                          |                                     | ESK3 | Would teaching students how to integrate their knowledge across disciplines or cultural contexts help them stand out in the global labor market? Why? (Yershova et al., 2000)   |
|                          |                                     | ESK4 | What skills do you think are important for a higher education graduate to successfully operate within a global company? Why? (Rakowska & de Juana-Espinosa, 2021)   |
| Global Labor Market      | Y=<br>Global Labor Market Readiness | EGR1 | Would you say that a higher education graduate who participated in an academic mobility program, is more flexible to adapt and work with another culture in the future? Why? (Sarwari & Wahab, 2017)  |
|                          |                                     | EGR2 | Do you think that having successfully developed attitude, knowledge and understanding, and skills will increase the employability level within a global company of a higher education graduate? Why? (Rakowska & de Juana-Espinosa, 2021)   |
|                          |                                     | AGR3 | What are the most important competencies for a higher education graduate to possess to have a higher employability level within a global company? Why? (Rakowska & de Juana-Espinosa, 2021)   |



UNIVERSIDAD AUTÓNOMA DE NUEVO LEÓN

FACULTAD DE CIENCIAS POLÍTICAS Y

RELACIONES INTERNACIONALES



## EMPLEADORES

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Buenas tardes Dr./Dra./Sr./Sra. \_\_\_\_\_, mi nombre es Issac Guzmán, actualmente me encuentro cursando el programa doctoral en Relaciones Internacionales, Negocios y Diplomacia dentro de la Facultad de Ciencias Políticas y Relaciones Internacionales de la Universidad Autónoma de Nuevo León. El Dr./Dra. \_\_\_\_\_ me brindo su información de contacto y me comento que usted sería una persona muy apropiada para la sección cualitativa de mi tesis. Quiero agradecerle enormemente que me brinde un poco de tiempo de su agenda para esta entrevista, también quisiera informarle que toda la valiosa información que usted me brinde, será utilizada meramente con fines académicos en la construcción de mi tesis doctoral “El Impacto de la Movilidad Académica Internacional en la Adquisición de la Competencia Multicultural para el Alistamiento al Mercado Laboral Global de Estudiantes Inscritos en Programas de Ingeniería dentro de la Universidad Autónoma de Nuevo León”.

El objetivo es conocer el impacto que tiene el tener una experiencia de una movilidad académica internacional en la adquisición de la competencia multicultural, así como la importancia que esta competencia tiene en el alistamiento al mercado laboral global de los estudiantes. Así mismo quisiera también comentarle que toda la información que usted brinde será de mucha importancia y enormemente apreciada dado a su estatus como experto en este tema y línea de investigación. Siéntase con la libertad de desarrollar sus respuestas lo más posible. Si usted quisiera leer mi tesis ya terminada, sería un honor enviarle una copia digital.

| Constructo                | Categoría   | Ítem | Pregunta  |
|---------------------------|---|------|---|
| Competencia Multicultural | X=<br>Actitud                                     | EAT1 | ¿Diría usted que respetar y valorar otras culturas es una competencia importante que un graduado universitario debe de poseer para trabajar en una compañía global? ¿Por qué? (Grigoryan & Schwartz, 2020)  |
|                           |   | EAT2 | En muchas ocasiones, los individuos no tienen una autorreflexión crítica sobre su cultura a nivel intrapersonal o interpersonal. ¿Por qué cree que la humildad cultural es una parte importante de la competencia multicultural para un graduado universitario laborando dentro de una compañía global? (Hughes et al., 2020)       |
|                           |   | EAT3 | Cuando se vive en una Sociedad multicultural, existen diferencias en las creencias, convicciones y prácticas; y los individuos se adhieren a las propias. ¿Por qué diría que la tolerancia es una característica importante que un graduado universitario debe poseer para trabajar en una empresa global? (Verkuyten et al., 2022) |
|                           |   | EAT4 | ¿Qué cualidades actitudinales son las más importantes para que un graduado universitario pueda competir por una posición laboral dentro de una compañía global? ¿Por qué? (Deardorff, 2006)   |
|                           | X=<br>Conocimiento                                | EKU1 | ¿Cómo podría afectar la forma en que una compañía opera al hacer suposiciones o estereotipar otras culturas o la propia? (Lustig & Koester, 2010)   |
|                           |   | EKU2 | ¿Cuál es la importancia de tener una evaluación cultural (creencias, valores y practicas) de un país donde la organización tiene operaciones? (Shealy, 2016)  |
|                           |   | EKU3 | Aunado a las habilidades lingüísticas, ¿qué otros elementos son clave para la comunicación efectiva con un individuos o grupo de individuos de otro país? ¿Por qué? (Braslauskas, 2021)   |
|                           |   | EKU4 | ¿Qué conocimientos de otras culturas deben poseer los aspirantes a una vacante dentro de una compañía global? ¿Por qué? (Hamilton et al., 1998)   |
|                           | X=<br>Habilidades                                 | ESK1 | ¿Por qué cree usted que un empleado con un alto nivel de adaptabilidad sería una pieza importante dentro de una compañía global? (Stoermer et al., 2020)  |
|                           |   | ESK2 | ¿Usted diría que aparte de las habilidades lingüísticas de un idioma extranjero, el uso de ese idioma está vinculado a la cultura de ese país? ¿Por qué? (Ho, 2009)   |
|                           |   | ESK3 | ¿El enseñar a un alumno como integrar su conocimiento en otras disciplinas y otros contextos culturales podría ayudarles a sobresalir en el mercado laboral? (Yershova et al., 2000)  |
|                           |   | ESK4 | ¿Qué habilidades cree que son importantes que posea un graduado universitario para que este pueda operar exitosamente dentro de una compañía global? ¿Por qué? (Rakowska & de Juana-Espinosa, 2021)   |
| Mercado Laboral Global    | Y=<br>Alistamiento para el Mercado Laboral Global | EGR1 | ¿Diría usted que un graduado universitario que participó en un programa de movilidad académica es más flexible para adaptarse o trabajar con otras culturas en el futuro? (Sarwari & Wahab, 2017)   |
|                           |   | EGR2 | ¿Cree usted que el haber desarrollado exitosamente la actitud, el conocimiento y habilidades en un graduado universitario incrementará su nivel de empleabilidad dentro de una compañía? ¿Por qué? (Rakowska & de Juana-Espinosa, 2021)   |
|                           |   | EGR3 | ¿Cuáles son las competencias más importantes que un graduado universitario debe poseer para tener un nivel más alto de empleabilidad dentro de una compañía global? ¿Por qué? (Rakowska & de Juana-Espinosa, 2021)  |

# APPENDIX IV: Quantitative Instrument (Survey Applied to Students with and without an International Mobility)

English Version.

| Construct            | Concept                    | Dimension                       | Items  | Operational Definition      |
|----------------------|----------------------------|---------------------------------|--|-----------------------------|
| Personal Information | Characteristics of subject | Name                            | First name, Last Name  | Name/Last Name              |
|                      |                            | Email                           | Email  | Email                       |
|                      |                            | Gender                          | What is your gender?   | Male/Female/Other           |
|                      |                            | Age                             | What is your age?  | Age                         |
|                      |                            | State of Origin                 | State of origin.   | State of Origin             |
|                      |                            | City/Country                    | What city of Mexico are you from? In case you are from another country, please specify the country and city. | Country/City                |
|                      |                            | Languages                       | What is your native language?  | Languages                   |
|                      |                            |                                 | Besides your native language, what other languages do you speak proficiently?                                | Languages                   |
|                      |                            |                                 | Did you learn the language during your academic formation previous to entering university                    | Yes/No                      |
|                      |                            |                                 | Did you learn the language in private lessons?   | Yes/No                      |
|                      |                            |                                 | Did you learn the language while living in a foreign country?  | Yes/No                      |
|                      |                            | School                          | ¿From what engineering school did you graduate?  | School                      |
|                      |                            | Mayor                           | What is your engineering mayor?  | Mayor                       |
|                      |                            | Country                         | Country where you had your academic mobility   | Country                     |
|                      |                            | City                            | City where you had your academic mobility  | City                        |
|                      |                            | University                      | Institution abroad where you had your academic mobility  | University                  |
|                      |                            | Academic Mobility Period        | Semester in which you started your academic mobility.  | Date                        |
|                      |                            |                                 | Semester in which you finished your academic mobility.   | Date                        |
|                      |                            | Socioeconomical Level           | According to the following options, what is your socioeconomical level of your family?                       | Socioeconomical Level       |
|                      |                            | Preparation prior to University | Your preparation prior to entering college was at a _____ institution.                                       | Private/Public              |
|                      |                            | Sponsorship for Mobility        | The possibility for you to have an academic mobility was thanks to?  | Scholarship/Own Income/Both |

|                        |  | Organism                        | What organism/institution helped you for your academic mobility to be possible?   | Organism/Institution   |
|------------------------|--|---------------------------------|---|--|
| <b>Self-Assessment</b> | Subject's view of self and others  | <b>Intercultural Abilities</b>  | <p>I am flexible of the opinions of others when working with people from different backgrounds (Fantini &amp; Tirmizi, 2006).</p> <p>I am a tolerant person, who accepts and respects the existing differences between cultures, races, ethnics, and different backgrounds (Fantini &amp; Tirmizi, 2006).</p> <p>I can adapt to environments with different customs, practices and values (Fantini &amp; Tirmizi, 2006).</p> <p>I have curiosity and a genuine interest to explore and understand traditions, customs and practices that are different than mine (Fantini &amp; Tirmizi, 2006).</p> <p>I keep a positive attitude and an open mind willing to explore new ideas (Fantini &amp; Tirmizi, 2006).</p> <p>I am constantly motivated to have intercultural interactions (Fantini &amp; Tirmizi, 2006).</p> <p>When I find myself in an intercultural interaction, I am empathetic to the customs and values of the other person if they are different than mine (Fantini &amp; Tirmizi, 2006).</p> <p>I am multiperceptive and I am aware that an individual or group of individuals from a culture different than mine have a different vision of the world and how it works, and my point of view can shape me to analyze a situation from different points of view (Fantini &amp; Tirmizi, 2006).</p> | <p>The variables will be measured through a Likert scale of 1 to 5 points according to the following</p> |
| <b>Attitude</b>        | <p>“Curiosity and openness, readiness to suspend disbelief about other cultures and belief about one’s own. Willingness to seek out or take up opportunities to engage with others [...]. Interest in discovering other perspectives on the interpretation of familiar and unfamiliar phenomena both in one’s own and in other cultures and cultural practices” (Byram M. , 2021, p. 131).</p> | <b>Value Cultural Diversity</b> | <p>Cultural diversity strengthens our educational experiences and enriches society as a whole (Mackie &amp; Smith, 2002).</p> <p>Cultural diversity harbors social cohesion and promotes cross-cultural dialogue and learning (Raewf &amp; Mahmood, 2021).</p> <p>Cultural diversity foments innovation and problem-solving (Thomas, et al., 2015).</p>   |  |
|                        |  | <b>Respect of Cultures</b>      | <p>I have respect for the practices and traditions of people with diverse cultural backgrounds, even when they oppose my own (Jackson &amp; Ruderman, 1995).</p> <p>I go out of my way to appreciate and understand the cultural heritage of people from different countries (Tervalon &amp; Murray-Garcia, 1998).</p> <p>It is my belief that the respect for other cultures is a fundamental aspect for being a global citizen (Fisher, et al., 2022).</p> <p>I can recognize and avoid conversations that reinforce stereotypes (Lankester &amp; Alexopoulos, 2021).</p>   |  |
|                        |  | <b>Openness</b>                 | <p>I am willing to interact with host culture members when I live/visit other countries (I didn’t avoid them or primarily seek out my compatriots) (Fantini &amp; Tirmizi, 2006).</p> <p>I am willing to take on various roles appropriate to different situations (e.g., in the family, as a volunteer, etc.) (Fantini &amp; Tirmizi, 2006).</p> <p>I demonstrate a willingness to try to understand differences in the behaviors, values, attitudes, and styles of host members when I live/visit other countries (Fantini &amp; Tirmizi, 2006).</p>  |  |
|                        |  | <b>Toleration</b>               | <p>I demonstrate willingness to deal with my emotions and frustrations with the host culture when I live/visit other countries (in addition to the pleasures it offered) (Fantini &amp; Tirmizi, 2006).</p> <p>I demonstrate a willingness to deal with different ways of perceiving, expressing, interacting, and behaving when I live/visit other countries (Fantini &amp; Tirmizi, 2006).</p> <p>I am willingness to suspend judgment and appreciate the complexities of communicating and interacting interculturallly with people from different countries or cultural backgrounds (Fantini &amp; Tirmizi, 2006).</p>  |  |
|                        |  |                                 |   |  |
|                        |  |                                 |   |  |
|                        |  |                                 |   |  |
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|                        |  |                                 |   |  |



|                                    |  |  |   |  |
|------------------------------------|--|--|---|--|
|                                    |  | and backgrounds (UNESCO, 1995, p. 2)   | I have a tolerance to cultural differences, even if they challenge my own beliefs and values (Deardorff, 2011a).  | g: 1-<br>Strongly<br>Disagree<br>; 2-<br>Disagree<br>; 3-<br>Neither<br>agree or<br>disagree;<br>4 -<br>Agree; 5<br>-<br>Strongly<br>Agree |
|                                    |  | <b>Curiousness to learn of other Cultures</b><br>An individual's interest in exploring and understanding different cultural traditions, customs, and practices (Mikhaylov, 2016; Sobkowiak, 2019)  | When I live/visit other countries or interact with people from a different cultural background, I am willing to learn from my hosts, their language, and their culture (Fantini & Tirmizi, 2006).   |  |
|                                    |  |  | When I live/visit other countries or interact with people from a different cultural background, I demonstrate willingness to show interest in new cultural aspects (e.g., to understand the values, history, traditions, etc.) (Fantini & Tirmizi, 2006). |  |
|                                    |  |  | Being curious of other cultures can be a source to positively improve my professional and personal success (Cox & Blake, 1991).   |  |
|                                    |  |  | I enjoy interacting with people from different cultures. (Cultural Intelligence Center 2005; Ang & Van Dyne, 2008)  |  |
|                                    |  | <b>Cultural Humility (Self-awareness/Identity)</b><br>This process ensures that one remains open to realities other than oneself and considers the continuous search for knowledge while being flexible to new perspectives according to one's own culture (Tervalon and Murray-García, 1998). | I know of the importance of cultural humility (awareness of one's own culture) (Tervalon & Murray-García, 1998).  |  |
|                                    |  |  | I am aware of my own cultural rules and biases (Calahan, 2017)  |  |
|                                    |  |  | I demonstrate willingness to deal with the ethical implications of my choices when I live/visit other countries (in terms of decisions, consequences, results, etc.) (Fantini & Tirmizi, 2006).   |  |
|                                    |  |  | I realize the importance of differences and similarities across my own and the host language and culture (Fantini & Tirmizi, 2006).   |  |
| <b>Knowledge and Understanding</b> | Another type of knowledge is conceptual, reflecting an understanding of how the particular country views and values central concerns such as appropriate forms of behavior, individual rights, group membership and its associated obligations, and obligations to the state (Bird, Heinbuch, Roger, & | <b>Internal Diversity and Heterogeneity of Cultural Groups</b><br>The cultural perceived differences between an individual and another (Jackson, 1992; Cox T., 1993; Kapur, 2020)  | I could discuss and contrast various behavioral patterns in my own culture with those in the host country when I lived/visited other countries (Fantini & Tirmizi, 2006).   |  |
|                                    |  |  | I believe that being aware of the internal diversity of a cultural group is very important to execute an effective cross-cultural communication (Deardorff, 2011a).   |  |
|                                    |  |  | Acknowledging that there is a difference within groups will help promote understanding and inclusivity and avoid stereotypes in the way (Lankester & Alexopoulos, 2021).  |  |
|                                    |  |  | When I have an intercultural interaction, I approach it with the understanding that individuals from the same cultural groups may have different beliefs, values and practices (Jackson & Ruderman, 1995).  |  |
|                                    |  | <b>Awareness of One's and Other's Assumptions</b><br>recognition and understanding of the implicit or explicit beliefs, attitudes, and expectations that the hold about ourselves and others (Hofstede G. , 2001; Bennett M., 2013; Bennett J. M., 2015).                                      | When I lived/visited other countries, I realized the importance of dangers of generalizing individual behaviors as representative of the whole culture (Fantini & Tirmizi, 2006).   |  |
|                                    |  |  | When I lived/visited other countries, I realized the importance of my personal values that affected my approach to ethical dilemmas and their resolution (Fantini & Tirmizi, 2006).   |  |
|                                    |  |  | I could describe common interactional behaviors among the people of the host country in social and professional areas (e.g., family roles, teamwork, problem solving, etc.) (Fantini & Tirmizi, 2006).  |  |
|                                    |  |  | I am aware of how my own experiences have shaped my personal rules or biases about cultural differences. (Calahan, 2017)  |  |

|        |   |  |  |  |
|--------|---|--|--|--|
| Skills | McNulty, 1993, p. 417).   | <b>Knowledge of Beliefs, Values and Practices</b><br>Understanding of the cultural, religious, and social beliefs, values and practices of oneself and others UNESCO, 2013.  | I differentiate the complex beliefs, values, communication styles, customs, politics, history and economics of other cultural groups. (Calahan, 2017)  |  |
|        |   |  | I am conscious of the cultural knowledge I apply to cross-cultural interactions. (Cultural Intelligence Center 2005;Ang & Van Dyne, 2008)  |  |
|        |   |  | I check the accuracy of my cultural knowledge as I interact with people from different cultures. (Cultural Intelligence Center 2005;Ang & Van Dyne, 2008)  |  |
|        |   |  | I actively seek out opportunities to learn about the beliefs and traditions of different cultural groups (Gudykunst & Kim, 2003).  |  |
|        | <b>Communicative Awareness (Verbal and Non-Verbal)</b><br>an individual's ability to perceive and understand the nuances of verbal and non-verbal communication in various social and cultural contexts (Lustig & Koester, 2010; UNESCO, 2013)  | <b>Communicative Awareness (Verbal and Non-Verbal)</b><br>an individual's ability to perceive and understand the nuances of verbal and non-verbal communication in various social and cultural contexts (Lustig & Koester, 2010; UNESCO, 2013) | I change my verbal behavior (e.g., accent, tone) when a multi-cultural interaction requires it. (Cultural Intelligence Center 2005;Ang & Van Dyne, 2008)   |  |
|        |   |  | I use pause and silence differently to suit different multi-cultural situations. (Cultural Intelligence Center 2005;Ang & Van Dyne, 2008)  |  |
|        |   |  | I vary the rate of my speaking when a multi-cultural situation requires it. (Cultural Intelligence Center 2005;Ang & Van Dyne, 2008)   |  |
|        |   |  | I change my nonverbal behavior when a multi-cultural situation requires it. (Cultural Intelligence Center 2005;Ang & Van Dyne, 2008)   |  |
|        | Set of abilities to successfully interact with people from other cultures, such as to listen, observe, evaluate, analyze, interpret, multiperspectivity, empathy, flexibility, adapting, linguistic and mediation (Deardorff, 2006; Barret, Byram, Lázár, Mompoin-Gaillard, & Philippou, 2014). | <b>Multiperspectivity</b><br>an individuals' view of the world and how it operates and varies from others, and it continues to be molded and influenced depending on the point of view in which it is analyzed (Hanvey, 1975).                 | I was able to contrast the host culture's view of the world from my own (Fantini & Tirmizi, 2006).   |  |
|        |   |  | I believe that being able to accept and understand that there are different perspectives and views of the world, is a key aspect for problem-solving and decision-making, when there are individuals from different backgrounds involved in the situation (Dervin, 2010) |  |
|        |   |  | I am able to adopt multiple perspectives when interacting in an intercultural situation (Deardorff, 2017)  |  |
|        |   |  | I actively seek to understand and appreciate the perspective of individuals with a different cultural background (Jackson & Ruderman, 1995).   |  |
|        |   | <b>Empathy</b><br>The ability to place oneself in another person's position or an openness to others and to divergent customs and values. (Van Der Zee & Van Oudenhoven 2000)  | I act in a supportive way that recognizes the feelings of other cultural groups. (Calahan, 2017)   |  |
|        |   |  | I actively put myself in the position of individuals from other cultural backgrounds to have a better understanding of the experiences (Deardorff, 2011a).   |  |
|        |   |  | I am empathetic towards the feelings and perspectives, with a strive to understand, of individuals from other cultural backgrounds (Tervalon & Murray-Garcia, 1998).   |  |
|        |   |  | I constantly look for opportunities to engage with individuals from other cultural backgrounds to develop empathy (Gudykunst & Kim, 2003).   |  |
|        |   | <b>Cognitive Flexibility</b><br>"the ability to change and adapt one's way of thinking according to the situation or context" (Barret et al., 2014, p. 20)   | I believe that there are multiple valid ways of thinking and problem-solving, and I am willing to explore them (Dervin, 2010).   |  |
|        |   |  | I adjust my cultural knowledge as I interact with people from a culture that is unfamiliar to me. (Cultural Intelligence Center 2005;Ang & Van Dyne, 2008)   |  |
|        |   |  | I am confident that I can socialize with locals in a culture that is unfamiliar to me. (Cultural Intelligence Center 2005;Ang & Van Dyne, 2008)  |  |
|        |   |  | I demonstrated flexibility when interacting with people from the host culture (Fantini & Tirmizi, 2006).   |  |
|        |   | <b>Behavior Adaptation</b><br>The ability a person has to  | I demonstrated a capacity to interact appropriately in a variety of different social situations in the host culture (Fantini & Tirmizi, 2006).   |  |
|        |   |  | I am sure I can deal with the stresses of adjusting to a culture that is new to me. (Cultural Intelligence Center 2005;Ang & Van Dyne, 2008)   |  |

|  |  |  |   |  |
|--|--|--|---|--|
|  |  | change their behavior to accommodate what is expected by other cultures (Margaret Pusch, 2009).  | I am willing to adapt my behavior to communicate appropriately in the foreign country (e.g., in non-verbal and other behavioral areas) as needed for different situations (Fantini & Tirmizi, 2006).                                  |  |
|  |  | <b>Linguistic Skills</b><br>“refer to the extent to which individuals can speak easily and accurately in the language that cross-cultural interactions require” (Shannon & Begley , 2008, p. 43) | I constantly seek to better respect and understand the behavioral expectations of individuals from different cultural backgrounds (Deardorff, 2011a).   |  |
|  |  |  | I have developed solid linguistic skills that allow me to have an effective communication in different languages, which enhances my ability to have a connection with individuals from different cultural backgrounds (Dervin, 2010). |  |
|  |  |  | I constantly seek opportunities to practice and increase my linguistic skills through interactions with individuals who speak a different language (Deardorff, 2011a).  |  |
|  |  |  | I am willing to learn additional languages to enhance my intercultural communication abilities (Deardorff, 2011a).  |  |
|  |  |  | I am a firm believer that having solid linguistic skills is an important tool for bridging cultural divides and fostering international cooperation (Dervin, 2010).   |  |

Spanish version.

| Constructo                  | Concepto                          | Dimensión                | Ítems  | Definición Operacional      |
|-----------------------------|-----------------------------------|--------------------------|--|-----------------------------|
| <b>Preguntas de Control</b> | <b>Características del sujeto</b> | Nombre                   | Nombre completo  | Nombre/Apellido             |
|                             |                                   | Correo Electrónico       | Genero   | Correo Electrónico          |
|                             |                                   | Genero                   | Correo Electrónico   | Masculino/Femenino/Otros    |
|                             |                                   | Edad                     | Edad   | Edad                        |
|                             |                                   | Estado de origen         | Estado de origen   | Estado de origen            |
|                             |                                   | Ciudad/País              | Ciudad de origen   | Ciudad                      |
|                             |                                   | Idioma                   | ¿Cuál es su lengua materna?  | Idioma                      |
|                             |                                   |                          | Aparte de su lengua materna, ¿qué otros idiomas que domina?                                  | Idiomas                     |
|                             |                                   |                          | ¿Aprendiste el idioma en tu formación académica previa a la licenciatura?                    | Si/No                       |
|                             |                                   |                          | ¿Aprendiste el idioma tomando clases particulares?   | Si/No                       |
|                             |                                   |                          | ¿Aprendiste el idioma viviendo en el extranjero?   | Si/No                       |
|                             |                                   | Facultad                 | Facultad de Procedencia  | Facultad                    |
|                             |                                   | Especialidad             | Carrera  | Especialidad                |
|                             |                                   | País                     | País en el que realizó su movilidad académica  | País                        |
|                             |                                   | Ciudad                   | Ciudad en el que realizó su movilidad académica  | Ciudad                      |
|                             |                                   | Universidad              | Institución en el extranjero donde realizaste tu movilidad académica                         | Universidad                 |
|                             |                                   | Periodo de Movilidad     | Semestre en el que inicio su movilidad académica   | Fecha                       |
|                             |                                   |                          | Semestre en el que termino su movilidad académica  | Fecha                       |
|                             |                                   | Nivel socioeconómico     | ¿De acuerdo con las siguientes opciones en qué nivel socioeconómico se encuentra tu familia? | Nivel socioeconómico        |
|                             |                                   | Tipo de Preparación      | Tu preparación académica antes de ingresar a la licenciatura fue en una institución:         | Privada/Pública             |
|                             |                                   | Posibilidad de Movilidad | La posibilidad de que realizaras tu movilidad académica fue gracias a                        | Beca/Ingresos Propios/Ambos |
|                             |                                   | Organismo                | ¿Qué organismo te otorgó la beca para que tu movilidad fuera posible?                        | Organismo                   |

|                |   |   |   |
|----------------|---|---|---|
| Autoevaluación | Visión del sujeto sobre sí mismo y los demás  | Habilidades interculturales   | Soy flexible a la hora de colaborar con personas de diferentes culturas respecto a sus opiniones. (Fantini & Tirmizi, 2006)   |
|                |   |   | Soy una persona tolerante, la cual acepta y respeta las diferencias que existen entre personas de culturas, razas, etnias, religiones y orígenes diferentes. (Fantini & Tirmizi, 2006)  |
|                |   |   | Puedo adaptarme a un entorno con costumbres, prácticas y valores diferentes al mío. (Fantini & Tirmizi, 2006)   |
|                |   |   | Tengo la curiosidad y un genuino interés por explorar y comprender tradiciones, costumbres y prácticas culturales diferentes. (Fantini & Tirmizi, 2006)   |
|                |   |   | Mantengo una actitud positiva y una mente abierta dispuesta a explorar nuevas ideas. (Fantini & Tirmizi, 2006)  |
|                |   |   | Estoy constantemente motivado a tener interacciones multiculturales. (Fantini & Tirmizi, 2006)  |
|                |   |   | Cuando me encuentro en una interacción multicultural, soy empático de la otra persona cuando esta tiene costumbres y valores distintos a los míos. (Fantini & Tirmizi, 2006)  |
|                |   |   | Soy multiperceptivo y estoy consciente que un individuo o grupo de individuos provenientes de una cultura distinta a la mía tienen una visión distinta del mundo y de cómo este funciona, y mi punto de vista puede moldear para analizar una situación desde diferentes puntos de vista. (Fantini & Tirmizi, 2006) |
| Actitud        | "Curiosidad y franqueza, disposición a suspender la incredulidad sobre otras culturas y la creencia en la propia. Disposición a buscar o aprovechar oportunidades para relacionarse con los demás [...]. Interés por descubrir otras perspectivas sobre la interpretación de fenómenos familiares y desconocidos, | <b>Valorar la Diversidad Cultural</b><br>"La representación, en un sistema social, de personas con distintas características de grupo y significado cultural". (Cox,1993)                           | La diversidad cultural refuerza nuestras experiencias educativas y enriquece al resto de la sociedad (Mackie & Smith, 2002).  |
|                |   |   | La diversidad cultural fomenta la cohesión social y favorece el diálogo y el aprendizaje intercultural (Raewf & Mahmood, 2021).   |
|                |   |   | La diversidad cultural fomenta la innovación y la resolución de problemas (Thomas, et al., 2015).   |
|                |   | <b>Respeto de las Culturas</b><br>Comprender la cultura que rodea a una persona o a un grupo de personas. (Johnson, 2000)   | Respeto las prácticas y tradiciones de personas con distintos orígenes culturales, incluso cuando se oponen a las mías. (Jackson & Ruderman, 1995).   |
|                |   |   | Me esfuerzo por apreciar y comprender el patrimonio cultural de personas de distintos países (Tervalon & Murray-García, 1998).  |
|                |   |   | Considero que el respeto por otras culturas es un aspecto fundamental para ser un ciudadano mundial (Fisher, et al., 2022).   |
|                |   | <b>Apertura</b><br>"Poseer una actitud dispuesta a explorar nuevas ideas" (Foronda, C., Baptiste, D.-L., Reinholdt, M. M., & Ousman, K.,2016)   | Reconozco y evito las conversaciones que refuerzan los estereotipos (Lankester & Alexopoulos, 2021).  |
|                |   |   | Estoy dispuesto a relacionarme con miembros de la cultura de acogida cuando vivo/visito otros países (no los evito ni busco principalmente a mis compatriotas) (Fantini & Tirmizi, 2006).   |
|                |   |   | Estoy dispuesto a asumir diversos papeles adecuados a diferentes situaciones (por ejemplo, en la familia, como voluntario, etc.) (Fantini & Tirmizi, 2006).   |
|                |   | <b>Tolerancia</b><br>La voluntad de las personas de aceptar y respetar las diferencias que existen entre personas de culturas, razas, etnias, religiones y orígenes diferentes (UNESCO, 1995, p. 2) | Cuando vivo o visito otros países, me dispongo a intentar comprender las diferencias en los comportamientos, valores, actitudes y estilos de los miembros de la sociedad o de la familia que me recibe. (Fantini & Tirmizi, 2006).  |
|                |   |   | Demuestro buena disposición para afrontar mis emociones y frustraciones con la cultura de acogida cuando vivo/visito otros países (Fantini & Tirmizi, 2006).  |
|                |   |   | Cuando vivo o visito otros países, me muestro dispuesto a aceptar distintas formas de percibir, expresar, interactuar y comportarme. (Fantini & Tirmizi, 2006).   |
|                |   |   | Estoy dispuesto a dejar de juzgar y a apreciar la complejidad de la comunicación y la interacción intercultural con personas de países o entornos culturales diferentes al mío. (Fantini & Tirmizi, 2006).  |
|                |   |   | Soy tolerante con las diferencias culturales, aunque cuestionen mis propias creencias y valores (Deardorff, 2011).  |

Las variables se medirán a través de una escala Likert de 1 a 5 puntos según lo siguiente : 1- Totalme

|                              |  |  |  |  |
|------------------------------|--|--|--|--|
| Conocimiento y Entendimiento | tanto en la propia como en otras culturas y prácticas culturales". (Byram M., 2021, p. 131).   | <b>Curiosidad por aprender de otras culturas</b><br>Interés por explorar y comprender tradiciones, costumbres y prácticas culturales diferentes. (Mikhaylov, 2016; Sobkowiak, 2019)  | Quando visito/vivo en otros países o me relaciono con personas de un entorno cultural diferente, estoy dispuesto a aprender su lengua y de su cultura (Fantini & Tirmizi, 2006).   | nte en desacuerdo; 2 - En desacuerdo; ; 3 - Ni de acuerdo ni en desacuerdo; 4 - De acuerdo; 5- |
|                              |  | <b>Humildad cultural (Autoconciencia/Identidad)</b><br>Este proceso garantiza que uno permanezca abierto a realidades distintas de la propia y se plantea la búsqueda continua de conocimiento siendo flexible a nuevas perspectivas según la propia cultura (Tervalon and Murray-García, 1998). | Quando visito/vivo en otro país, o me relaciono con personas de otro origen cultural, muestro disposición a interesarme por nuevos aspectos culturales (por ejemplo, entender sus valores, historia, tradiciones, etc.) (Fantini & Tirmizi, 2006).   |  |
|                              |  |  | Tener curiosidad por otras conocer y aprender de culturas puede ser una fuente que mejore positivamente mi éxito profesional y personal (Cox & Blake, 1991).   |  |
|                              |  |  | Me gusta relacionarme con personas de diferentes culturas. (Cultural Intelligence Center 2005; Ang & Van Dyne, 2008)   |  |
|                              | Otro tipo de conocimientos son los conceptuales, que reflejan una comprensión de cómo un país en particular ve y valora cuestiones centrales como las formas adecuadas de comportamiento, los derechos individuales, la pertenencia a un grupo y sus obligaciones asociadas, y las obligaciones para con el Estado. (Bird, | <b>Diversidad interna y heterogeneidad de los grupos culturales</b><br>Las diferencias culturales percibidas entre un individuo y otro (Jackson, 1992; Cox T., 1993; Kapur, 2020).   | Conozco la importancia de la humildad cultural. (ser consiente de mi cultura, sus creencias, valores y prácticas) (Tervalon & Murray-García, 1998).  |  |
|                              |  |  | Soy consiente de mis propias normas y prejuicios culturales (Calahan, 2017)  |  |
|                              |  |  | Demuestro voluntad para afrontar las consecuencias éticas de mis elecciones cuando vivo/visito otros países (en cuanto a decisiones, consecuencias, resultados, etc.) (Fantini & Tirmizi, 2006).   |  |
|                              |  |  | Soy consiente de la importancia de las diferencias y similitudes entre mi propia lengua y cultura y la del país de que me recibe. (Fantini & Tirmizi, 2006).   |  |
|                              |  | <b>Conciencia de las suposiciones propias y ajenas</b><br>Reconocimiento y comprensión de las creencias, actitudes y expectativas implícitas o explícitas que tenemos sobre nosotros mismos y los demás (Hofstede G., 2001; Bennett M., 2013; Bennett J. M., 2015).                              | Podría debatir y contrastar diversas pautas de comportamiento de mi propia cultura con las del país que me recibe cuando viví/visité otros países. (Fantini & Tirmizi, 2006).  |  |
|                              |  |  | Creo que ser consiente de la diversidad interna de un grupo cultural es muy importante para llevar a cabo una comunicación intercultural eficaz. (Deardorff, 2011).  |  |
|                              |  |  | Reconocer que existen diferencias dentro de los grupos ayudará a fomentar la comprensión y la integración, y evitará estereotipos al momento de trabajar en equipo (Lancker & Alexopoulos, 2021).  |  |
|                              |  |  | Cuando tengo una interacción intercultural, la afronto con el convencimiento de que las personas de un mismo grupo cultural pueden tener creencias, valores y prácticas diferentes. (Jackson & Ruderman, 1995).                                      |  |
|                              | <b>Conocimiento de creencias, valores y prácticas</b><br>Comprensión de las creencias, valores y prácticas culturales, religiosas y sociales de uno mismo y de los demás. (UNESCO, 2013).  |  | Cuando viví/visité otros países, me di cuenta de la importancia de los peligros de generalizar comportamientos individuales como representativos de toda la cultura (Fantini & Tirmizi, 2006).   |  |
|                              |  |  | Cuando viví/visité otros países, me di cuenta de la importancia de mis valores personales, que afectaban a mi planteamiento de los dilemas éticos y a su resolución (Fantini & Tirmizi, 2006).   |  |
|                              |  |  | Podría describir comportamientos interactivos habituales entre la población del país que me recibe en los ámbitos social y profesional (por ejemplo, roles familiares, trabajo en equipo, resolución de problemas, etc.). (Fantini & Tirmizi, 2006). |  |
|                              |  |  | Soy consiente de cómo mis propias experiencias han conformado mis normas o prejuicios personales sobre las diferencias culturales. (Calahan, 2017)   |  |
|                              |  |  | Diferencio las complejas creencias, valores, estilos de comunicación, costumbres, política, historia y economía de otros grupos culturales. (Calahan, 2017)  |  |
|                              |  |  | Soy consiente de los conocimientos culturales que aplico a las interacciones interculturales. (Cultural Intelligence Center 2005; Ang & Van Dyne, 2008)  |  |
|                              |  |  | Compruebo la exactitud de mis conocimientos culturales cuando interactúo con personas de distintas culturas. (Cultural Intelligence Center 2005; Ang & Van Dyne, 2008)   |  |
|                              |  |  | Busco activamente oportunidades para aprender sobre las creencias y tradiciones de diferentes grupos culturales. (Gudykunst & Kim, 2003).  |  |
|                              |  |  |  |  |

|             |   |   |  |                       |
|-------------|---|---|--|-----------------------|
| Habilidades | Heinbuch, Roger, & McNulty, 1993, p. 417).  | <b>Conciencia comunicativa (verbal y no verbal)</b><br>La capacidad de una persona para percibir y comprender los matices de la comunicación verbal y no verbal en diversos contextos sociales y culturales (Lustig & Koester, 2010; UNESCO, 2013). | Cambio mi comportamiento verbal (por ejemplo, acento, tono) cuando una interacción multicultural lo requiere. (Cultural Intelligence Center 2005; Ang & Van Dyne, 2008)  | Totalmente de acuerdo |
|             |   |   | Utilizo la pausa y el silencio de forma diferente para adaptarme a distintas situaciones multiculturales. (Cultural Intelligence Center 2005; Ang & Van Dyne, 2008)  |                       |
|             |   |   | Vario el ritmo de mi discurso cuando una situación multicultural lo requiere. (Cultural Intelligence Center 2005; Ang & Van Dyne, 2008)  |                       |
|             |   |   | Cambio mi comportamiento no verbal cuando una situación multicultural lo requiere. (Cultural Intelligence Center 2005; Ang & Van Dyne, 2008)   |                       |
|             | Conjunto de habilidades para interactuar exitosamente con personas de otras culturas, como escuchar, observar, evaluar, analizar, interpretar, multiperspectividad, empatía, flexibilidad, adaptación, lingüística y mediación (Deardorff, 2006; Barret, Byram, Lázár, Mompoin-Gaillard, & Philippou, 2014) | <b>Multiperspectividad</b><br>La visión que un individuo tiene del mundo y de cómo funciona y varía con respecto a los demás, y sigue moldeándose e influenciándose en función del punto de vista desde el que se analice (Hanvey, 1975).           | Pude contrastar la visión del mundo que tiene la cultura que me recibió con la mía. (Fantini & Tirmizi, 2006).   |                       |
|             |   |   | Creo que ser capaz de aceptar y comprender que existen diferentes perspectivas y visiones del mundo es un aspecto clave para la resolución de problemas y la toma de decisiones, cuando en la situación intervienen personas de diferentes orígenes (Dervin, 2010) |                       |
|             |   |   | Soy capaz de adoptar múltiples perspectivas cuando interactúo en una situación intercultural (Deardorff, 2017)   |                       |
|             |   |   | Busco activamente comprender y apreciar la perspectiva de las personas con un trasfondo cultural diferente (Jackson & Ruderman, 1995).   |                       |
|             |   | <b>Empatía</b><br>Capacidad de ponerse en el lugar de otra persona o apertura a los demás y a costumbres y valores divergentes. (Van Der Zee & Van Oudenhoven 2000)   | Actúo de un modo solidario que reconoce los sentimientos de otros grupos culturales. (Calahan, 2017)   |                       |
|             |   |   | Me pongo en el lugar de personas de otros orígenes culturales para comprender mejor las experiencias de otras personas. (Deardorff, 2011).   |                       |
|             |   |   | Siento empatía hacia los sentimientos y las perspectivas de las personas de otros orígenes culturales, y me esfuerzo por comprenderlas. (Tervalon & Murray-García, 1998).  |                       |
|             |   |   | Busco constantemente oportunidades de relacionarme con personas de otros orígenes culturales para desarrollar la empatía. (Gudykunst & Kim, 2003).   |                       |
|             |   | <b>Flexibilidad cognitiva</b><br>"la habilidad para cambiar y adaptar la manera de pensar, de acuerdo con una situación o contexto específico" (Barret et al., 2014, p. 20).  | Creo que existen múltiples formas válidas de pensar y resolver problemas, y estoy dispuesto a explorarlas. (Dervin, 2010).   |                       |
|             |   |   | Ajusto mis conocimientos culturales cuando interactúo con personas de una cultura que me es desconocida. (Cultural Intelligence Center 2005; Ang & Van Dyne, 2008)   |                       |
|             |   |   | Confío en poder relacionarme con la población local en una cultura que me es desconocida. (Cultural Intelligence Center 2005; Ang & Van Dyne, 2008)  |                       |
|             |   |   | Demostré flexibilidad al interactuar con personas de la cultura que me recibió (Fantini & Tirmizi, 2006).  |                       |
|             |   | <b>Adaptación de la conducta</b><br>La habilidad que una persona tiene de cambiar su conducta para adaptarse a lo que se espera por otras culturas (Margaret Pusch, 2009).  | Demostré capacidad para interactuar adecuadamente en una variedad de situaciones sociales diferentes en la cultura que me recibió. (Fantini & Tirmizi, 2006).  |                       |
|             |   |   | Estoy seguro de que podré hacer frente al estrés de adaptarme a una cultura que es nueva para mí. (Cultural Intelligence Center 2005; Ang & Van Dyne, 2008)  |                       |
|             |   |   | Estoy dispuesto a adaptar mi comportamiento para comunicarme adecuadamente en el país extranjero (por ejemplo, en el ámbito no verbal y en otros ámbitos del comportamiento) según lo requieran las distintas situaciones. (Fantini & Tirmizi, 2006).              |                       |
|             |   |   | Trato constantemente de respetar y comprender mejor las expectativas de comportamiento que tienen personas de distintos orígenes culturales de mí. (Deardorff, 2011).  |                       |

|  |  |  |  |  |
|--|--|--|--|--|
|  |  | <b>Habilidades lingüísticas</b><br>"Se refieren al grado en que los individuos pueden hablar con facilidad y precisión en la lengua que requieren las interacciones interculturales" (Shannon & Begley, 2008, p. 43) | He desarrollado sólidas competencias lingüísticas que me permiten comunicarme eficazmente en diferentes idiomas, lo que mejora mi capacidad para conectar con personas de distintos orígenes culturales. (Dervin, 2010). |  |
|  |  |  | Busco constantemente oportunidades para practicar y aumentar mis conocimientos lingüísticos interactuando con personas que hablan otro idioma. (Deardorff, 2011).  |  |
|  |  |  | Estoy dispuesto a aprender otros idiomas para mejorar mi capacidad de comunicación intercultural. (Deardorff, 2011).   |  |
|  |  |  | Creo firmemente que tener sólidos conocimientos lingüísticos es una herramienta importante para salvar las diferencias culturales y fomentar la cooperación internacional. (Dervin, 2010).                               |  |





## APPENDIX VI: Engineering Students who participated in Academic Mobility in a Foreign University

| Departure Semester | Gender | School  | Engineering Program                  | Host University                     | Country |
|--------------------|--------|---|--------------------------------------|-------------------------------------|---------|
| Jan. - Jun. 2019   | Female | School of Agriculture                           | Agricultural Engineering             | Universidad de Almeria              | Spain   |
| Jan. - Jun. 2019   | Female | School of Agriculture                           | Engineering in Agricultural Business | Universidad de Extremadura          | Spain   |
| Jan. - Jun. 2019   | Female | School of Agriculture                           | Engineering in Agricultural Business | Universidad de Extremadura          | Spain   |
| Jan. - Jun. 2019   | Female | School of Chemical Science                      | Industrial Management Engineer       | Universidad Politécnica de Madrid   | Spain   |
| Jan. - Jun. 2019   | Female | School of Forest Science                        | Industrial Management Engineer       | Universidad de Cantabria            | Spain   |
| Jan. - Jun. 2019   | Female | School of Mechanical and Electrical Engineering | Aeronautics Engineer                 | Universidad Politécnica de Madrid   | Spain   |
| Jan. - Jun. 2019   | Female | School of Mechanical and Electrical Engineering | Mechatronics Engineer                | Universidad de Castilla - La Mancha | Spain   |
| Jan. - Jun. 2019   | Male   | School of Mechanical and Electrical Engineering | Mechatronics Engineer                | Universidad de Extremadura          | Spain   |
| Jan. - Jun. 2019   | Female | School of Mechanical and Electrical Engineering | Software Technology Engineer         | Universidad Austral                 | Chile   |
| Jan. - Jun. 2019   | Female | School of Mechanical and Electrical Engineering | Mechanical and Management Engineer   | Universidad Politécnica de Madrid   | Spain   |
| Jan. - Jun. 2019   | Male   | School of Mechanical and Electrical Engineering | Mechanical and Management Engineer   | Universidad Camilo José Cela        | Spain   |
| Jan. - Jun. 2019   | Male   | School of Mechanical and Electrical Engineering | Mechanical and Electrical Engineer   | Bordeaux                            | France  |
| Aug. - Dec. 2019   | Female | School of Agriculture                           | Engineer in Food Industries          | Universidad de Castilla - La Mancha | Spain   |
| Aug. - Dec. 2019   | Female | School of Agriculture                           | Engineer in Food Industries          | Universidad de Valencia             | Spain   |
| Aug. - Dec. 2019   | Male   | School of Agriculture                           | Engineer in Food Industries          | Universidad de Castilla - La Mancha | Spain   |
| Aug. - Dec. 2019   | Female | School of Chemical Science                      | Industrial Management Engineer       | Universidad Complutense de Madrid   | Spain   |
| Aug. - Dec. 2019   | Female | School of Chemical Science                      | Industrial Management Engineer       | Universidad de Cantabria            | Spain   |
| Aug. - Dec. 2019   | Female | School of Chemical Science                      | Industrial Management Engineer       | École Centrale                      | France  |
| Aug. - Dec. 2019   | Male   | School of Chemical Science                      | Industrial Management Engineer       | Universidad Complutense de Madrid   | Spain   |
| Aug. - Dec. 2019   | Male   | School of Chemical Science                      | Industrial Management Engineer       | Universidad Complutense de Madrid   | Spain   |
| Aug. - Dec. 2019   | Male   | School of Chemical Science                      | Industrial Management Engineer       | Universidad Politécnica de Madrid   | Spain   |
| Aug. - Dec. 2019   | Male   | School of Chemical Science                      | Industrial Management Engineer       | INSA Lyon                           | France  |
| Aug. - Dec. 2019   | Female | School of Earth Science                         | Mineralogist Geologist Engineer      | Universidad Mayor                   | Chile   |

| Departure Semester | Gender | School  | Engineering Program                     | Host University                                | Country   |
|--------------------|--------|---|---|--|-----------|
| Aug. - Dec. 2019   | Female | School of Mechanical and Electrical Engineering | Mechatronics Engineer                   | Universidad de Castilla - La Mancha            | Spain     |
| Aug. - Dec. 2019   | Male   | School of Mechanical and Electrical Engineering | Mechatronics Engineer                   | INSA Lyon                                      | France    |
| Aug. - Dec. 2019   | Male   | School of Mechanical and Electrical Engineering | Software Technology Engineer            | Universidad de Castilla - La Mancha            | Spain     |
| Aug. - Dec. 2019   | Female | School of Mechanical and Electrical Engineering | Mechanical and Management Engineer      | Universidad de Málaga                          | Spain     |
| Aug. - Dec. 2019   | Male   | School of Mechanical and Electrical Engineering | Mechanical and Management Engineer      | Universidad de Concepción                      | Chile     |
| Aug. - Dec. 2019   | Male   | School of Mechanical and Electrical Engineering | Mechanical and Management Engineer      | Southeast Technological University / Waterford | Ireland   |
| Aug. - Dec. 2019   | Male   | School of Mechanical and Electrical Engineering | Mechanical and Electrical Engineer      | Universidad de Cantabria                       | Spain     |
| Jan. - Jun. 2020   | Female | School of Agriculture                           | Engineering in Agricultural Business    | Universidad de Extremadura                     | Spain     |
| Jan. - Jun. 2020   | Female | School of Agriculture                           | Engineering in Agricultural Business    | Universidad de Extremadura                     | Spain     |
| Jan. - Jun. 2020   | Male   | School of Agriculture                           | Engineering in Agricultural Business    | Universidad de Castilla - La Mancha            | Spain     |
| Jan. - Jun. 2020   | Male   | School of Agriculture                           | Engineering in Biotechnology            | Universidad de Almeria                         | Spain     |
| Jan. - Jun. 2020   | Male   | School of Agriculture                           | Engineering in Biotechnology            | Universidad de Almeria                         | Spain     |
| Jan. - Jun. 2020   | Male   | School of Agriculture                           | Engineering in Biotechnology            | Universidad de Zaragoza                        | Spain     |
| Jan. - Jun. 2020   | Female | School of Agriculture                           | Engineer in Food Industries             | Universidad Autónoma de Barcelona              | Spain     |
| Jan. - Jun. 2020   | Female | School of Earth Science                         | Mineralogist Geologist Engineer         | UBA Ciencias Geologicas                        | Argentina |
| Jan. - Jun. 2020   | Female | School of Forest Science                        | Engineer in Natural Resource Management | Universidad de Castilla - La Mancha            | Spain     |
| Jan. - Jun. 2020   | Male   | School of Forest Science                        | Engineer in Natural Resource Management | Universidad Politécnica de Madrid              | Spain     |
| Jan. - Jun. 2020   | Female | School of Forest Science                        | Forestry Engineer                       | Universidad de Santiago de Compostela          | Spain     |
| Jan. - Jun. 2020   | Female | School of Forest Science                        | Forestry Engineer                       | Universidad Politécnica de Madrid              | Spain     |
| Jan. - Jun. 2020   | Female | School of Forest Science                        | Forestry Engineer                       | Universidad Politécnica de Madrid              | Spain     |
| Jan. - Jun. 2020   | Male   | School of Forest Science                        | Chemical Engineering                    | Universidad Complutense de Madrid              | Spain     |
| Jan. - Jun. 2020   | Male   | School of Forest Science                        | Chemical Engineering                    | Universidad de Cantabria                       | Spain     |

| Departure Semester | Gender | School  | Engineering Program                     | Host University                              | Country |
|--------------------|--------|---|---|--|---------|
| Jan. - Jun. 2020   | Male   | School of Mechanical and Electrical Engineering | Aeronautics Engineer                    | Universidad Politécnica de Madrid            | Spain   |
| Jan. - Jun. 2020   | Female | School of Mechanical and Electrical Engineering | Manufacturing Engineer                  | Universidad de Extremadura                   | Spain   |
| Jan. - Jun. 2020   | Male   | School of Mechanical and Electrical Engineering | Mechatronics Engineer                   | Universidad de Cantabria                     | Spain   |
| Jan. - Jun. 2020   | Male   | School of Mechanical and Electrical Engineering | Mechatronics Engineer                   | Universidad de Castilla - La Mancha          | Spain   |
| Jan. - Jun. 2020   | Male   | School of Mechanical and Electrical Engineering | Mechatronics Engineer                   | Universidad de Castilla - La Mancha          | Spain   |
| Jan. - Jun. 2020   | Male   | School of Mechanical and Electrical Engineering | Mechatronics Engineer                   | Universidad de Castilla - La Mancha          | Spain   |
| Jan. - Jun. 2020   | Female | School of Mechanical and Electrical Engineering | Software Technology Engineer            | Universidad de Murcia                        | Spain   |
| Aug. - Dec. 2021   | Male   | School of Chemical Science                      | Chemical Engineering                    | Universidad de Ottawa                        | Canada  |
| Aug. - Dec. 2021   | Male   | School of Mechanical and Electrical Engineering | Mechatronics Engineer                   | Wroclaw University of Science and Technology | Poland  |
| Jan. - Jun. 2022   | Female | School of Agriculture                           | Engineer in Food Industries             | Universidad de Castilla - La Mancha          | Spain   |
| Jan. - Jun. 2022   | Female | School of Agriculture                           | Engineer in Food Industries             | Universidad de Castilla - La Mancha          | Spain   |
| Jan. - Jun. 2022   | Male   | School of Agriculture                           | Engineer in Food Industries             | Universidad Politécnica de Madrid            | Spain   |
| Jan. - Jun. 2022   | Female | School of Chemical Science                      | Environmental Engineer                  | Universidad de Cantabria                     | Spain   |
| Jan. - Jun. 2022   | Male   | School of Mechanical and Electrical Engineering | Electronics and Automatization Engineer | INSA Lyon                                    | France  |
| Jan. - Jun. 2022   | Female | School of Mechanical and Electrical Engineering | Mechatronics Engineer                   | Universidad Miguel Hernández de Elche        | Spain   |
| Aug. - Dec. 2022   | Male   | School of Agriculture                           | Engineering in Agricultural Business    | Universidad de Almeria                       | Spain   |
| Aug. - Dec. 2022   | Female | School of Chemical Science                      | Industrial Management Engineer          | University of Ottawa                         | Canada  |
| Aug. - Dec. 2022   | Male   | School of Chemical Science                      | Industrial Management Engineer          | Universidad de Castilla - La Mancha          | Spain   |
| Aug. - Dec. 2022   | Female | School of Mechanical and Electrical Engineering | System Management Engineer              | Universidad Pública de Navarra               | Spain   |
| Aug. - Dec. 2022   | Female | School of Mechanical and Electrical Engineering | System Management Engineer              | Universidad Pública de Navarra               | Spain   |

| Departure Semester | Gender | School  | Engineering Program                     | Host University   | Country |
|--------------------|--------|---|---|---|---------|
| Aug. - Dec. 2022   | Male   | School of Mechanical and Electrical Engineering | System Management Engineer              | Universidad Miguel Hernandez de Elche   | Spain   |
| Aug. - Dec. 2022   | Male   | School of Mechanical and Electrical Engineering | System Management Engineer              | Universidad Miguel Hernandez de Elche   | Spain   |
| Aug. - Dec. 2022   | Male   | School of Mechanical and Electrical Engineering | System Management Engineer              | Universidad Pública de Navarra  | Spain   |
| Aug. - Dec. 2022   | Male   | School of Mechanical and Electrical Engineering | System Management Engineer              | INSA Toulouse   | France  |
| Aug. - Dec. 2022   | Male   | School of Mechanical and Electrical Engineering | Biomedical Engineer                     | Grenoble INP  | France  |
| Aug. - Dec. 2022   | Male   | School of Mechanical and Electrical Engineering | Mechatronics Engineer                   | INSA Lyon   | France  |
| Aug. - Dec. 2022   | Female | School of Mechanical and Electrical Engineering | Chemical Engineering                    | École Nationale Supérieure d'Électronique, d'Électrotechnique, d'Informatique, d'Hydraulique, et des Télécommunications (ENSEEIH) | France  |
| Jan. - Jun. 2023   | Male   | School of Agriculture                           | Engineering in Agricultural Business    | Universidad de Almeria  | Spain   |
| Jan. - Jun. 2023   | Male   | School of Agriculture                           | Engineering in Biotechnology            | Universidad de Almeria  | Spain   |
| Jan. - Jun. 2023   | Female | School of Chemical Science                      | Environmental Engineer                  | Universidad Bio Bio   | Chile   |
| Jan. - Jun. 2023   | Female | School of Chemical Science                      | Environmental Engineer                  | Southeast Technological University / Waterford  | Ireland |
| Jan. - Jun. 2023   | Male   | School of Chemical Science                      | Industrial Management Engineer          | Universidad de Cantabria  | Spain   |
| Jan. - Jun. 2023   | Male   | School of Civil Engineering                     | Civil Engineer                          | Universidad de Cantabria  | Spain   |
| Jan. - Jun. 2023   | Female | School of Mechanical and Electrical Engineering | Biomedical Engineer                     | Universidad Pública de Navarra  | Spain   |
| Jan. - Jun. 2023   | Female | School of Mechanical and Electrical Engineering | Biomedical Engineer                     | Universidad Pública de Navarra  | Spain   |
| Jan. - Jun. 2023   | Male   | School of Mechanical and Electrical Engineering | Biomedical Engineer                     | Universidad Pública de Navarra  | Spain   |
| Jan. - Jun. 2023   | Female | School of Mechanical and Electrical Engineering | Electronics and Automatization Engineer | Universidad de Castilla - La Mancha   | Spain   |
| Jan. - Jun. 2023   | Female | School of Mechanical and Electrical Engineering | Electronics and Automatization Engineer | Universidad de Castilla - La Mancha   | Spain   |

| Departure Semester | Gender | School  | Engineering Program                     | Host University                              | Country  |
|--------------------|--------|---|---|--|----------|
| Jan. - Jun. 2023   | Female | School of Mechanical and Electrical Engineering | Electronics and Automatization Engineer | Universidad de Santiago de Compostela        | Spain    |
| Jan. - Jun. 2023   | Female | School of Mechanical and Electrical Engineering | Manufacturing Engineer                  | Universidad de Castilla - La Mancha          | Spain    |
| Jan. - Jun. 2023   | Male   | School of Mechanical and Electrical Engineering | Materials Engineer                      | Universidad de Extremadura                   | Spain    |
| Jan. - Jun. 2023   | Female | School of Mechanical and Electrical Engineering | Mechatronics Engineer                   | Wroclaw University of Science and Technology | Poland   |
| Jan. - Jun. 2023   | Male   | School of Mechanical and Electrical Engineering | Mechatronics Engineer                   | Universidad de Extremadura                   | Spain    |
| Jan. - Jun. 2023   | Male   | School of Mechanical and Electrical Engineering | Mechatronics Engineer                   | Universidad Miguel Hernandez de Elche        | Spain    |
| Jan. - Jun. 2023   | Female | School of Mechanical and Electrical Engineering | Software Technology Engineer            | Wroclaw University of Science and Technology | Poland   |
| Aug. - Dec. 2023   | Female | School of Agriculture                           | Engineering in Agricultural Business    | Universidad de Almeria                       | Spain    |
| Aug. - Dec. 2023   | Male   | School of Agriculture                           | Engineering in Agricultural Business    | Universidad de Almeria                       | Spain    |
| Aug. - Dec. 2023   | Male   | School of Agriculture                           | Engineering in Agricultural Business    | Universidad de Almeria                       | Spain    |
| Aug. - Dec. 2023   | Male   | School of Civil Engineering                     | Civil Engineer                          | INSA Lyon                                    | France   |
| Aug. - Dec. 2023   | Male   | School of Civil Engineering                     | Civil Engineer                          | Universidad Tecnológica de Nagaoka           | Japan    |
| Aug. - Dec. 2023   | Male   | School of Civil Engineering                     | Civil Engineer                          | Universidad Tecnológica de Nagaoka           | Japan    |
| Aug. - Dec. 2023   | Male   | School of Civil Engineering                     | Civil Engineer                          | Universidad Tecnológica de Nagaoka           | Japan    |
| Aug. - Dec. 2023   | Male   | School of Civil Engineering                     | Civil Engineer                          | Universidad Tecnológica de Nagaoka           | Japan    |
| Aug. - Dec. 2023   | Female | School of Forest Science                        | Industrial Management Engineer          | Universidad EAFIT                            | Colombia |
| Aug. - Dec. 2023   | Female | School of Forest Science                        | Industrial Management Engineer          | Universidad Complutense de Madrid            | Spain    |
| Aug. - Dec. 2023   | Female | School of Mechanical and Electrical Engineering | Biomedical Engineer                     | Universidad Pública de Navarra               | Spain    |
| Aug. - Dec. 2023   | Female | School of Mechanical and Electrical Engineering | Biomedical Engineer                     | Universidad Pública de Navarra               | Spain    |
| Aug. - Dec. 2023   | Female | School of Mechanical and Electrical Engineering | Biomedical Engineer                     | Grenoble INP                                 | France   |

| Departure Semester | Gender | School  | Engineering Program                     | Host University                              | Country |
|--------------------|--------|---|---|--|---------|
| Aug. - Dec. 2023   | Female | School of Mechanical and Electrical Engineering | Biomedical Engineer                     | Grenoble INP                                 | France  |
| Aug. - Dec. 2023   | Male   | School of Mechanical and Electrical Engineering | Biomedical Engineer                     | Universidad Pública de Navarra               | Spain   |
| Aug. - Dec. 2023   | Male   | School of Mechanical and Electrical Engineering | Biomedical Engineer                     | Grenoble INP                                 | France  |
| Aug. - Dec. 2023   | Male   | School of Mechanical and Electrical Engineering | Biomedical Engineer                     | Grenoble INP                                 | France  |
| Aug. - Dec. 2023   | Female | School of Mechanical and Electrical Engineering | Aeronautics Engineer                    | Universidad de Castilla - La Mancha          | Spain   |
| Aug. - Dec. 2023   | Male   | School of Mechanical and Electrical Engineering | Aeronautics Engineer                    | Universidad de Castilla - La Mancha          | Spain   |
| Aug. - Dec. 2023   | Male   | School of Mechanical and Electrical Engineering | Aeronautics Engineer                    | Universidad de Castilla - La Mancha          | Spain   |
| Aug. - Dec. 2023   | Male   | School of Mechanical and Electrical Engineering | Aeronautics Engineer                    | INSA Rouen                                   | France  |
| Aug. - Dec. 2023   | Male   | School of Mechanical and Electrical Engineering | Aeronautics Engineer                    | Wroclaw University of Science and Technology | Poland  |
| Aug. - Dec. 2023   | Male   | School of Mechanical and Electrical Engineering | Electronics and Automatization Engineer | Universidad de Extremadura                   | Spain   |
| Aug. - Dec. 2023   | Female | School of Mechanical and Electrical Engineering | Mechatronics Engineer                   | Universidad de Cantabria                     | Spain   |
| Aug. - Dec. 2023   | Female | School of Mechanical and Electrical Engineering | Mechatronics Engineer                   | Universidad de Castilla - La Mancha          | Spain   |
| Aug. - Dec. 2023   | Male   | School of Mechanical and Electrical Engineering | Mechatronics Engineer                   | Universidad de Extremadura                   | Spain   |
| Aug. - Dec. 2023   | Male   | School of Mechanical and Electrical Engineering | Mechatronics Engineer                   | Universidad de Santiago de Compostela        | Spain   |
| Aug. - Dec. 2023   | Male   | School of Mechanical and Electrical Engineering | Mechatronics Engineer                   | Wroclaw University of Science and Technology | Poland  |
| Aug. - Dec. 2023   | Female | School of Mechanical and Electrical Engineering | Software Technology Engineer            | Universidad de Cantabria                     | Spain   |
| Aug. - Dec. 2023   | Female | School of Mechanical and Electrical Engineering | Mechanical and Management Engineer      | Universidad Complutense de Madrid            | Spain   |

| Departure Semester | Gender | School  | Engineering Program                | Host University                              | Country  |
|--------------------|--------|---|------------------------------------|--|----------|
| Aug. - Dec. 2023   | Female | School of Mechanical and Electrical Engineering | Mechanical and Management Engineer | Universidad de Extremadura                   | Spain    |
| Aug. - Dec. 2023   | Male   | School of Mechanical and Electrical Engineering | Mechanical and Management Engineer | Universidad Complutense de Madrid            | Spain    |
| Aug. - Dec. 2023   | Male   | School of Mechanical and Electrical Engineering | Mechanical and Electrical Engineer | Universidad Politécnica de Madrid            | Spain    |
| Aug. - Dec. 2023   | Male   | School of Mechanical and Electrical Engineering | Mechanical and Electrical Engineer | Wroclaw University of Science and Technology | Poland   |
| Jan. - Jun. 2024   | Male   | School of Agriculture                           | Agricultural Engineering           | Universidad EAFIT                            | Colombia |
| Jan. - Jun. 2024   | Male   | School of Agriculture                           | Engineer in Food Industries        | Universidad de Castilla - La Mancha          | Spain    |
| Jan. - Jun. 2024   | Male   | School of Chemical Science                      | Environmental Engineer             | Wroclaw University of Science and Technology | Poland   |
| Jan. - Jun. 2024   | Female | School of Civil Engineering                     | Civil Engineer                     | University of New Mexico                     | USA      |
| Jan. - Jun. 2024   | Male   | School of Mechanical and Electrical Engineering | System Management Engineer         | University of New Mexico                     | USA      |
| Jan. - Jun. 2024   | Male   | School of Mechanical and Electrical Engineering | Biomedical Engineer                | Universidad Pública de Navarra               | Spain    |
| Jan. - Jun. 2024   | Male   | School of Mechanical and Electrical Engineering | Biomedical Engineer                | Universidad Pública de Navarra               | Spain    |
| Jan. - Jun. 2024   | Female | School of Mechanical and Electrical Engineering | Manufacturing Engineer             | Universidad de Cantabria                     | Spain    |
| Jan. - Jun. 2024   | Male   | School of Mechanical and Electrical Engineering | Mechatronics Engineer              | INSA Lyon                                    | France   |
| Jan. - Jun. 2024   | Male   | School of Mechanical and Electrical Engineering | Mechatronics Engineer              | INSA Lyon                                    | France   |
| Jan. - Jun. 2024   | Male   | School of Mechanical and Electrical Engineering | Mechanical and Management Engineer | Universidad Complutense de Madrid            | Spain    |

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*Source. Universidad Autónoma de Nuevo León's, Department of Academic Mobility Activity Report (2024)*



