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Intercultural competence and employability of students at Iowa State University: Outcomes assessment of study abroad

Katie Marie Davidson

Iowa State University

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Intercultural competence and employability of students at Iowa State University: Outcomes assessment of study abroad

by

Katie Marie Davidson

A dissertation submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of
DOCTOR OF PHILOSOPHY

Major: Higher Education Administration

Program of Study Committee:
Linda Serra Hagedorn, Major Professor
Dawn Bratsch-Prince
Yu Chen
Larry Ebbers
David Holger

The student author and the program of study committee are solely responsible for the content of this dissertation. The Graduate College will ensure this dissertation is globally accessible and will not permit alterations after a degree is conferred.

Iowa State University
Ames, Iowa
2017

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DEDICATION

To my Grandma Linda
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ABSTRACT

The purpose of this research is to answer questions pertaining to the design of study abroad programs at Iowa State University and determine which types of programs result in positive change in student development as it relates to intercultural competence and employability. The study implements the administration of an assessment instrument selected as part of a Capstone project with study abroad stakeholders at the university. The instrument selected, memo©, was piloted with groups of Iowa State University students studying abroad in the spring, spring break, and summer terms of 2016; of the 1221 students studying abroad during these terms, 115 completed both the pre and post assessment survey, a 9% response rate.

The findings show that overall, students improved four of the ten memo© factors that are evidence of intercultural competence and employability. Longer programs tend to result in growth in intercultural competence, but not employability or overall memo© Total values. Pre-departure preparation and reflection activities while abroad did have a positive impact on memo© Total values, and students in this study felt more prepared, on average, after they returned from their study abroad program than they did before they departed. This may indicate that the pre-departure orientation activities they completed did not create a false sense of preparedness.

Based on the findings, the researcher has concluded that an assessment team should take additional steps at the home institution to vet the instrument and the statistical analysis of the data. Additionally, the assessment team should add customized questions to provide a clearer picture of which program characteristics result in the most positive change. Finally, the assessment team should focus on providing information about the instrument to stakeholders in order to increase the response rate.
CHAPTER 1. INTRODUCTION

There are many barriers, perceived or otherwise, that students face when choosing to study abroad. Many students believe they are unable to afford it. Many believe it will delay their graduation and are concerned about adding additional time to their degree plan. Many students are unable to understand exactly which skills they might develop during a semester or summer abroad. Many parents of students are concerned about their safety and worry about their children traveling the world. This research focuses on the skills that students do or do not develop during a study abroad program and how those skills are related to a student’s intercultural competence and employability; terms define later in this chapter.

This study uses pre-departure and post-return surveys to examine the characteristics of study abroad programs and how the presence or absence of those characteristics impact survey results. The survey includes questions about program length, activities in which students participate, both before and during their study abroad experience, language components, as well as student demographic information. It is important to understand which programs and which specific elements of those programs produced students with more intercultural competence who are more employable. This informs program design and development and ensures that institutions are not focusing time and resources on programs that result in no student growth or skill development. Regression analysis of survey results focuses on the demographics and program characteristics, which predict the greatest student development, i.e. age, gender and other characteristics such as year in school, major, study of language, etc. International education professionals can use this information to determine the most beneficial time for students to study abroad and provide data to students and parents to inform their decisions.
The relationship of student development during a study abroad program to a student’s future employability must be further explored in order to provide evidence to students, parents, faculty, administrators, and future employers that students who study abroad are developing the skills that employers value. This study was conducted under the assumption that, upon graduation from an institution of higher education, students will pursue employment and that universities, students, and parents should all work towards this goal. There are those who believe that higher education institutions should focus primarily on providing students a liberal education and secondarily on their employability (Atkins, 1999).

If a University can add value to a student’s degree program by offering opportunities to study abroad and develop skills employers generally find beneficial, students who are especially focused on their careers should find a way to include a study abroad experience in their degree plan.

Students exist in a world that requires them to interact with people who have alternative ways of thinking, come from diverse backgrounds, use different styles of communication, have different ideas about physical space, hold different beliefs, speak different languages, and have a different physical appearance than the students. Many students in the United States grow up in homogenous communities where they may have had limited experience interacting with people who are different from them, and therefore do not develop the skills necessary to experience difference. There are numerous venues where they can learn these skills, including but not limited to their place of employment, in the home from parents who are intentional about having conversations related to difference, and through institutions of higher education who are intentional about providing opportunities and instruction for this learning to occur. This instruction can be embedded in the curriculum, in general education courses, in experiential
learning, through pedagogy, etc. Universities may not have the infrastructure or resources to provide instruction in these ways, and in institutions where faculty workloads are very full, it may not be feasible to impose additional requirements on curricula.

This chapter examines the research problem, the purpose of the study, and how the study will address the problem. It will list the research questions and the researcher’s hypotheses about the answers to the research questions and the implication of both the answers and the hypotheses. This chapter also describes the theoretical frameworks used to design the study and to interpret the results. This chapter then gives the reader a context in which to place the study and explain many of the researcher’s hypotheses. There will be a brief explanation of the methodology used and an outline of why that methodology was chosen. This chapter will explain why this research is significant with respect to the profession of international education, to education broad professionals in general, to faculty, and most important, to students. This chapter will refer to the literature to define terms that may be unfamiliar to the reader and list any limitations and delimitations of the study. Finally, the researcher will summarize this chapter, reiterating the purpose of the study and its potential significance.

Statement of the Problem

It is difficult to measure how students develop certain skills while studying abroad, in part due to potential discrepancy between a student’s perceived learning and actual learning. Most of the skills students tend to improve while abroad are difficult to define, especially when the definitions of those skills might depend on what their future employers value most, which is impacted by that employer’s field of work and geographic location. It is also difficult to explain which qualities make a student, or anyone, interculturally competent because the term is so
generally defined (Deardorff, 2015). Additionally, research should identify which types of activities or absence of activities resulted in the development of those skills and when those activities took place in relation to the students’ experience.

There are myths about study abroad. There are students, parents, faculty, and administrators who believe students study abroad to drink before they are 21 years of age, to take easy courses that raise their GPA, or to go on an extended glorified vacation. These myths can make it difficult to justify support for study abroad at institutions of higher education and to convince students and their parents that study abroad is an investment and there are returns on their investment if the program is developed and executed properly. The focus of this study is the proper development and execution of study abroad programs.

Study abroad programs take many different forms. There are provider programs, exchange programs, direct enroll programs, consortium programs, island programs, faculty-led programs, international internships, teaching abroad, research abroad, and both non-degree-seeking and degree-seeking programs (NAFSA CEP, 2016). These program types are defined in Table 1. Each program type has advantages and disadvantages, both for students and for the international educators responsible for managing the program within their institution’s study abroad portfolio.

It is important to understand which factors related to study abroad have the most impact on student development and to focus university study abroad efforts on those programs. Iowa State University and other public research universities across the United States are facing decreased funding from state allocations (National Science Board, 2012). Decreased funding results in budget cuts, which can affect the number of staff devoted to programming efforts and
course offerings, especially in relation to study abroad, which some institutions would view as non-essential.

In order to demonstrate that study abroad is valuable for students and institutions, international educators should be able to describe how students are different after a study abroad program and explain how that difference adds value to their degree and has resulted in the development of skills and intercultural competence. There are many different ways to measure these changes. International educator and researcher, Darla Deardorff, suggests that there are an estimated 140 instruments and tools used to assess student learning within study abroad (Deardorff, 2015).

The first decision an institution should make when choosing an instrument to assess study abroad is what exactly they hope to measure (Deardorff, 2015). These measurements are dependent on many factors: what an institution wants study abroad to be for its students, how an institution chooses to market to those students, and how much time and resources the institution is prepared to devote to assessment.

**Purpose of the Study**

In many institutions of higher education, there exists a Senior International Officer. This position is located within the upper echelons of administration, ideally reporting to the President of the University, and is responsible for the comprehensive internationalization strategy of the institution. An institution would establish this position in order to provide leadership for International student and scholar offices, study abroad offices, internationalization of the curriculum, and strategic development of International partnerships and global campuses. The Senior International Officer would also oversee assessment initiatives at an administrative level.
and work with stakeholders to establish assessment criteria and choose or develop an instrument for the university.

Iowa State University does not have a Senior International Officer, therefore any coordination of efforts should happen with existing international education personnel. This study was generated by a client who chose to assess student development during study abroad as it relates to intercultural competence and employability (see appendix A). This decision was made by numerous stakeholders, including senior administration, the central Study Abroad Center, Associate Deans responsible for International efforts in their respective Colleges, and international education professionals from those Colleges (Davidson, 2015). In proposing this study, the researcher talked with other international educators at Iowa State to ensure no one else was currently working on assessment of study abroad. Once it was determined that assessment was not happening consistently at the university, the researcher proposed a Capstone project to work with a client to choose an assessment instrument based on what the university wished to measure. This project and its implementation are described in more detail in chapter 3.

The purpose of this study is to assess what students are learning through study abroad and through data analysis, determine which types of programs and their characteristics that are resulting in the most student development. While the survey used in the study has been administered to over 90,000 individuals in Europe, the existing survey did not ask about pre-departure activities or activities in which students engage while abroad. These questions were unique to this study and provide unique data to inform the development of pre-departure courses and program itineraries at the home institution.
Research Questions

The researcher and the Capstone client determined that the university wants to measure how study abroad affects the development of skills related to intercultural competence and employability. These areas were chosen because the researcher and client believe demonstrating the benefits of study abroad to students in both a long-term and short-term framework will result in an increase of students studying abroad.

The research questions that follow guide this dissertation study:

1. Do longer programs result in positive change in memo© Total values?
2. Does time spent on pre-departure activities impact positive change in memo© Total values?
3. Are there activities students complete while abroad that result in positive change in memo© Total values?

Hypotheses

Hypothesis 1: Longer programs result in positive change in memo© Total values.

Hypothesis 2: Students who spend more time on pre-departure preparation will have positive change in memo© Total values.

Hypothesis 3: Students who participate in journaling and/or reflection sheets during the program abroad will have positive change in memo© Total values.
Theoretical Frameworks

This study was informed by two theoretical frameworks: Astin’s Input-Environment-Outcome (IEO) model (Astin, 1984) and Deardorff’s Process Model of Intercultural Competence (Deardorff, 2009) (see appendix B). These theories were chosen based on the research questions, which ask specifically which inputs and environments during study abroad are producing specific outcomes related to intercultural competence. The goal of the study is to determine which inputs of a study abroad program, in this case the student demographics and the pre-departure activities, when placed in certain environments, i.e. particular countries for a specific amount of time and with or without a language immersion aspect, result in favorable outcomes. In this case, favorable would indicate that students have developed their skills related to intercultural competence and employability.

Framework one: Process model of intercultural competence

Deardorff’s Process Model of Intercultural Competence is an individual process that parallels Astin’s IEO model but is cyclical. Within Deardorff’s framework, students begin their process with certain attitudes related to their respect for other cultures, their openness or ability to withhold judgment, and their curiosity or discovery that relates to their ability to tolerate ambiguity (Deardorff 2006, 2009).

As students, increase their knowledge and comprehension, both of their own culture and the culture that is not their own, they develop a set of skills: listening, observation and evaluation, analyzing, interpreting, and relating. This development of skills results in desired internal and external outcomes. The internal outcome is a shift in students’ informed frame of reference and directly affects their adaptability, flexibility, empathy, and ethnorelative view.
external outcome is effective and appropriate communication and behavior in an intercultural situation (Deardorff, 2006, 2009).

This process then circles back to the students’ attitudes and beliefs about their own culture and other cultures and influences their respect, openness, and curiosity about other cultures. This model explores personal characteristics and outcomes directly related to those determined by the memo© survey used in the study, which will be further explored in chapters 2 and 3.

**Framework two: Astin’s Inputs-Environment-Outputs model**

Astin’s Inputs-Environment-Outputs (I-E-O) model is based on the theory that specific inputs, i.e. gender, race, socio-economic status, etc., when placed in an educational environment with specific influences, i.e. student organizations, academics, athletics, will result in specific outcomes (Astin, 1991). This theory is relevant to the study because it directly relates to the research questions and what the study hopes to determine.

Inputs in this study are the student demographics, i.e. gender, age, year in college, etc. Additional inputs are the pre-departure activities in which the students engage. Environment is the study abroad experience itself, which is made up of the location of the study abroad program, the length of the program, whether or not there is a language immersion component, homestays, activities while abroad, etc. The outcomes are both individual and related to the programs. For individual students, the outcome is how they developed skills during their study abroad program. Program outcomes are the collective results of how students developed on that program. If a program results in students decreasing their capacity for skills related to intercultural competence and employability, it could be a reflection of the either the environment or inputs. This theory as it applies to the data is explored further in chapters 2 and 3.
Context of the Study

This study was conducted at Iowa State University in Ames, Iowa. The students surveyed studied abroad during the spring semester, spring break week, and summer of 2016. Iowa State University is a public land-grant university that is Carnegie classified as a Doctoral University with the Highest Research Activity (Iowa State University, 2015). Total enrollment at Iowa State was 36,001-combined undergraduate and graduate enrollment in the 2015-2016 academic year, with 1,497 students studying abroad during that period (Iowa State University, 2016). Iowa State University is located in Ames, Iowa, approximately forty miles north of the capital city of Des Moines. The population of Ames is around 62,000 people, including the student population (City of Ames, 2017).

The University is comprised of seven academic colleges: Agriculture and Life Sciences, Business, Design, Engineering, Human Sciences, Liberal Arts and Sciences, and Veterinary Medicine. Approximately sixty-five percent of students enrolled at Iowa State are Iowa residents and over ten percent are International students.

Overview of Methods

This is a quantitative study analyzing data from a survey developed by CHE Consultants, a German-based company. The tool is called memo© and was developed to assess student development during study abroad specifically as it relates to employability factors, or personality characteristics employers find valuable. Chapter 2 will explore definitions of employability and how they differ between Europe, the United States, and the rest of the world. Monitoring exchange mobility outcomes, or memo©, focuses on psychometric-related analysis of actual
personality traits, as opposed to traditional assessment tools within international education that focus on assessing a student’s perceived growth (memo©, 2014).

This pilot study was conducted during the chosen terms of spring semester, spring break, and summer term in 2016 because traditionally those are the terms in which the greatest number of students study abroad at Iowa State University. The tool consists of a pre and post survey, which complicates response rates, as respondents must complete both portions for their personal growth to be measured. Information about the survey was communicated to students, faculty, academic advisors, and other international education professionals at Iowa State prior to implementation of the study. More details about the communication plan can be found in chapter 3 and appendix C.

Analysis of the data includes descriptive statistics and multiple T-tests in order to answer the research questions pertaining to correlated program characteristics that result in the greatest student development. Consultants with CHE provided a report summarizing the survey responses as well as the raw data. More information about the methodology can be found in chapter 3, while a critique of the methods can be found in chapter 5.

**Significance of the Study**

In order to understand why this study is significant, is it important to understand the field of international education and how professionals at institutions of higher education operate and function within it. International education is a complex field made up of several areas of expertise. The NAFSA Associate of International Educators classifies international education into five areas of specialization, or knowledge communities: International Students and Scholars Services (ISSS), Education Abroad (EA), International Enrollment Management (IEM),
Teaching, Learning, and Scholarship (TLS), and International Education Leadership (IEL) (NAFSA, 2015). NAFSA also focuses many of its professional development opportunities on campus Internationalization, which encompasses all of these knowledge communities and how they are managed collaboratively at institutions of higher education, many times under the guidance of the Senior International Officer.

Each of these knowledge communities are complex individually. For example, professionals working in ISSS must know federal regulations pertaining to International student immigration status and know how their home institution interprets the regulations and which policies exist to help guide those interpretations. ISSS professionals also should have an understanding of intercultural competence in order to properly navigate advising situations with students from all over the world. They should understand their institution’s policies on recruiting, admissions, course registration, academic advising, International student health insurance, academic success, career services, and other university units that impact the International student experience.

Education Abroad, the knowledge community in which this study is based, is also a complex area of the field of international education. EA professionals should manage a portfolio of programs based on the three R’s: risk, revenue, and resources (NAFSA CEP, 2016). It is crucial for those working in EA to understand how much risk their institution is willing to take with respect to students traveling abroad, i.e. many institutions will not allow travel to countries with a Department of State travel warning. EA professionals should know if the programs on which they send students can break even financially or if they are required to generate revenue or can operate at a loss. Finally, those working in EA should know their limits. They should know
the resources of their office, both financial and human, and know how those resources, as well as the other two r’s, influences their institution’s study abroad portfolio (NAFSA CEP, 2016).

The education abroad portfolio consists of all of the programs an institution offers that provide a study abroad experience for its students. There are four program models that can fall within a portfolio: Institution-led, Co-Sponsored, Consortium, and Outsourced.

Institution-led programs are developed, marketed, and managed by faculty and staff at the U.S. institution and do not involve any institutional partners abroad. They tend to be an economical option for students, as there are no outsourced logistics, which means the cost of the program is not inflated to pay for additional tour guides, booking of accommodations or flights, and usage of facilities or other personnel abroad. The institution also absorbs the greatest amount of risk with these programs, since all course logistics are handled by faculty members who are not professional tour guides.

Co-Sponsored programs are a hybrid of Institution-led and outsourced, as they rely on the institution for a portion of the logistics and a partner of some sort for the remainder. Partners may include institutions abroad with which the U.S. institution has a Memorandum of Understanding (MOU), a travel agent that specializes in student travel, or a host institution abroad. These programs allow experts and faculty to work in conjunction with EA professionals to deliver a program that is less expensive, yet utilizes local or specialized services.

Consortium programs share responsibilities between institutions in the U.S., for example, many private colleges have consortium agreements with other private colleges where one school will take the lead on a program and allow students from other schools to enroll in that program. This is an excellent option for schools who generally have low enrollment in study abroad
programs, because the lead school can reach minimum numbers by enrolling one or two students from consortium schools.

Finally, outsourced or provider programs. This option, while the most expensive, works well for EA offices that do not have sufficient human resources to provide many Institution-led programs. Providers also take on much of the liability for students and faculty while abroad and generally have built infrastructure in the host country. This results in program content that better utilizes local expertise and reflects knowledge of the host country’s idiosyncrasies, which a faculty member may or may not know.

In designing a program portfolio, EA professionals can better focus resources if they know which programs result in the greatest student development and why. This study aims to answer those questions and help those working in EA and the faculty teaching courses abroad to improve their program design to ensure that students are growing as much as possible. This study will also help identify which programs produce students who have grown the least and can help EA professionals decide if those programs are salvageable.

If an institution employs a Senior International Officer or someone who is in charge of international education best practices or policy-making, this study can be informative for them also. Policy-makers can write policies that require study abroad programs to contain certain components, such as language learning or specific pre-departure activities. An institution can also make policy related to program length, and potentially mandate minimum length requirements. Policy is influenced by the demographics of students who study abroad, for example, students of a certain age can be prohibited from studying abroad or encouraged, depending on what the data show.
This study is especially important for students. Students make many commitments when they study abroad: they commit financially, to learning and speaking a language, to living in a part of the world with which they are unfamiliar, to interacting with cultures and people who are not like them. Students make these commitments and they have expectations of what the time abroad will provide to them. Many students simply want to experience another part of the world. They expect their interactions with locals to be very surface-level, i.e. in restaurants and shops, perhaps in the classroom. Other students expect a study abroad experience to change them. They know their personality, maturity level, self-confidence, and so much more could and should change. When EA professionals, faculty, and partner institutions can design programs that are proven to result in the greatest student development, those students’ expectations will be met.

Definitions of Terms

The following terms are defined for use in this study:

*Intercultural competence*: “Broadly defined as appropriate and effective communication and behavior in intercultural situations” (Deardorff, 2009, p xi). Definitions of intercultural competence tend to be generic and should be defined by the literature and within the context of the study (Deardorff 2015). Within this study, intercultural competence is defined as the knowledge and skills developed by students during a study abroad experience that help them navigate cultural differences (Olson, et. al, 2007, p. v). This skillset includes personality factors of: adaptability, curiosity, position-defending, self-awareness, sociability, and tolerance (memo©, 2016). Further definitions of these factors as they relate to this study and analysis can be found in chapter 2.
**Employability:** Possessing skills or personality characteristics that employers value. Students become more employable the more skills and traits they develop. It is important to note that this term is defined with a European and United States focus and considers only what employers in those two regions of the world value in employees.

**Education abroad, study abroad, student mobility:** These terms, used interchangeably throughout this document, refer to students studying outside the country in which they are pursuing a degree. For example, students attending institutions of higher education in the United States study abroad when they leave the United States.

**Internationalization:** “the process of infusing an international, intercultural or global dimension into the purpose, function, or delivery of postsecondary education” (Knight, 2003, p. 2-3)

**Globalization:** A loaded term with disparate connotations, “implying the hegemony of the capitalist system, the domination of the rich nations over the poor and the loss of national identity and culture” (Olson et. al, 2007 p. vi). Internationalization is the preferred term for the “processes needed to ensure that it penetrates the institution’s activities and ethos, both broadly and deeply” (Olson, et. al, p. vi), as it does not conjure those negative connotations.

**memo© Factors of Employability:** Confidence, curiosity, decisiveness, problem-solving, self-assessment, and tolerance. Further definitions of these terms and how they relate to the survey used in this study can be found in chapter 3 (memo©, 2014).

**memo© Factors of Intercultural Competence:** Adaptability, curiosity, position-defending, self-awareness, sociability, and tolerance. Further definitions of these terms and how they relate to the survey used in this study can be found in chapter 3 (memo©, 2014).
**Erasmus Program**: A program developed by the European Commission in 1987 to encourage European higher education students to study in another European country. Through this program, students throughout Europe can study at any Erasmus placement location. There are 280 placement locations in 32 European countries (Erasmus Student Network, 2016).

**NAFSA**: The world’s largest nonprofit association dedicated to international education and exchange. (NAFSA, 2016)

**Forum on Education Abroad**: The Standards Development Organization (SDO) for education abroad. Members include U.S. Colleges and Universities, overseas institutions, consortia, agencies, provider organizations, and foundations (Forum on Education Abroad, 2014).

**Forum Standards of Good Practice**: Set of guidelines that supports the complex responsibilities inherent in offering education abroad opportunities. (Forum on Education Abroad, 2015).

**Third Party Provider**: For-profit company that offers assistance with study abroad program planning, including logistics, billing, risk management, recruiting, vetting of homestays, maintaining institutional partnerships, etc. Third party providers should be included in a study abroad program portfolio if there is limited staffing and resources in education abroad at an institution. These companies take on the risk and logistics, freeing faculty and institutional to focus on academics and student recruitment.

**Homestay**: A student lives with a local family during a study abroad experience. The homestay experience generally involves cultural and language immersion through meals and daily interactions with a student’s host family.
**Island program:** A group of students studying abroad lives, studies, and travels together. They are limited to the classes offered to the group and while activities are easier for administrators to control, they limit students’ autonomy and intercultural interactions (NAFSA CEP, 2016).

**Consortium program:** Study abroad programs in which there are shared responsibilities between institutions, usually with one institution taking the lead. These institutions are generally a group of private colleges, community colleges, or institutions governed by a common entity (NAFSA CEP, 2016).

**Exchange programs:** These are study abroad experiences, usually a semester, offered under the auspices of an institutional agreement (Memorandum of Understanding) between a U.S. institution and non-U.S. partner institution. Students participating in the exchange pay their home institution tuition and fees directly to their home institution, and pay for meals and housing in their host country on their own. Generally there are only one or two exchange slots per agreement and any students beyond one or two must enroll directly with the partner institution.

**Direct Enroll programs:** Semester study abroad programs in which the student enrolls directly with the non-U.S. institution and pays that institution’s tuition and fees. These programs do not need a Memorandum of Understanding.

**Short-term Faculty-Led programs:** Study abroad programs, usually 1-3 weeks in length, that are led by faculty members from the U.S. institution. In most cases, faculty work with their institution’s study abroad office to develop an itinerary and work with advisor or third-party providers to manage all program logistics.
Institutional Portfolio: The combination of study abroad programs offered by an institution.

Most institutions have a mixture of exchange, direct enroll, faculty-led, etc. Balancing the portfolio based on the three R’s: risk, revenue, and resources, (NAFSA CEP, 2016) is essential to managing a study abroad office.

Pre-departure Orientation: This can be offered as part of the course abroad or as a separate course and consists of information presented to students about health and safety while abroad, any required or recommended immunizations, cultural differences, etc. In this study, students are given several options for pre-departure preparation, which will be highlighted in chapter 5.

Limitations and Delimitations

The delimitations of this study are numerous, due to the implementation timeline of the study. This study only analyzes data from students studying abroad at Iowa State University, referred to throughout as the home institution, during the spring semester, spring break, and summer of 2016. These terms were chosen because the majority of students studying abroad travel during these terms. Iowa State is a racially and ethnically homogenous institution, with only 12% of the study body identifying as non-white, and the number of students who study abroad proportionately homogenous.

In omitting the fall semester from the study, there will be some programs only offered in fall that are excluded. These students were not given the opportunity to receive results about their intercultural competence before and after their study abroad experience, as their peers who studied abroad in other terms were. Some students choose to study abroad in specific terms because their major requires them to be on campus during all other terms. If a program of study
only allows students to study abroad in the fall, there will be no students from that major included in these survey results.

This study was conducted only at Iowa State University. The instrument used, while established in Europe, is not well-known in the United States. The survey was housed in Iowa State’s study abroad application management software, ISUAbroad (Terra Dotta software). Students were able to see a link to the survey and brief information about it as learning content that was required to be read in the post-decision phase, once the student had been accepted on the program but before they departed. Students were required to read the learning content, but not required to click on the link that registered them for the survey. Once students registered for the survey, they received e-mail prompts from memo© starting two weeks before their program start date and again 30 days after their program end date. They received regular reminders to complete the survey once they registered to take it.

This process narrowed the study because Terra Dotta study abroad application management software is not intuitive and can be difficult for both students and staff to navigate. Only students who were able to manage their application and complete all required learning content would encounter the link to register. Then, only students who clicked through to register would receive the links to the pre and post surveys. The surveys would only be taken if the students then checked their e-mail and clicked through the links to the surveys. This is too many steps and overcomplicates the process, but with the timeline to administer the study and the implementation process, it was the most feasible option.

The limitation with the greatest impact on this study is sample size and the low number of students studying abroad. The national average of students studying abroad is less than 5%. The
number of students studying abroad during this study constituted only 3.4% of the total student population.

Another limitation of the study is the personal choice of the student to complete the pre and post assessments. Students were not required to complete the surveys and were responsible for taking the survey on their own time. Although the language of the Learning Content in ISUAbrad (see appendix D) highlighted the benefits of the assessment and the personalized report the student would receive upon completion, many students chose not to complete either the pre or post survey or both. This could potentially skew the results because students who are involved at an initial stage of a program are more likely to participate in activities throughout the process (Astin, 1984), which presents a data set represented only by those who actively participated and not those students who may have learned and grown substantially while on the study abroad course, but who did not, for whatever reason, complete the surveys.

Another limitation focuses on the reliability and validity of this study based on definitions of terms. The instrument was developed by a German consulting company, operates in the Czech Republic, and primarily assess Erasmus students. While the United States and Europe are considered westernized nations and employers tend to value similar qualities in their employees, definitions of employability may differ.

Another limitation of the study is the absence of a control group. In order to understand the growth and development that can be contributed to study abroad, it would be beneficial to also survey a control group to assess the effects the college experience itself has on a student’s intercultural competence and employability overall. This would provide data comparing the differences in growth resulting from a study abroad experience compared to the growth a student exhibits from simply attending college. A controlled study could also look at different types of
student engagement, such as student organization involvement, class attendance, extracurricular activities, etc. There are instruments that assess the effects of engagement on student development while at college (Braskamp et al., 2014), but they do not focus on student development as it relates to intercultural competence and employability.

CHE Consultants, the company that developed memo© is currently developing a survey to administer to a control group that would measure growth in students who do not study abroad, but that tool is not yet ready for use.

There are additional limitations that will be further explored in chapter 5.

Summary

This study was developed in order to measure student development during study abroad programs at Iowa State University. The assessment instrument used in the study, memo©, measure actual growth and development, as opposed to student’s perceived growth as it relates to intercultural competence and employability. The research questions focus on the types of programs and their characteristics that result in the most growth, as well as the student demographics that show the greatest development between the pre and post survey results.

This study is significant due to the impact its results may have on study abroad program design and development at Iowa State University or other institutions who use this study to inform their practice. International education professionals, particularly those who work in education abroad, want the programs offered at their institutions to result in the greatest amount of student growth possible because student success is the ultimate goal.

Refining study abroad program design and quantifying student development during study abroad programs provides students, their parents, faculty, administrators, and other stakeholders
with justification to pursue study abroad, to allow their children to study abroad, to promote study abroad, and to financially support study abroad.

In providing that justification, it is important to focus on the long-term effects of study abroad, specifically greater employability. Chapter 2 reviews the literature of assessment in international education and informs the researcher’s decision to focus on intercultural competence and employability. The literature looks at definitions of employability in international education and links those definitions to the employability factors featured in the memo© assessment instrument. Employability will be defined using a European lens, an American lens, and a non-Western lens. The literature review also focuses on definitions of intercultural competence and how those definitions are included in the memo© tool. Current best practices in study abroad program design are also explored in greater depth, and resources from both NAFSA and the Forum on Education Abroad will be explored.

Chapter 3 explores the methodology of the study in depth, including the design of the study, how the sample was identified, the data collection protocols and procedures, and finally the data analysis. Chapter 4 explores the findings, while chapter 5 goes into greater detail to explain the impact of each of the findings on program design, student learning, and the field of education abroad.
CHAPTER 2. REVIEW OF THE LITERATURE

Global economies and technology connect people through travel, business, student exchange, and numerous other channels. Yet only 46% of Americans have a passport (Stabile, 2014, U.S. State Department, 2014). In order for U.S. citizens to be productive members of a global society, it is important to internationalize the campuses of higher education institutions (Braskamp, 2009a) and encourage students to improve their intercultural competence.

A common definition of internationalization is “the process of infusing an international, intercultural or global dimension into the purpose, function, or delivery of postsecondary education” (Knight, 2003, p. 2-3). Internationalization is a cultural shift that embeds a global perspective into as many facets of the institution as possible. In order to do this, Braskamp stresses that we must understand the “desired ends” (Braskamp, 2010, p. 3) of student learning and development. If we are mentoring and guiding students, we are responsible not only for creating experiences, programs, activities, curricula, and community that helps our students grow in ways that result in those desired ends, but for properly assessing student learning to determine the most efficient and effective ways to achieve them.

Data from Braskamp’s study is important to the field of international education because it focuses on study abroad program design and how it affects student learning. Specifically, designing programs that focus on the desired ends of study abroad, in this case, developing students’ intercultural competence and employability, which can often be one in the same, as seen later in this chapter as employability is explored. These specific skills were chosen because of their ability to relate to short-term and long-term goals for students: their current intercultural competence and their future employability. Programs that are proven to result in the acquisition
of these skills can be marketed to both students and their parents to highlight potential return on investment and justify participation in a study abroad program.

In order to measure students’ growth in these skills that benefit them in both the short and long-term, institutions should strategically implement an assessment process. Formulating an institutional assessment strategy is the most efficient method of determining what those desired ends should be based on institutional mission, culture, and goals for study abroad (Deardorff, 2015). In her book “Demystifying Outcomes Assessment for International Educators”, Darla Deardorff speaks at length about assessment strategies specific to international education and the history of assessment in the field.

After reviewing a brief history of assessment in international education, this chapter will review the literature related to intercultural competence, explore various definitions of the term, and finally define the term and place it into context for this study. The instrument that is the basis of this study, memo©, assesses student development in relation to both intercultural competence and employability. Therefore, this chapter will also explore definitions of employability and review several studies which have linked employability to skills students develop while studying, working, or volunteering internationally.

In order to answer the research questions, the data must be analyzed using a multiple regression technique that will determine which program characteristics predict different student learning outcomes. This strategy for analysis is informed by Astin’s theory of Input-Environment-Outputs (I-E-O), which will be further explained within this literature review. Finally, this chapter will explore the literature with regard to study abroad program design, highlighting historical models, current models, and what other scholars hold to be the models of the future. This study will build on that forward-thinking literature and will serve as a resource
to international educators as they create study abroad program portfolios at their institution and implement programs strategically to result in the greatest student development of skills related to intercultural competence and employability.

**Assessment in International Education**

Assessment is a relatively new concept in international education. When international educators assess their programs, they have historically focused on easily measured outcomes or use an easy-to-use assessment tool without thinking about the implications of their data collection and without setting any goals or objectives (Steinke & Fitch, 2011). The choice of instrument or set of questions depends on the motivation for answering the following question: Why assess? (Deardorff, 2015).

“For educators, outcomes assessment is about deepening students’ learning and improving both teaching and learning. For administrators, outcomes assessment is about evidence for accountability to stakeholders and advocating for program viability and resources. For students, such assessment may be about completion of a credentialing process, as well as about gaining knowledge and skills needed for the future, especially in terms of employability. For employers, outcomes assessment may be about team development or candidate selection” (Deardorff, 2015, p. 10).

An assessment tool should meet the demands of three stakeholders: students, administrators, and employers. It is important to select a tool that not only gives students individualized feedback in order to assess their personal development abroad, but also highlights how those factors impact them long-term. Specifically, how those factors affect their future employability. Finally, it is important that the tool selected meet the needs of the administration
so that they may adjust their marketing, pre-departure preparation, and returnee programming efforts.

Assessment of education dates back to Plato and Aristotle, who assessed student learning through oral recitation. The University of Bologna in 1063 reviewed students using a jury system and during Colonial times, Harvard students demonstrated their learning through weekly “disputes” (Bresciani, Gardner, & Hickmott, 2009). Much of the foundation of assessment principals used today comes from Tyler’s (1949) work on curriculum development and evaluation that outlined the why (education purposes), the how (selection and organization of education experiences), and the what (evidence of desired results from educational experiences). In the 1970s, Astin’s work (1972) on student talent development and I-E-O model provided the basis for “outcomes based assessment programs today” (Bresciani et al., 2009, p. 4). The I-E-O model is based on the idea that student development is a result of inputs, or the characteristics and influencing factors already in place when students begin college, environmental factors students experience while in college, and the outputs, or results of the students’ college experience.

By the end of the 20th century, the field of assessment was well developed, mainly due to increased accountability and lack of resources in education. In the past decade, there has been a shift from accountability to a focus on teaching and learning, meaning an increased emphasis on academic learning standards and curricular alignment (Ewell, 2005). There was also a focus on learning that happened outside the classroom, including international experiences. At this point, the U.S.-based Association of American College & Universities initiated a project called Valid Assessment of Learning in Undergraduate Education (VALUE), which involved developing rubrics for 16 difference learning outcomes in undergraduate education (Deardorff, 2015).
There has also been a shift in U.S. education in the past 20 years, from the more traditional faculty-driven lectures to a flipped classroom model, where the instructors become facilitators of student learning. Assessment has also moved to a more learning-centered model. The implications of this paradigm shift include the promotion of higher expectations for learning, respect of diverse talents and learning styles, student engagement, prompt feedback, and increased student-faculty contact (Huba & Freed, 2000).

 Assessment expert Trudy Banta (2005) states that “Outcomes assessment is simply not worth doing unless it is used to enhance the student learning experience by improving instruction in a single class, the structure or sequencing of a curriculum, or the process of offering student services that complement coursework” (p. 38). It is the responsibility of administrators and instructors to help students move beyond the surface learning and into deeper levels of engagement and understanding. One way to do this is the learner-centered approach and this is a way to document the more complex learning outcomes of international education (Deardorff, 2015).

 Although students are expected to be engaged in their learning process, a facilitator is required. It is important to involve faculty in the assessment process from start to finish, “including the development of objectives, the selection of assessment techniques, and the review of assessment results” (Palomba & Banta, 2001, p. 23). This study focuses on two learning objectives and the increased capacity for both: intercultural competence and employability.

**Intercultural Competence**

One theory, which is widely used in international education assessment, is that of intercultural competence. “Broadly defined as appropriate and effective communication and
behavior in intercultural situations” (Deardorff, 2009, p. xi), the term should be further defined contextually within a study, as its meaning can differ depending on the research questions and methodology. The definition of the term will be contextualized later in this chapter.

In 2009, Spitzberg and Changnon identified 286 cognitive/personality, affective/attitudinal, and behavioral/skill dimensions of intercultural competence, along with 18 context/environmental factors and 39 outcome variables. They also concluded that minimal effort had been made to assess the development of those dimensions or clarified how each dimension is related to cross-cultural outcomes. Also, there was no way to clarify how individuals, teams, and organizations could increase their cultural competence to improve bottom-line results. Despite this fact, scholars have built many assessment instruments based on theories of intercultural competence.

Some researchers choose to define intercultural competence as the mastery of a particular body of knowledge (Hirsch, 1987) and develop instruments or tests to reflect that mastery. For example, Corbitt (1998) developed the Global Awareness Profile (GAP) test, which consists of 120 multiple-choice items designed to test cultural knowledge in 13 areas: one general section, six sections related to geographic knowledge of different regions, and six sections dealing with knowledge related to the following: environment, politics, geography, religion, socioeconomics, and culture. Knowledge-based approaches are limited in that they are domain specific, for example, what a student learns on their study abroad program to Japan relates primarily to Japan (Whalen, 2015).

Measuring intercultural competence can also involve the assessment of attitudes and specific behaviors, which is what the researcher chooses to measure in this study. One instrument, in addition to the tool chosen for this study, which successfully integrates both
dimensions, is the Attitudinal and Behavioral Openness Scale (ABOS) (Caligiuri, Jacobs, & Farr, 2000). The ABOS is based on the theory of personality characteristics as predictors of successful cross-cultural adaptation.

“The ABOS consists of 24 items divided across four subscales designed to measure (a) attitudes (e.g. ‘other cultures fascinate me’), (b) past experience (e.g., ‘I am fluent in another language’), (c) comfort with difference (e.g. ‘my friends’ ethnic backgrounds are different than mine’), and (d) participation in cultural activities (e.g. ‘I eat at a variety of ethnic restaurants’)” (Whalen, 2015, p. 248-249). Unlike the memo© tool, these conceptualized traits are viewed as relatively stable, and leave little room for change or improvement to result in a students’ greater intercultural competence.

In her Process Model of Intercultural Competence (see appendix B), Deardorff (2009) describes a cyclical model that includes a combination of existing attitudes, knowledge and comprehension, and skills that result in a desired external outcome. The model begins with attitudes and moves from an individual level, i.e. an individual’s attitudes, to what she refers to as an “interaction level” (p. 480) that focuses on outcomes. In Deardorff’s model, the degree of an individual’s intercultural competence is dependent upon the level of their attitudes, knowledge and comprehension, and skills. As stated previously, intercultural competence is a term that should be defined based on the literature and within the context of the study (Deardorff, 2015).

**Employability**

Employability can be subjective, complex, and may differ among disciplines. Many fields will require specific training in order to demonstrate employability, while others will not consider technical experience so much as a prospective employee’s potential to learn the job.
Other employers, depending on the field, may view factors such as emotional maturity and interpersonal and communication skills as most important for employability (David, et. al, 2010; Brunello and Schlotter, 2011).

Lowden et al. (2011) provided a detailed explanation of the difficulties of defining employability, requiring the decision to either focus on a narrow definition based on skills and attributes or a broader, more inclusive approach that defines employability based on values, intellectual rigor, and engagement (Hinchcliffe & Jolly, 2011).

Regardless of definition, it is important for the institutions educating the work force to understand what employers in that workforce value in an employee. In the 2014 Erasmus Impact Study, conducted by the European Union, employability is defined as “a combination of factors which enable individuals to progress towards or enter employment, to stay in employment and to progress throughout their careers” (p. 69). It is a combination of skills, experience, and personal attributes that make graduates more likely to be employed and be successful in their chosen occupations (Pegg et al. 2012) and the key is determining which of those skills are transferrable across disciplines and focusing on the development of those skills.

The Erasmus Impact study includes summaries of numerous studies and reviews the literature related to employability, which highlight both the complexity of the term and the external factors researchers must take into consideration. Employability involves not only the skills, attitudes, and motivations of the individual, but also labor regulations, demography, the structure of the economy, and the overall economic situation (Council of the European Union, 2012a).

A 2013 study conducted by Humburg, van der Velden, and Verhagen simulated the selection process with hypothetical candidates in order to gauge what employers find most
valuable in new graduates. This mixed-methods study surveyed more than 900 employers in nine different European countries and conducted in-depth interviews with employers. They also conducted focus groups with relevant stakeholders. The data collected showed that the most important skills for graduates’ employability were related to interpersonal skills, such as communication and teamwork, as well as professional expertise and a field of study that matched the graduates’ degree programs. “International orientation was very much appreciated, though it could not compensate for a lack of relevant working experience or a non-matching field of study” (European Union, 2014, p. 69).

Zimmerman & Neyer, in their 2013 longitudinal study, showed that the skills and the improvement of skills that result in greater employability for graduates are related to mobility, or as the study refers to it, “sojourning”. The data showed that both short and long-term sojourning resulted in increased openness and agreeableness and in decreased neuroticism.

Further studies show that transferable skills and employability skills can be linked to the transformative experiences students have while abroad, through study, work, or volunteering. Brooks and Waters (2011) claimed that “there is substantial evidence that, in certain countries at least, an overseas qualification does often lead to substantial labor market rewards” (p.11). Additionally, “for many overseas students, international experience is seen as an essential part of their CV in an increasingly competitive global employment market” (Fielden, et.al, 2007, p. 16).

Yorke (2006) defined employability as something more than the simple acquisition of skills. He believed employability involves a complex and continuous process of learning, and should not be based solely on a set of achievements related to their discipline. “In some employment contexts, the actual subject discipline was relatively unimportant, while the
possession of the so-called ‘soft skills’ was valued higher when recruiting graduates” (European Union, 2014, p. 70).

A 2011 survey, conducted by the Erasmus Student Network (ESN) (Alfranseder et al., 2012), compared the skills and attitudes of students with academic or work experience abroad to those of students without that experience. In short, the findings concluded that study abroad enhanced students’ career opportunities, primarily through the study of foreign language. Students also developed self-confidence, intercultural understanding, knowledge of another culture, and believed themselves to be more open-minded after their time abroad. They acknowledged that their employment opportunities increased and they felt more confident moving to a different country to work.

Another U.K.-based study (Coleman, 2011) focused on graduates with a language degree, and highlighted the links between work and study abroad and employability. Over 70% of respondents said that skills gained abroad were a factor in acquiring their first and subsequent jobs, and nine out of ten respondents said those same skills were useful at work. The same study showed that employers highly valued the language and other soft skills their employees developed while studying and/or working abroad.

All stakeholders in Crossman and Clarke’s 2010 study of students, universities, and employers could clearly see the connections between international experience and employability, specifically in the building of networks, language acquisition, and development of intercultural understanding. This study was unique because it surveyed universities, as well as employers and students.

There have been many studies conducted that focus solely on employers and their satisfaction, or dissatisfaction, with the preparation of their workforce. A study of nearly 250
employers from companies of varying sizes for the London-based Council of Industry and Higher Education (CIHE), analyzed the skills and experience employers look for when recruiting graduates (Archer and Davison, 2008). According to the study, the most important skills and capabilities were communication, teamwork, and integrity. These qualities were also far down in the employer’s satisfaction list, with the largest satisfaction gaps between commercial awareness and relevant working experience. Professional working experience overseas was particularly valued among employers. Additionally, a British Council/Think Global survey in 2011 found that 79% of chief executives and board level directors of businesses in the UK thought that, when recruiting new employees, knowledge and awareness of the wider world was more important than achieving a degree with high marks.

This is not to say that every employer in Europe values international experience or language acquisition as highly desirable. Graduate recruiters responding to a 2011 survey by Diamond et al. were more likely to highlight the importance of teamwork (67%) than the importance of foreign language skill (33%), although language skills were ranked higher as a requirement for future graduates. Eighty-seven percent of respondents agreed that work experience was a crucial asset for new recruits, while 70% disagreed that a work or study experience abroad was a necessity in new recruits.

A more recent German study by Grotheer et al. (2012) found that German students with any international travel experience were three times more likely to find a job than non-mobile students. The mobile graduates also self-assessed their intercultural competence as higher and more important for their jobs and were more likely to continue their academic education as a doctoral student. It is important to note that their overall professional success and income did not differ from students who did not go abroad during their studies.
Despite these studies, the data pointing to a link between mobility and employability is not always visible to employers. In a 2014 study by the Center for International Mobility (CIMO) in Finland, the nearly 300 employers surveyed recognized that skills such as tolerance, language skills, or cultural knowledge were traditionally linked to international mobility. CIMO defined the skills that employers fail to link but are actually acquired by international experience as hidden skills or hidden competences. These hidden competences include: openness and sharing, transnational culture, virtual societies, social media, individuality, global value chains, digital systems, identifying global problems, global demand, games and interaction, and virtual degrees (CIMO, p. 16).

In summary, the existing literature regarding definitions of employability highlight skills and characteristics that employers value. Much of the literature also links the development of those skills and characteristics to international experience. This literature informed the development of the memo© tool to assess students’ skill and personality development during an international mobility, or study abroad, program. These studies also show that each of the memo© factors are relevant to employability, particularly the 2013 study by Humberg, van der Velden, and Verhagen.

Much of the literature on the relationship of international mobility to employability is European and conducted with students participating in Erasmus exchanges: a limitation of the literature when assessing students in the United States. This limitation will be further addressed in chapter 5.

There are also those within academia who would rather employability not be factored into learning expectations or outcomes in any way. Those who oppose the “employability agenda do so because they emphatically reject the argument that universities should, as one of
their primary aims, serve the economy and the profitability of employers” (Atkins, 1999, p. 3).

The employability agenda and its effects on higher education will be discussed further in the implications section in chapter 5.

Once the skills related to intercultural competence and employability were identified through the development of the memo© tool, the development of those skills could be assessed individually in two surveys, one offered before the student departs for their international experience and one to be completed upon their return.

No two students who study abroad go into the experience with the same demographics, attitudes, motivations, or lived experiences. No two students will have the exact same experience during their program abroad, or exhibit exactly the same qualities upon their return. Students are motivated by different factors when they choose to study abroad and come from different backgrounds. This concept of inputs within an environment leading to specific outputs is the basis for Astin’s I-E-O model.

**Astin’s Inputs-Environment-Outputs Model**

Shown in appendix E, Alexander Astin’s Inputs-Environments-Outputs, or I-E-O, model was developed in 1993 as a framework to guide assessment in higher education. Astin’s premise is that assessments of education are not complete unless a student’s inputs (i.e. demographics, motivations, attitudes, etc.) are taken into consideration, as well as the environment in which students are expected to learn (Astin, 1993).

Inputs “refers to those personal qualities the student brings initially to the education program (including the student’s initial level of developed talent at the time of entry)” (Astin, 1993, p. 18). Within this study, inputs include the answers to the questions students were asked
in the pre-survey related to their gender, age, major, etc. An additional input is the content of the pre-departure course and which activities students participated in, either voluntarily or as part of a formal course. It is these inputs which become the independent variables in this study. See chapter 3 for a comprehensive list of inputs.

Environment “refers to the student’s actual experiences during the educational program” (Astin, 1993, p. 18). Students are in an environment specific to their study abroad program. They are in a specific location, for a specified period of time, attending specific courses, interacting in a specific language. While students will participate in various activities while studying abroad, there are standard activities in which they will participate based on their program. It is these program characteristics which become the dependent variables in this study.

Outputs “refer to the ‘talents’ we are trying to develop in our educational program” (Astin, 1993, p. 18). In this study, the “talents” to which Astin refers would be those skills students develop as a result of their experience abroad. Specifically, those skills related to intercultural competence and employability, explained at length earlier in this chapter.

This model would inform the regression analysis, explained further in chapters 3 and 4, as the study attempts to identify predictors of success, or in this case, development of skills. As stated in the critique of the consultant in chapter 5, the analysis resulted only in correlates, and not actual statistically significant predictors of positive or negative change. The research questions are directly related to this model and ask questions about all three areas: inputs, environment, and outputs. The goal of answering these research questions is to inform study abroad program design and benefit international educators who may be working under time constraints, with limited resources, and with students who do not study abroad because they do not see the benefit. Study abroad program design is more than designing a program. It is
creating a study abroad program portfolio with consideration for the three r’s: risk, revenue, and resources (NAFSA CEP, 2016).

**Study Abroad Program Design**

The literature for the section is found in the training and educational materials of the two largest professional organizations for international educators: NAFSA Association of International Educators and the Forum on Education Abroad. These two organizations employ professionals and organize teams of volunteers to update bodies of literature and best practices for international educators regularly.

The purpose of this section is to review best practices in study abroad program design and portfolio management, according to the literature, and highlight the ways in which this study might benefit the efficiency and effectiveness of program design and portfolio management.

The literature and best practices related to education abroad, or study abroad, are primarily generated by the Forum on Education Abroad and supplemented by NAFSA. The Standards of Good Practice for Education Abroad are in their 5th edition and were revised in 2015. The nine standards provide guidance for education abroad professionals throughout the study abroad cycle. The Standards are:

1. Mission and Goals
2. Student Learning & Development
3. Academic Framework
4. Student Selection, Preparation, and Advising
5. Student Code of Conduct and Disciplinary Measures
6. Policies and Procedures
7. Organizational and Program Resources
9. Ethics
   (The Forum on Education Abroad, 2014)
These standards of good practice inform program and portfolio development in terms of risk management, academic rigor, and the overall mission of study abroad at an institution. They also suggest institutional partners who will help education abroad professionals maintain best practices, i.e. academic advisors, registrars, bursars, procurement, etc. Standard 2, Student Learning and Development, is focused on the following three statements:

“Educational objectives remain central to program design and management. Regular evaluations are conducted to assess student learning and development. Organizations seek to create and maintain continuity with student learning and development on the home campus.” (https://forumea.org/resources/standards-of-good-practice/standard-2/)

The Forum on Education Abroad also provides members with an “Outcomes Assessment Toolbox” that includes case studies, assessment tools, assessment texts, position papers, an outcomes assessment bibliography, and a glossary of terms to help assess student learning based on the mission and goals of study abroad at their institution. The assessment texts include guidelines for forming an assessment plan in general, in addition to texts specific to education abroad.

The Standards of Good Practice provide guidelines and best practices for program design and the institutional management of education abroad policies and procedures. However, the literature for managing an education abroad portfolio can be found in NAFSA Core Education Program (CEP) workshops, offered at national and regional conferences as pre-conference workshops. The CEP workshop that provides guidance on building an education abroad portfolio is “Collaborative Approaches to Developing Faculty-Led Programs”.

The complete content of this workshop is proprietary, but includes basic guidelines for portfolio development that are common knowledge in international education, mainly the three r’s: risk, revenue, and resources (NAFSA CEP, 2016). An education abroad office, in
conjunction with institutional administration, must determine what level of risk they are willing to take with programs.

Risk might come in the form of institutional liability, program location, and program activities. It is up to an institution to decide what they are comfortable taking on in terms of risk. If an institution is risk averse, an education abroad portfolio should include more provider programs. If an institution is more tolerant of risk and has the resources, their portfolio should include more home-grown faculty-directed programs in which the education abroad office provides more assistance with logistics and risk management (NAFSA CEP, 2016).

Revenue, the second r, is an important factor when developing an education abroad portfolio. Institutional priorities should drive financial goals of study abroad programs and administrators should work with the education abroad office and its funding model to determine if programs in general or individual programs should generate revenue, can operate at a loss, or are required to break even (NAFSA CEP, 2016).

Finally, resources are the driving factor in the management of a study abroad program portfolio. Resources come in the form of staffing, budget, and time. If an office has a staff of one and institutional goals to grow study abroad participation, the education abroad professional will be required to rely on program providers to manage the majority of their programs due to lack of time to manage logistics and risk themselves. If an office has sufficient staffing but not enough financial resources, they may choose to focus on home-grown programs which are less expensive, provided their institution will tolerate that added risk (NAFSA CEP, 2016).
Summary

There have been many studies in Europe and the United States focused on intercultural competence, employability, or a combination of the two. There are also resources providing international educators with literature on study abroad program design. This study links the concepts of intercultural competence, employability, and study abroad program design. The primary goal of this study is to contribute to the literature and provide education abroad professionals with a strategy for managing their program portfolios intentionally, with a focus on programs that the data have shown will result in greater development of the skills related to both intercultural competence and employability.

Chapter 3 discusses the methodology of this study, including the initial project that informed the selection of the tool implemented to assess respondents’ growth. It will discuss the selection of the instrument, the implementation timeline, and data collection process.
CHAPTER 3. METHODOLOGY

Study abroad can have different effects on students depending on their demographics, their lived experience, the effort they put into their time abroad, their expectations, and the type of program they have chosen. In order to understand the overall effects of study abroad on student development, it is important to include many students in the research, which necessitates a quantitative study.

Overview of Purpose and Research Questions

The purpose of this study is to determine if there are any correlates of positive change in students’ intercultural competence and employability. In determining those correlates, international educators can design study abroad programs that result in the most potential for that positive change. There is the possibility that some students may not be operating in a mindset that allows them to grow as much as their peers who may be more open to that growth or have lived experiences that have resulted in their capacity for more growth. Regardless of the characteristics of the particular student, international educators and program providers should be designing programs to provide the greatest amount of growth for the greatest number of students. This helps sustain study abroad efforts and helps education abroad professionals focus their portfolio on developing programs that result in the most growth among students.

If international educators are designing programs to result in the most student development, it is important to answer the following questions: which program characteristics result in the most/least development and which student demographics result in the most/least development? This study focuses on development related to intercultural competence and employability; therefore, the change was measured using those two benchmarks.
Methods

This study was designed around an existing survey, memo©, or monitoring exchange mobility outcomes. The survey was developed in Germany to help universities, specifically universities participating in Erasmus programs, increase students’ personal growth. The survey was also created to assess the effects of program modifications on student development and to select staff that fit institutional needs. Initially, the survey was only used with students, and has since been modified to assess alumni and university staff.

CHE Consult, the company who developed the instrument, has been administering the survey to Erasmus students since 2013. The tool is unique, as it relates to employability, and how programs are designed to impact student development as it relates to employability. The focus on employability and designing programs to impact a student’s employability is not widespread throughout existing surveys commonly used in the United States, as the literature demonstrated in chapter 2. Only one other United States institution utilizing the instrument as of the commencement of this study, and had not yet received their report or raw data when the researcher spoke with their Director of Study Abroad.

Design

memo© methodology was developed by CHE Consult and was founded on research in psychometrics and the findings of a previous project that identified the relevant factors for academic success (memo©, 2014). Many of the instruments used to assess student development during a study abroad, or mobility, program are based on measuring a student’s perceived growth or development of certain skills during their experience (Davidson, 2015). These tools assume that students know what they have learned and how they have learned it. Many of the tools also
place students on a continuum based upon their answers to survey questions and ascribe characteristics to those students based on where their answers indicate they fall on that continuum. This can be problematic in that students do not necessarily behave, communicate, or base decisions on the way their assigned area of the continuum describes their expected actions.

An approach that places students on a continuum and outlines a list of expected behavior based on their location on that continuum can result in self-fulfilling prophecies, with students behaving the way the continuum says they should, when they might otherwise behave differently. Continuum-based instruments place students in what might feel like a box that they then become comfortable within, which defeats the purpose of the intentional discomfort students should seek when studying abroad.

“memo© is unique for its innovative methodology going beyond classical perceptional surveys of student satisfaction and introducing a psychometric-related analysis of actual personality traits (‘memo© factors’). At the same time the tools integrate also traditional questions and monitor who students are and what they think” (memo©, 2014).

A mixed-methods approach was used to develop memo© and the methodology is based on research findings from various samples. These factors were extracted using psychometric-related analysis of actual personality traits determined through a mixed-methods approach using various samples from the following: The European Parliament study on improving the participation in the Erasmus programme (2010), the VALERA study (Professional Value of Erasmus Mobility – a study by the International Centre for Higher Education Research) (2006) and the Flash Eurobarometer study, (Employers' perceptions of graduate employability – Gallup Organisation requested by European Commission) (2010).
Researchers developed the memo© tool in 2011 and began with a list of 155 items related to the employability and intercultural competence of students. These items were generated through past projects developed by CHE Consultants and the research of their team. A sample of 80 students were tested with the 155 items to provide the consultants with initial data in order to conduct a factor analysis. “The analysis yielded 10 different factors comprised of 126 items. Two further validations followed. The main test was conducted on 2,449 cases and led to a concentration on 67 items. The last validation based on 3,332 cases yielded a further possible reduction to 52 items without influencing the strengths of the factors.” (memo©, 2014)

After the initial analysis and two additional validations, memo©'s Cronbach-alpha is 0.895. Cronbach's alpha is the estimate of the reliability of a psychometric test. It uses the covariance between item-pairs and the variance of the total score to express to which extent items (questions, indicators) measure the same thing. The result ranges from 0 to 1. The satisfactory threshold is different for the different numbers of items included (Bortz and Döring 2006), so a value of 0.5 for a four item set is better than one of 0.6 on a twenty item set. The research shows that alpha is multiply determined under all but the most highly restrictive conditions – it often reflects not only general factor saturation but also group factor saturation and even variability in factor loading (Zinbarg, et. al, 2005).

The initial memo© survey was administered to more than 90,000 individuals affiliated with nearly 1,000 higher education institutions (memo©, 2014). The survey informed the Erasmus Impact study, conducted in 2014 and 2016, and included 56,733 students, 18,618 alumni, 4,986 staff, and 652 employers. The survey was conducted online and the respondents participated in Erasmus programs spanning 34 countries (Erasmus Impact study, 2014, 2016).
“memo© introduces 10 memo© factors describing the main personality traits of students related to intercultural competence and employability. memo© data does not aim to provide solely an assessment of students’ abilities to interact in different international and unknown contexts, but also to provide an assessment of how well the design and management of an educational experience are suited to enhancing students’ employability and intercultural competence. The analysis of the added value must therefore be understood as an assessment of the role of the institution in preparing its students for, and guiding them through, their university experience.” (memo©, 2014)

The survey provides students with a personal report showing how they compare with other students who have taken the survey worldwide. Students receive a personal report upon completion of the pre-survey and an additional post-survey report that shows a comparison of their results to their pre-survey results as well as other respondents’ results. The report includes two sets of scores with six personality factors related to each score. The six memo© factor values combined to equal a student’s employability score are confidence, curiosity, decisiveness, problem-solving, self-assessment, and tolerance. Students’ intercultural competence scores are based on the factors of adaptability, curiosity, position-defending, self-awareness, sociability, and tolerance. Definitions of these terms as they are used within this assessment can be found in chapter 1, table 1 and in the Intercultural Competence section of chapter 2.

Questions in the pre and post survey are identical, unless an institution has chosen to customize their survey and include additional questions to answer specific research questions. In this study, the researcher chose to add a question related to pre-departure activities to the pre-survey and a question about activities undertaken while abroad in the post-survey. These questions will help inform the researcher of the program activities included in programs that
resulted in the most student growth and the activities or lack thereof that resulted in the least amount of growth. The change in memo© Total values based on the presence or absence of these activities can be found in chapter 4.

**Sample**

Approximately 1,500 students study abroad at Iowa State University every year, with 1,633 studying abroad in FY 2016 (Study Abroad Center Self-Study Report, 2015). This number varies based on the number of programs that are offered, programs that are offered every other year or every three years, the appeal of program locations, and students’ desire and capability to study abroad. The majority of students study abroad in the spring and summer, so in order to maximize the population to whom the surveys were administered, this study includes data from the spring, spring break, and summer terms of 2016.

Of the 1,221 students who studied abroad during the spring, spring break, and summer terms of 2016 (Study Abroad Center FY 2017 report, 2016), 247 completed the pre survey via the mechanism describe in the next section. Of those who completed the pre survey, 115 completed the post survey. This 9% response rate is a limitation and will be discussed further in chapter 5.

If Iowa State chooses to use memo© again to assess students, prior to implementation they should form a study abroad assessment committee comprised of international educators, administrators, and faculty. This would help faculty to thoroughly understand the instrument and its validity and include it in the development of future faculty-led study abroad courses. International educators can be sure to include information about the survey in all promotional, application, pre-departure, and post-return materials.
Data Collection Protocols and Procedures

The instrument used in this study was chosen as a result of a Capstone project between the researcher and the client, Iowa State University (Davidson, 2015). The goal of the Capstone project was to choose an instrument to assess student development during study abroad. The memo© tool was chosen because it measures actual as opposed to perceived growth related to both intercultural competence and employability. When marketing study abroad, it is important to help both students and parents understand the long-term benefits of a study abroad experience. Many students state that they don’t want to study abroad because it delays their time to degree and isn’t directly related to their major, although research has shown that study abroad does not delay graduation, regardless of major, compared to students who do not study abroad (Redden, 2012). If a student is undecided about studying abroad, it is informative to demonstrate the benefits to their future employability in order for them to feel there will be a return on the investment of the time and money to study abroad.

The researcher reviewed four different assessment instruments as part of the Capstone project: the Intercultural Development Inventory, the Global Perspectives Inventory, memo©, and a home grown instrument developed at the University of Delaware. In short, no other instruments connected study abroad to employability, and memo© was the most economical option (Davidson, 2015).

Once the researcher and the client agreed on an instrument, the researcher worked with numerous stakeholders to administer the survey. A complete timeline of the study and copies of communication to students, faculty, advisors, and international educators can be found in appendices F through H.
Administration of the study was not a difficult process, and if students had known about the benefits of the survey and been encouraged at every step in their study abroad application, pre-departure, and post-return process the response rate might have been higher. Those who were in closest contact with students, such as faculty, academic advisors, and study abroad advisors, were aware of the study but there were limited opportunities to educate these stakeholders on the benefits of the study. These limitations will be discussed further in chapter 5.

The survey was administered through StudioAbroad, known at Iowa State University as ISUAbroad. This is a study abroad application management software administered by the software company Terra Dotta. Students are required to read all Learning Content items within ISUAbroad as part of their study abroad application, so although it was not possible to require completion of the survey due to Institutional Review Board policy, students were required to open the Learning Content item that included the communication about the survey (see appendix D). Once the students clicked on the Learning Content, they were shown the benefits of the survey as well as a link to register for the survey. The Institutional Review Board documentation for this study can be found in its entirety in appendix I.

The link embedded in the Learning Content did not take the students directly to the survey because of the strict timeline associated with memo©. The link sent students to a registration page that asks them where they are going, their trip dates, and for an e-mail address. This information is kept in a database, hosted by CHE Consult, and automated messages were sent to students via the e-mail they provided at specific times before and after their study abroad program, prompting them to complete the survey. Pre-survey links were sent two weeks prior to
departure and post-return links are sent thirty days after return. Copies of the registration link and survey reminder pages are proprietary and therefore cannot be included in the appendix.

Students continued to receive automated messages until they completed the surveys, arrived at their destination if it was the pre-survey, or, in the case of the returnee survey, 45 days had passed since they returned to the United States. This messaging service allowed students to communicate any technical issues or questions about the survey directly to CHE Consult.

Information about the survey was communicated prior to the beginning of each of the terms in which the survey was administered. E-mails were sent to faculty leading programs, study abroad staff, academic advisors, and students, outlining the key points of the survey and explaining the benefits. These e-mails came from the Associate Provost, who oversees the central Study Abroad Center at Iowa State University, and directed those with questions to contact the researcher directly. Two faculty members sent e-mail communication requesting more information and were sent links to memo©’s website and given the contact information of the consultant assigned to this study.

Faculty were asked to encourage students to complete the survey during the pre-departure orientation Iowa State students complete as part of their study abroad program and in accordance with best practices in the field of education abroad (Forum on Education Abroad Standards of Good Practice, 2015). There is a possibility that faculty had already held their pre-departure sessions for spring and spring break before they were asked to encourage participation, which may have decreased the participation rate. Faculty also are required to cover all aspects of the study abroad program during pre-departure orientation and information about the survey may not have been included in the syllabus.
Communication from ISUAbroad was sent every week to students who had not yet opened the Learning Content within their application that contained the information about the survey and the registration link. In order for the e-mails to stop, students had to confirm that they had read the Learning Content and click an electronic signature box. This regular communication ensured that students who had not completed the survey received reminders which were intended to increase the participation rate.

The researcher initially received weekly e-mail reports from CHE Consult to confirm current participation numbers. Eventually these reports were sent only when there were new responses to confirm. The final report confirming responses was received approximately six weeks after the students studying abroad in the summer term returned to the United States. A summary report of the data as well as the raw data were sent to the client and the researcher approximately three months after the final survey response was received. It is not possible to include the report in its entirety, although it may be requested through the client.

The survey itself is comprised of questions that relate to students’ personality factors. Six factors are related to employability (confidence, curiosity, decisiveness, problem-solving, self-assessment, and tolerance) and six are related to intercultural competence (adaptability, curiosity, position-defending, self-awareness, sociability, and tolerance). Ten of these personality factors are further explained by memo© and related to how students may have absence or abundance of a quality.

These skills are: adaptability, curiosity, position-defending, self-awareness, sociability, and tolerance. The assessment instrument defines these skills by the behavior students exhibit when there is either a presence or absence of the skill.
For example, when a student exhibits a lack of adaptability, they feel exhausted and overwhelmed and their lack of adaptability further manifests itself as lack of sleep, sadness, or helplessness. These students find it hard to ask for and accept help and support. Conversely, when students possess high values of adaptability, they deal well with negative experiences which equates to a lack of fear of potential setbacks in the future. These students have a greater belief in their own abilities and better physical well-being (memo©, 2014).

Students who possess high values of curiosity are not only open to experiences, but seek them out, where students who do not possess curiosity in high values are more reluctant to experience difference and have a greater appreciation for familiar situations, food, cultures, etc. This skill is interesting to measure because it is implicit that students studying abroad must have some skill in curiosity in order to consider and follow through with study abroad (memo©, 2014).

Position-defending is the third skill that the memo© tool relates to intercultural competence. Students who exhibit high values of position-defending engage easily in discussion, they feel passionately about things and do not hesitate to voice their opinion in an academic environment. Students who do not possess this skill keep their opinions to themselves, sometimes because their conviction is not strong but also in order to avoid confrontation. These students hesitate to engage in class (memo©, 2014).

Within the memo© tool, the fourth characteristic related to intercultural competence, self-awareness, refers to self-efficacy, specifically a student’s ability to think their hard work can change outcomes and that results are not luck or coincidence. These students likely understand the expectations of assignments and are able to relate those expectations to specific actions they might take to succeed. Students who exhibit lower values for self-awareness think that their
actions will not make a difference, regardless of the situation, and are more likely to feel ambiguity towards specific tasks and situations because they don’t understand how their actions relate to that situation (memo©, 2014).

Sociability is one of the more ambiguous characteristics. It assigns high values to students who like to socialize and do not cope well when they are alone. This equates an active social life to emotional well-being. Conversely, students with low sociability values do not like to mingle but are better able to handle negative feelings and rejection and are less likely to care what others think of them (memo©, 2014). This is a confusing characteristic of intercultural competence and relies on the social context of what is acceptable and unacceptable in terms of social interaction.

The sixth and final characteristic memo© relates to intercultural competence is tolerance. In this context, tolerance refers to the ability of a student to “tolerate the behaviors and values of other people without compromising their own values” (memo©, 2014). If students possess low values of tolerance, they are very uncomfortable when encountering people with different views and beliefs and they may perceive difference as threatening.

These six characteristics make up one half of the memo© tool and are a good basis on which to quantify the short-term gains of a study abroad experience. Quantifying long-term gains requires an examination of employability and how it is defined by the memo© tool. More information on definitions of employability can be found in chapter 2.

Data Analysis and Procedures

CHE Consult sent a summary report as well as the raw data to Iowa State University three months after the final student completed their post-return survey. The summary includes
data about how the students’ results compare to themselves in the pre and post survey, as well as how they compare to the other students worldwide who have completed the survey. The summary also provides a report of descriptive statistics and averages.

The instrument contains a statistically significant factor analysis based on the 155 items related to intercultural competence and employability, described earlier in this chapter. According to the memo© consultant, significance was tested only for the memo© factors and only for binary categories of gender, academic background, and age. Although the age category was not binary, the consultants ignored the 25 and older category as it was the least represented. To calculate the significance, the consultant used a t-test with a confidence level of p<.05 throughout the analysis. The consultant chose to analyze the data using T-tests for all pairings, regardless of the number of groups.

It is important to note that the analysis of the data was completed by a consultant at memo©. All scales used were designed by memo©, and the proprietary nature of the instrument prohibited the researcher from accessing the information that would allow her to analyze the data herself. Findings can be found in chapter 4 and a critique of the analysis can be found in chapter 5.

Hypotheses as stated in chapter 1:

Hypothesis 1: Longer programs result in positive change in memo© Total values.

Hypothesis 2: Students who spend more time on pre-departure preparation will have positive change in memo© Total values.

Hypothesis 3: Students who participate in journaling and/or reflection sheets during the program abroad will have positive change in memo© Total values.
Summary

The research methodology for this study was a straightforward administration of a previously developed and validated survey, chosen through a prior review of assessment instruments. There were some limitations to the administration of the survey, which are further described in chapter 5.
CHAPTER 4. FINDINGS

The data collected through the methodology, outlined in chapter 3, were analyzed by the memo© consultant using the following: descriptive statistics, paired-samples t-tests, and multiple regression analysis. Despite numerous requests, memo© would not release a level of raw data that would allow the researcher to replicate the analyses done as part of their services. Memo© insisted that due to the proprietary nature of the information required that certain analyses could only be done by the company. The descriptive statistics will provide a basis for the study in terms of the gender, age, major, program length, etc. of respondents. The paired sample T-test analysis is used to measure the change in response for the same student between the pre and post-test (Pallant, 2013). A multiple regression analysis, which was not applied in this study, could determine if there are any statistically significant predictors of the difference in response for the sample overall. These methods of analysis will be further explored later in this chapter. Any tables confirming results will be included in the text. Unless otherwise noted, all data is taken from the memo© Mobility Scan Report (2016) and any direct quotes will be referenced by page number.

The memo© Mobility Scan Report is a complete analysis of the findings from the data. It was compiled using the proprietary questions and analytics developed by memo©, based on the psychometric testing and factor analysis that is the basis of the tool. More information on the development of memo© can be found in chapter 3. The survey questions are proprietary, as are how they are paired and their responses combined to report a score for the memo© factors. Due to the proprietary nature of the memo© tool, the findings reported in this chapter are directly from the memo© Mobility Scan Report and are reported in the same manner in which the report describes them. Any data tables are taken directly from the memo© Mobility Scan Report (2016). Proper permissions were obtained by the memo© statistician to reproduce the tables.
from the report. Institutional context, implications of the data, any limitations, and recommendations for further research will be explored in chapter 5.

The sample size in this study was 1,221 students. Of the 1,221 students who studied abroad during the spring, spring break, and summer terms of 2016 (Study Abroad Center FY 2017 report, 2016), 424 started the pre-survey, meaning they began the survey, but did not answer every question, and 161 students began the post survey. There were 115 students who completed both the pre and post surveys. The response rate for the pre-survey is 20%, while the response rate of students who completed both the pre and post-surveys is 9%. There are many factors which might have impacted the low response rate, and they will be discussed at length in chapter 5.

The data and analyses were generated by the consultant employed by memo©, the developer of the survey and a division of CHE Consult. The consultant sent a file with the raw data along with a report of the findings to the researcher and this chapter will be a review of analysis by the consultant. Although the raw data were received, the composition of the scales used by memo was not available. As already stated, permission was obtained to insert the tables from the memo© Mobility Scan Report. All tables in this chapter are taken directly from the memo© Mobility Scan Report and their corresponding page number has been noted. The findings reported by memo© are reported as the paired sample T-test results for pre and post-survey data for the sample set from Iowa State University, peer institutions of similar type and size, as well as the average values for all participating memo© institutions.

As stated in chapter 3, memo© is based on the belief that it is insufficient to ask for student self-perceptions alone in order to determine if an International experience was effective. Therefore, survey questions and the analysis of the data are focused on three areas: “facts and
other students’ characteristics (who students are and what they do), perceptions (what the students think), and personality traits – a psychometric test of 10 memo© factors measuring the personality traits of students (how students behave and how their personalities and mind-sets change)” (memo© Mobility Scan Report, 2016, p.4).

Again, the memo© factors are: curiosity, confidence, adaptability, sociability, tolerance, decisiveness, self-awareness, problem-solving, self-assessment, and position-defending.

Employability factors include: confidence, tolerance, problem-solving, curiosity, self-assessment, and decisiveness. Intercultural competence factors include: adaptability, curiosity, position-defending, self-awareness, sociability, and tolerance.

Some key terms within the memo© Mobility Scan Report (2016) are:

“memo© Total: Represents an average of all ten factors. Individual memo© factor values are combined into a memo© total value.

memo© Average: Represents an average value of outgoing/incoming students from all institutions participating in the memo© survey in the academic year 2015-2016.

Academic Family Background: Family background of the student is defined as ‘academic’ if at least one of the parents attended university.” (p. 8)

The term “reflection sheets” is also used throughout this study. Reflection sheets are generally one-page worksheets that ask students general questions about their day. Students complete these daily to have an overall picture of how they felt about being abroad and how those feelings changed over time.

**Statistical Significance**

As stated in chapter 3, the consultants calculated statistical significance only for the memo© factors and only for binary categories of gender, academic family background, and two younger age categories (under 21 and between 21 and 25). The only test of significance used
was a T-test. Multiple T-tests were performed with no corrections to reduce the possibility of a Type 1 error. This is a limitation of the study and is addressed in chapter 5. Statistically significant results are indicated with an asterisk. Many of the findings reported throughout this chapter are based on the output and report provided by memo. In many cases statistical tests were not done but results of “higher” and “lower” scores were reported without reference to statistical significance. Due to the proprietary nature of the memo© scales, it is not possible for the researcher to now determine statistical significance of all results.

**Descriptive Statistics**

Descriptive statistics within this survey encompass the following aspects of mobility: gender, academic family background, duration of stay abroad, age, exchange type, pre-departure preparation type, subject area, and activities abroad. The gender distribution of respondents was 29.2% male and 70.8% female. The national average is 33.4% male and 66.6% female (IIE Open Doors, 2016), which is closer to the gender distribution of same size and type Higher Education Institutions (HEIs) at 32.6% male and 67.4% female. The memo© average of 30.5% male and 69.5% female is closer to the distribution of this study.

Academic family background is another descriptive statistic used within this study. Defined above as at least one parent attended university, a better descriptor might be “First Generation” or “Non-First Generation”. This difference in terminology will be included as a suggested change in the survey language for American audiences, included in chapter 5. 72.1% of the respondents in this study had at least one parent attend university, and 27.9% would be considered first generation college students, or students with a non-academic family background.
The majority of students studying abroad who responded to this survey, 76.4%, were abroad for less than three months. Twenty-three percent were abroad for three to six months and the remaining .7% were abroad for longer than six months. This data differ from the comparative data in the memo© Mobility Scan Report, with around 10% of students studying abroad longer than six months on average for peer institutions and memo© average.

The majority of respondents in this study were under the age of twenty-one, with 20.9% between twenty-one and twenty-five and 5.7% twenty-six and older. Ninety percent were abroad for studies, two percent for internships, one percent for research, and six percent for other.

The research questions ask specifically about program characteristics and how they impact student development. The two customized questions in the surveys were related to pre-departure preparation and activities while abroad. Sixty-six percent of respondents spent ten hours or less on pre-departure activities. Almost 23% of students spent between eleven and twenty hours, and 11.1% spent more than twenty hours on pre-departure activities.

Ninety-seven percent of respondents participated in Study Abroad Center pre-departure orientation, either in-person or online. Additionally, 40.5% attended orientation activities specific to their academic College. The effects of pre-departure activities on the students’ development will be explored later in this chapter.

Students who participated in this study came from a variety of disciplines, with the most students from: agriculture and veterinary medicine (23.2%), engineering (16.9%), and business (11.1%). While abroad, students participated in a variety of activities, although only the following were tracked through survey data: journaling (62.7% participated), reflection sheets (17.9% participated), and group discussion (76.9% participated).
The memo© Mobility Scan Report uses the terms “winners” to identify students who have experienced positive change in their employability and intercultural competence and “losers” to identify students who have experience negative or no change in those areas. This terminology is potentially problematic, given American societal connotations of the terms that may not carry as much weight in Europe. The researcher will include recommendations to amend these and other terms in the next chapter.

Not all students will experience positive change while abroad and some will encounter unexpected problems and unknown situations that actually cause them to regress. The memo© Mobility Scan Report (2016) examines the ratio of “winners and losers” (p. 18) among students going abroad and also identifies the groups of students who benefitted more and not as much.

The following is a summary of results with respect to the aspects of mobility stated in the first paragraph of this section:

“The percentage of outgoing students who experienced a positive change of their personality traits through the international mobility was slightly lower compared to your peer institutions and memo© average. So called ‘winners’ were represented more among male students, individuals without an academic family background, students who went abroad for a maximum of three months, students younger than 21, participants of in-person orientation activity, students of Social sciences, journalism and information, and those who wrote reflection sheets during the exchange.” (memo© Mobility Scan Report, 2016, p. 18)

**Paired-Samples T-tests**

In this study, the data were collected both before and after a student’s international experience. In order to determine the average difference between pre and post-survey results, paired-samples t-test analysis was completed. This method of analysis is used when a respondent is assessed once, exposed to “some experimental manipulation or intervention”
(Pallant, p. 252), and then assessed a second time. All statistical analysis for this study was completed by a consultant at CHE Consult, the developers of the memo© tool.

**Effect size**

According to memo©, “Personality traits measured by the memo© factors are quite stable and changes normally occur over a relatively long period of time (in terms of years). Therefore, any changes that occur over a relatively short period of time, even with small effect sizes, should be considered substantial and meaningful” (memo© Mobility Scan Report, p. 8).

“In order to assess the importance of differences between groups (in this case the change in the memo© values after the stay abroad), one needs to attach a value to their differences in memo© values. In statistics, different measures are used to estimate such effect sizes. A common method for measuring and gauging effect sizes often used in psychometrics is Cohen’s d (Cohen 1988). Cohen’s d represents the mean difference between two groups, divided by a standard deviation for the data, i.e. $d = \frac{\mu_1 - \mu_2}{\sigma}$. Cohen himself originally introduced the following cut-offs to gauge the ‘practical significance’ of differences:

- $d > 0.2 =$ small effect (1/5 of a standard deviation)
- $d > 0.5 =$ moderate effect (1/2 of a standard deviation)
- $d > 0.8 =$ large effect (8/10 of a standard deviation unit)

As Rice and Harris (2005) pointed out, labels depend on empirical and social contexts. The results from the Erasmus Impact Study (2013) confirmed this attitude in that many changes in personality traits ranged between 0.1 and 0.2, making them relevant according to studies such as by Zimmermann & Neyer (2013). Therefore for the analysis of personality traits we adapt the scale to:

- $d > 0.1 =$ small effect (1/10 of a standard deviation)
- $d > 0.3 =$ moderate effect (3/10 of a standard deviation)
- $d > 0.5 =$ large effect (1/2 of a standard deviation unit)” (memo© Mobility Scan Report, p. 8)

Effect size results for employability demonstrate results with no measurable effect, with an effect size of 0.00, compared to peers at 0.08 and the memo© average of 0.06 (memo©
Mobility Scan Report, 2016, p. 9). Therefore, with regard to employability, the post-return memo© values achieved by the respondents in this study were below both the peer and memo© average. This indicates that the students participating in the surveys are slightly less prepared for their professional career in comparison to respondents from other institutions using the memo© survey.

The effect size for intercultural competence in this study was 0.05, compared to 0.02 for peer institutions and 0.02 for the memo© average (memo© Mobility Scan Report, 2016, p. 9). Post-return values for respondents in this study were slight lower than those of peer institutions and the overall memo© average, which may indicate that students are less prepared to deal with intercultural aspects in their future academic and professional lives compared to respondents at other institutions.

Although effect size for both employability and intercultural competence demonstrate results with little measurable effect, there was change (although statistical significance was not tested), both positive and negative among results pertaining to individual memo© factors. Overall, respondents in this study experience positive change in 4 of the 10 memo© factors (see figure 1 below), including a 3% positive change in decisiveness and 1% positive change in curiosity, self-awareness, and confidence. In contrast, students experienced a 1% regression in adaptability, sociability, problem-solving, self-assessment, and position-defending and a 3% regression in tolerance.
International mobility does not result in positive change to all factors for all individuals. As the Mobility Scan Report states, “not everyone wins” (p. 11). Any number of factors might influence a student’s individual experience, from their pre-departure preparation to support from parents to a number of unpredictable and unexpected situations.

According to the Mobility Scan Report (2016) a summary of the data would be:

“Students who managed to increase their overall personality abroad (so called ‘winners’) represented a slight majority among your outgoing students. Mainly non-academic family background students and students of Social Sciences, journalism, and information approved their results. On the other hand, among academic background students, those with more than 20 hours of pre-departure preparation and students of Engineering, manufacturing and construction, there were more losers than winners” (p. 11).

The change in total data (both employability and intercultural competence scores) before and after the international experience as it relates to descriptive statistics is interesting and in some cases surprising. The implications of surprising results will be further
discussed in chapter 5. The data in the memo© Mobility Scan Report (2016) show the following:

“Gender: Female students had higher values both before and after the mobility [their study abroad program]. The change was only minor in both cases.

Academic Family Background: Students without an academic family background experienced a positive change which brought them higher post-return values compared to those with an academic background, who lost a little.

Duration of stay abroad: Students going abroad for less than three months showed higher values both before and after the stay abroad.

Age: 21 to 24 years old students lost over the mobility while elder students improved.

Exchange type: Students who went abroad for studies underwent nearly no change in their values, unlike students at ‘other’ exchange types who lost.

Pre-departure preparation type: Students participating in online preparation at the Study Abroad Center improved [their overall scores] abroad and achieved higher post-return values than those who did in-person or college-specific orientation.

Subject area: Students of Arts and Humanities experienced the largest positive change and achieved the highest post-return values, followed by students of Business administration and law.

Activities abroad: Students elaborating the reflection sheets improved more than students who engaged in journaling or participated in group discussions” (p. 14)

Table 1 provides evidence of these claims for memo© total data:

Table 1: memo© Total, Aspects of Mobility

<table>
<thead>
<tr>
<th></th>
<th>Prior to the stay abroad</th>
<th>Change</th>
<th>After the stay abroad</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>70.2%</td>
<td>0.2%</td>
<td>70.4%</td>
</tr>
<tr>
<td>Female</td>
<td>71.7%</td>
<td>0.1%</td>
<td>71.8%</td>
</tr>
</tbody>
</table>
Table 1: continued

<table>
<thead>
<tr>
<th>Background</th>
<th>Academic family</th>
<th>Non-academic family</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>71.6%</td>
<td>70.5%</td>
</tr>
<tr>
<td></td>
<td>-0.5%</td>
<td>2.0%</td>
</tr>
<tr>
<td></td>
<td>71.1%</td>
<td>72.5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Academic family</th>
<th>Non-academic family</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 3 months</td>
<td>70.8%</td>
<td>70.8%</td>
</tr>
<tr>
<td>3 - 6 months</td>
<td>68.6%</td>
<td>68.6%</td>
</tr>
<tr>
<td>&gt; 6 months</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Below 21</td>
<td>71.2%</td>
<td>71.2%</td>
</tr>
<tr>
<td>Below 25</td>
<td>72.1%</td>
<td>72.1%</td>
</tr>
<tr>
<td>25 and more</td>
<td>68.9%</td>
<td>68.9%</td>
</tr>
<tr>
<td>Studies</td>
<td>71.2%</td>
<td>71.2%</td>
</tr>
<tr>
<td>Internship</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Research</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Other</td>
<td>73.1%</td>
<td>73.1%</td>
</tr>
<tr>
<td>10 hours and less</td>
<td>71.2%</td>
<td>71.2%</td>
</tr>
<tr>
<td>11 - 20 hours</td>
<td>71.5%</td>
<td>71.5%</td>
</tr>
<tr>
<td>More than 20 hours</td>
<td>72.4%</td>
<td>72.4%</td>
</tr>
</tbody>
</table>
Table 1: continued

<table>
<thead>
<tr>
<th>Category</th>
<th>Study Abroad Center in-person Orientation</th>
<th>Study Abroad Center online Orientation</th>
<th>College-specific Orientation</th>
<th>Other (please specify)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>71.6%</td>
<td>72.1%</td>
<td>70.2%</td>
<td>70.8%</td>
</tr>
<tr>
<td></td>
<td>-1.0%</td>
<td>1.6%</td>
<td>-0.2%</td>
<td>3.6%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Generic programs and qualifications</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Education</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Arts and humanities</td>
<td>73.2%</td>
<td>3.9%</td>
<td>77.2%</td>
<td></td>
</tr>
<tr>
<td>Social sciences, journalism and information</td>
<td>69.7%</td>
<td>1.0%</td>
<td>70.7%</td>
<td></td>
</tr>
<tr>
<td>Business administration and law</td>
<td>70.8%</td>
<td>3.4%</td>
<td>74.2%</td>
<td></td>
</tr>
<tr>
<td>Natural sciences, mathematics and statistics</td>
<td>68.8%</td>
<td>2.7%</td>
<td>71.5%</td>
<td></td>
</tr>
</tbody>
</table>
Table 1: continued

<table>
<thead>
<tr>
<th>Category</th>
<th>Employability</th>
<th>Intercultural Competence</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information and Communication Technologies</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Engineering, manufacturing and construction</td>
<td>71.8%</td>
<td>-2.2%</td>
<td>69.6%</td>
</tr>
<tr>
<td>Agriculture, forestry, fisheries and veterinary</td>
<td>70.5%</td>
<td>-1.0%</td>
<td>69.4%</td>
</tr>
<tr>
<td>Health and welfare</td>
<td>71.1%</td>
<td>0.4%</td>
<td>71.5%</td>
</tr>
<tr>
<td>Services</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Other</td>
<td>71.9%</td>
<td>-0.6%</td>
<td>71.3%</td>
</tr>
<tr>
<td>Journaling</td>
<td>70.9%</td>
<td>1.0%</td>
<td>71.9%</td>
</tr>
<tr>
<td>Reflection sheets</td>
<td>74.3%</td>
<td>2.2%</td>
<td>76.4%</td>
</tr>
<tr>
<td>Group discussion</td>
<td>70.9%</td>
<td>1.1%</td>
<td>72.0%</td>
</tr>
<tr>
<td>Other</td>
<td>70.5%</td>
<td>-0.2%</td>
<td>70.4%</td>
</tr>
</tbody>
</table>

memo© Mobility Scan Report, 2016

The implications of these memo© total data results will be discussed further in chapter 5. The memo© total is made up of both employability and intercultural competence scores. When the two aspects of the data are separated, the results show areas of growth with respect to
respondents’ descriptive statistics that are not reflective of the memo© total data scores. For example, employability results are overall more positive, when comparing post-survey data to pre-survey, but not when comparing scores to peer institutions and overall memo© averages.

Overall employability results from the memo© Mobility Scan Report (2016) are:

“Gender: Female students started with higher values and did not lose over their mobility [during their study abroad program] unlike their male colleagues.

Academic family background: Students without an academic family background started with slightly lower values but improved over the mobility, which resulted in a higher post-return result.

Duration of stay abroad: Students going abroad for less than three months showed higher values both before and after the stay abroad.

Age: Students under 21 years of age had the highest values after the mobility, although they improved less than those over 25.

Exchange type: After the mobility, the students who went abroad for studies had slightly higher values than those at ‘other’ exchange types.

Pre-departure preparation type: The value of students participating in online preparation at the Study Abroad Center were the higher both prior to the departure and after the return of all groups except for the ‘other’ category.

Subject area: Students of Natural sciences, mathematics, and statistics improved the most while Engineering students lost the most.

Activities abroad: The reflection sheets were associated with the highest values both prior to departure and after the return as well as the largest positive change” (p. 16)

Table 2 provides evidence of these claims for memo© employability data:
Table 2: memo© Employability

<table>
<thead>
<tr>
<th></th>
<th>Prior to the stay abroad</th>
<th>Change</th>
<th>After the stay abroad</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>73.1%</td>
<td>-1.2%</td>
<td>71.9%</td>
</tr>
<tr>
<td>Female</td>
<td>75.0%</td>
<td>0.3%</td>
<td>75.3%</td>
</tr>
<tr>
<td>Academic family background</td>
<td>74.5%</td>
<td>-0.3%</td>
<td>74.3%</td>
</tr>
<tr>
<td>Non-academic family background</td>
<td>74.3%</td>
<td>1.1%</td>
<td>75.4%</td>
</tr>
<tr>
<td>&lt; 3 months</td>
<td>73.9%</td>
<td>1.2%</td>
<td>75.0%</td>
</tr>
<tr>
<td>3 - 6 months</td>
<td>71.2%</td>
<td>1.1%</td>
<td>72.3%</td>
</tr>
<tr>
<td>&gt; 6 months</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Below 21</td>
<td>74.4%</td>
<td>0.4%</td>
<td>74.8%</td>
</tr>
<tr>
<td>Below 25</td>
<td>75.4%</td>
<td>-1.8%</td>
<td>73.5%</td>
</tr>
<tr>
<td>25 and more</td>
<td>72.7%</td>
<td>1.9%</td>
<td>74.5%</td>
</tr>
<tr>
<td>Studies</td>
<td>74.4%</td>
<td>-0.1%</td>
<td>74.3%</td>
</tr>
<tr>
<td>Internship</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Research</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Other</td>
<td>75.5%</td>
<td>-1.4%</td>
<td>74.1%</td>
</tr>
</tbody>
</table>
Table 2: continued

<table>
<thead>
<tr>
<th>Category</th>
<th>10 hours and less</th>
<th>11 - 20 hours</th>
<th>More than 20 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>74.3%</td>
<td>74.3%</td>
<td>75.8%</td>
</tr>
<tr>
<td></td>
<td>1.3%</td>
<td>-0.4%</td>
<td>-3.5%</td>
</tr>
<tr>
<td></td>
<td>75.6%</td>
<td>73.9%</td>
<td>72.3%</td>
</tr>
<tr>
<td>Study Abroad Center in-person Orientation</td>
<td>74.8%</td>
<td>-1.0%</td>
<td>73.8%</td>
</tr>
<tr>
<td>Study Abroad Center online Orientation</td>
<td>74.9%</td>
<td>1.7%</td>
<td>76.7%</td>
</tr>
<tr>
<td>College-specific Orientation</td>
<td>73.6%</td>
<td>-0.5%</td>
<td>73.0%</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>73.8%</td>
<td>3.3%</td>
<td>77.1%</td>
</tr>
<tr>
<td>Generic programs and qualifications</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Education</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Arts and humanities</td>
<td>76.7%</td>
<td>3.8%</td>
<td>80.5%</td>
</tr>
<tr>
<td>Social sciences, journalism and information</td>
<td>73.6%</td>
<td>2.3%</td>
<td>75.8%</td>
</tr>
<tr>
<td>Business administration</td>
<td>73.8%</td>
<td>2.9%</td>
<td>76.7%</td>
</tr>
<tr>
<td>and law</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 2: continued

<table>
<thead>
<tr>
<th>Category</th>
<th>%</th>
<th>% Change</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural sciences, mathematics and statistics</td>
<td>71.2%</td>
<td>4.2%</td>
<td>75.5%</td>
</tr>
<tr>
<td>Information and Communication Technologies</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Engineering, manufacturing and construction</td>
<td>74.5%</td>
<td>-3.3%</td>
<td>71.2%</td>
</tr>
<tr>
<td>Agriculture, forestry, fisheries and veterinary</td>
<td>73.9%</td>
<td>-1.1%</td>
<td>72.8%</td>
</tr>
<tr>
<td>Health and welfare</td>
<td>74.4%</td>
<td>0.5%</td>
<td>74.9%</td>
</tr>
<tr>
<td>Services</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Other</td>
<td>75.2%</td>
<td>-1.1%</td>
<td>74.1%</td>
</tr>
<tr>
<td>Journaling</td>
<td>73.9%</td>
<td>1.2%</td>
<td>75.1%</td>
</tr>
<tr>
<td>Reflection sheets</td>
<td>77.0%</td>
<td>2.5%</td>
<td>79.5%</td>
</tr>
<tr>
<td>Group discussion</td>
<td>74.0%</td>
<td>1.3%</td>
<td>75.3%</td>
</tr>
<tr>
<td>Other</td>
<td>73.2%</td>
<td>1.1%</td>
<td>74.3%</td>
</tr>
</tbody>
</table>

memo© Mobility Scan Report, 2016
Respondents’ intercultural competence scores, unlike the employability scores, more closely reflect the memo© total data scores, with results that are marginally positive, depending on the aspect of mobility, but still low comparatively. Overall intercultural competence results from the memo© Mobility Scan Report (2016) are:

“Gender: Female students had higher values both before and after the mobility despite a minor loss.

Academic family background: Students without an academic family background started with lower values but improved through the stay.

Duration of stay abroad: Students going abroad for less than three months showed higher values both before and after the stay abroad although they did not improve.

Age: Students older than 25 years of age had the lowest values although they were the only group to improve.

Exchange type: Students who went abroad for studies slightly lost but not as much as those at the ‘other’ mobility types.

Pre-departure preparation type: Students participating in the online preparation at the Study Abroad Center achieved the highest values although they improved only slightly.

Subject area: Students of Health and welfare experienced the largest positive change although their post-return values were still among the lowest.

Activities abroad: Students elaborating the reflection sheets had the highest results both before and after the mobility and they were also the only group that substantially gained” (p. 18)

Table 3 provides evidence of these claims for memo© intercultural competence data:
Table 3: memo© Intercultural Competence

<table>
<thead>
<tr>
<th></th>
<th>Prior to the stay abroad</th>
<th>Change</th>
<th>After the stay abroad</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>66.0%</td>
<td>0.4%</td>
<td>66.4%</td>
</tr>
<tr>
<td>Female</td>
<td>67.2%</td>
<td>-0.6%</td>
<td>66.6%</td>
</tr>
<tr>
<td>Academic family</td>
<td>67.3%</td>
<td>-1.1%</td>
<td>66.3%</td>
</tr>
<tr>
<td>Non-academic family</td>
<td>65.6%</td>
<td>1.7%</td>
<td>67.3%</td>
</tr>
<tr>
<td>&lt; 3 months</td>
<td>66.6%</td>
<td>0.0%</td>
<td>66.6%</td>
</tr>
<tr>
<td>3 - 6 months</td>
<td>64.8%</td>
<td>0.3%</td>
<td>65.1%</td>
</tr>
<tr>
<td>&gt; 6 months</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Below 21</td>
<td>67.0%</td>
<td>-0.4%</td>
<td>66.6%</td>
</tr>
<tr>
<td>Below 25</td>
<td>67.3%</td>
<td>-1.4%</td>
<td>65.9%</td>
</tr>
<tr>
<td>25 and more</td>
<td>63.6%</td>
<td>1.6%</td>
<td>65.2%</td>
</tr>
<tr>
<td>Studies</td>
<td>66.8%</td>
<td>-0.5%</td>
<td>66.3%</td>
</tr>
<tr>
<td>Internship</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Research</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>
Table 3: continued

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage 1</th>
<th>Percentage 2</th>
<th>Percentage 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other</td>
<td>68.6%</td>
<td>-5.3%</td>
<td>63.2%</td>
</tr>
<tr>
<td>10 hours and less</td>
<td>66.8%</td>
<td>1.1%</td>
<td>67.9%</td>
</tr>
<tr>
<td>11 - 20 hours</td>
<td>67.2%</td>
<td>-2.7%</td>
<td>64.5%</td>
</tr>
<tr>
<td>More than 20 hours</td>
<td>67.5%</td>
<td>-3.1%</td>
<td>64.4%</td>
</tr>
<tr>
<td>Study Abroad Center in-person Orientation</td>
<td>67.5%</td>
<td>-1.8%</td>
<td>65.7%</td>
</tr>
<tr>
<td>Study Abroad Center online Orientation</td>
<td>68.1%</td>
<td>0.5%</td>
<td>68.6%</td>
</tr>
<tr>
<td>College-specific Orientation</td>
<td>65.4%</td>
<td>0.1%</td>
<td>65.5%</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>65.3%</td>
<td>1.9%</td>
<td>67.2%</td>
</tr>
<tr>
<td>Generic programs and qualifications</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Education</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Arts and humanities</td>
<td>69.0%</td>
<td>1.3%</td>
<td>70.3%</td>
</tr>
<tr>
<td>Social sciences, journalism and information</td>
<td>65.0%</td>
<td>-0.7%</td>
<td>64.3%</td>
</tr>
</tbody>
</table>
Table 3: continued

<table>
<thead>
<tr>
<th>Field</th>
<th>Probability</th>
<th>% Change</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business administration and law</td>
<td>66.9%</td>
<td>2.3%</td>
<td>69.2%</td>
</tr>
<tr>
<td>Natural sciences, mathematics and statistics</td>
<td>65.2%</td>
<td>1.4%</td>
<td>66.5%</td>
</tr>
<tr>
<td>Information and Communication Technologies</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Engineering, manufacturing and construction</td>
<td>68.2%</td>
<td>-1.1%</td>
<td>67.1%</td>
</tr>
<tr>
<td>Agriculture, forestry, fisheries and veterinary</td>
<td>65.4%</td>
<td>-1.1%</td>
<td>64.3%</td>
</tr>
<tr>
<td>Health and welfare</td>
<td>65.3%</td>
<td>2.4%</td>
<td>67.7%</td>
</tr>
<tr>
<td>Services</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Other</td>
<td>67.6%</td>
<td>-1.7%</td>
<td>66.0%</td>
</tr>
<tr>
<td>Journaling</td>
<td>67.1%</td>
<td>-0.2%</td>
<td>66.9%</td>
</tr>
<tr>
<td>Reflection sheets</td>
<td>70.1%</td>
<td>1.7%</td>
<td>71.8%</td>
</tr>
<tr>
<td>Group discussion</td>
<td>66.4%</td>
<td>0.3%</td>
<td>66.6%</td>
</tr>
<tr>
<td>Other</td>
<td>66.8%</td>
<td>-0.8%</td>
<td>65.9%</td>
</tr>
</tbody>
</table>

memo© Mobility Scan Report, 2016
The memo© Mobility Scan Report (2016) explains the concepts of winners and losers and provides data to show evidence of both. It also focuses on students who represent the “potential risk groups of students one should pay more attention to” (p. 19). These are students who did not improve their employability or intercultural competence or may have actually regressed. According to the report, “the potential risk groups are in particular students with an academic family background, individuals 25 years old or older, students who participated in ‘other’ pre-departure activity and also students of Engineering, manufacturing, and construction” (p. 19).

The following table provides evidence of these claims for memo© potential areas for risk data:

Table 4: memo© Winners and Losers

<table>
<thead>
<tr>
<th></th>
<th>Winners</th>
<th>Losers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>54.8%</td>
<td>45.2%</td>
</tr>
<tr>
<td>Female</td>
<td>51.9%</td>
<td>48.1%</td>
</tr>
<tr>
<td>Academic family</td>
<td>46.5%</td>
<td>53.5%</td>
</tr>
<tr>
<td>background</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-academic family</td>
<td>68.4%</td>
<td>31.6%</td>
</tr>
<tr>
<td>background</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 3 months</td>
<td>53.3%</td>
<td>46.7%</td>
</tr>
<tr>
<td>3 - 6 months</td>
<td>51.6%</td>
<td>48.4%</td>
</tr>
<tr>
<td>Description</td>
<td>Studies</td>
<td>Internship</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>---------</td>
<td>------------</td>
</tr>
<tr>
<td>&gt; 6 months</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Below 21</td>
<td>53.1%</td>
<td>46.9%</td>
</tr>
<tr>
<td>Below 25</td>
<td>51.7%</td>
<td>48.3%</td>
</tr>
<tr>
<td>25 and more</td>
<td>50.0%</td>
<td>50.0%</td>
</tr>
<tr>
<td>Studies</td>
<td>52.4%</td>
<td>47.6%</td>
</tr>
<tr>
<td>Internship</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Research</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Other</td>
<td>55.6%</td>
<td>44.4%</td>
</tr>
<tr>
<td>10 hours and less</td>
<td>59.0%</td>
<td>41.0%</td>
</tr>
<tr>
<td>11 - 20 hours</td>
<td>52.9%</td>
<td>47.1%</td>
</tr>
<tr>
<td>More than 20 hours</td>
<td>29.4%</td>
<td>70.6%</td>
</tr>
<tr>
<td>Study Abroad Center in-person</td>
<td>56.3%</td>
<td>43.8%</td>
</tr>
<tr>
<td>Orientation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study Abroad Center online</td>
<td>54.2%</td>
<td>45.8%</td>
</tr>
<tr>
<td>Orientation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>College-specific Orientation</td>
<td>51.7%</td>
<td>48.3%</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>41.7%</td>
<td>58.3%</td>
</tr>
</tbody>
</table>
Table 4: continued

<table>
<thead>
<tr>
<th>Generic programs and qualifications</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Education</strong></td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td><strong>Arts and humanities</strong></td>
<td>54.5%</td>
<td>45.5%</td>
</tr>
<tr>
<td><strong>Social sciences, journalism and information</strong></td>
<td>75.0%</td>
<td>25.0%</td>
</tr>
<tr>
<td><strong>Business administration and law</strong></td>
<td>47.6%</td>
<td>52.4%</td>
</tr>
<tr>
<td><strong>Natural sciences, mathematics and statistics</strong></td>
<td>55.6%</td>
<td>44.4%</td>
</tr>
<tr>
<td><strong>Information and Communication Technologies</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Engineering, manufacturing and construction</strong></td>
<td>42.9%</td>
<td>57.1%</td>
</tr>
<tr>
<td><strong>Agriculture, forestry, fisheries and veterinary</strong></td>
<td>51.2%</td>
<td>48.8%</td>
</tr>
<tr>
<td><strong>Health and welfare</strong></td>
<td>50.0%</td>
<td>50.0%</td>
</tr>
</tbody>
</table>
Table 4: continued

<table>
<thead>
<tr>
<th>Services</th>
<th>NA</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other</td>
<td>60.0%</td>
<td>40.0%</td>
</tr>
<tr>
<td>Journaling</td>
<td>52.6%</td>
<td>47.4%</td>
</tr>
<tr>
<td>Reflection sheets</td>
<td>56.5%</td>
<td>43.5%</td>
</tr>
<tr>
<td>Group discussion</td>
<td>55.1%</td>
<td>44.9%</td>
</tr>
<tr>
<td>Other</td>
<td>50.0%</td>
<td>50.0%</td>
</tr>
</tbody>
</table>

Results for Individual memo© Factors

The individual memo© factors are ten personality traits related to employability and/or intercultural competence used to measure the impact of international mobility on survey respondents. In this study, respondents experienced positive change in four out of the ten memo© factors and a negative change in the remaining six. Refer to figure 1 for a graphical representation of these changes.

The negative change in six of the four individual memo© factors were not tested for statistical significance overall, so while the regression in these factors is not the desired outcome, it is not possible to know if the regression is statistically significant without further analysis.

As stated earlier, the memo© consultants tested statistical significance only for the memo© factors and only in the binary categories of gender, academic background, and age. The following tables present the factors and binary categories with statistically significant results in
the factors of sociability, problem solving curiosity, self-assessment, decisiveness, and position defending. The statistically significant difference between the categories is identified with an asterisk.

Table 5: Sociability - *Between males and females prior to stay abroad

<table>
<thead>
<tr>
<th></th>
<th>Prior to the stay abroad</th>
<th>Change</th>
<th>After the stay abroad</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>62.1%*</td>
<td>-1.4%</td>
<td>60.7%</td>
</tr>
<tr>
<td>Female</td>
<td>67.2%*</td>
<td>-0.9%</td>
<td>66.3%</td>
</tr>
</tbody>
</table>

Table 6: Problem solving - *Between <21 and <25 prior to stay abroad

<table>
<thead>
<tr>
<th></th>
<th>Prior to the stay abroad</th>
<th>Change</th>
<th>After the stay abroad</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 21</td>
<td>72.4%*</td>
<td>-0.2%</td>
<td>72.2%</td>
</tr>
<tr>
<td>Below 25</td>
<td>75.5%*</td>
<td>-2.6%</td>
<td>72.9%</td>
</tr>
<tr>
<td>25 and more</td>
<td>72.0%</td>
<td>2.5%</td>
<td>74.5%</td>
</tr>
</tbody>
</table>

Table 7: Curiosity - *Between male and female both prior and after stay abroad

<table>
<thead>
<tr>
<th></th>
<th>Prior to the stay abroad</th>
<th>Change</th>
<th>After the stay abroad</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>74.1%*</td>
<td>-1.2%</td>
<td>72.8%*</td>
</tr>
<tr>
<td>Female</td>
<td>78.9%*</td>
<td>0.7%</td>
<td>79.6%*</td>
</tr>
</tbody>
</table>

memo© Mobility Scan Report, 2016
Table 8: Self-assessment - *Between male and female both prior and after stay abroad

<table>
<thead>
<tr>
<th></th>
<th>Prior to the stay abroad</th>
<th>Change</th>
<th>After the stay abroad</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>75.2%*</td>
<td>-3.1%</td>
<td>72.1%*</td>
</tr>
<tr>
<td>Female</td>
<td>79.1%*</td>
<td>-0.4%</td>
<td>78.7%*</td>
</tr>
</tbody>
</table>

memo © Mobility Scan Report, 2016

Table 9: Decisiveness - *Between male and female prior to stay abroad and between <21 and <25 after stay abroad

<table>
<thead>
<tr>
<th></th>
<th>Prior to the stay abroad</th>
<th>Change</th>
<th>After the stay abroad</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>74.8%*</td>
<td>3.7%</td>
<td>78.5%</td>
</tr>
<tr>
<td>Female</td>
<td>77.6%*</td>
<td>2.2%</td>
<td>79.9%</td>
</tr>
<tr>
<td>Below 21</td>
<td>76.5%</td>
<td>4.2%</td>
<td>80.7%*</td>
</tr>
<tr>
<td>Below 25</td>
<td>78.1%</td>
<td>-2.9%</td>
<td>75.2%*</td>
</tr>
<tr>
<td>25 and more</td>
<td>76.3%</td>
<td>4.6%</td>
<td>80.8%</td>
</tr>
</tbody>
</table>

memo © Mobility Scan Report, 2016

Table 10: Position defending - *Between male and female prior to study away and between academic and non-academic background prior to study away

<table>
<thead>
<tr>
<th></th>
<th>Prior to the stay abroad</th>
<th>Change</th>
<th>After the stay abroad</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>55.2%*</td>
<td>2.1%</td>
<td>57.3%</td>
</tr>
<tr>
<td>Female</td>
<td>52.3%*</td>
<td>-0.9%</td>
<td>51.4%</td>
</tr>
<tr>
<td>Academic family background</td>
<td>54.1%*</td>
<td>-1.0%</td>
<td>53.1%</td>
</tr>
<tr>
<td>Non-academic family background</td>
<td>50.8%*</td>
<td>0.7%</td>
<td>51.6%</td>
</tr>
</tbody>
</table>

memo © Mobility Scan Report, 2016
Student Perceptions

While the basis for the memo© tool is the assumption that student perceptions are not enough to measure actual growth in employability and intercultural competence, student perceptions regarding preparedness, contacts made abroad, and attitudes towards living or working abroad are important to the overall results of the study. Overall student satisfaction with their academic and non-academic experience abroad is also important, especially with regard to peer mentoring and student to student marketing efforts post-return. An education abroad office would prefer that students be satisfied and generate positive word of mouth about their program after they return.

Survey questions related to student satisfaction include both academic and non-academic content. Academic questions include student assessments of their workload at their host institution, the support they received from professors and instructors at their host institution, institutional support received from their home university, and accessibility of course and program information while abroad. Non-academic questions are focused on additional financial and administrative support from their home institution and support of social issues unrelated to academics. Finally, students were asked about their previous international experience, their motivations for going abroad, and their attitudes towards working on a team.

Preparedness

Ninety-one percent of respondents in this study considered themselves well-prepared for their experience abroad prior to their departure. This feeling of preparedness actually increased after their time abroad, which reinforces the success of pre-departure orientation and is unique to this study, as peer institutions and memo© average results show that students felt less prepared upon their return than they did before their departure. Students who felt less prepared in this
study were generally over the age of 25 and students studying Business Administration or Law (in this case, Business Administration, as there are no law students in this study). The students responding to the surveys in this study who felt most prepared had spent more than 20 hours on pre-departure activities and were students of Arts and humanities and Social or Natural sciences. Table 11 shows the percentages of increase in preparedness for all aspects of the survey. This table was included as its results speak favorably of the preparation efforts of the institution in this study.

Table 11: memo© Total Preparedness

<table>
<thead>
<tr>
<th>Category</th>
<th>% I am well prepared (prior to stay abroad)</th>
<th>% I have been well prepared (after the stay abroad)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>88.1%</td>
<td>92.9%</td>
</tr>
<tr>
<td>Female</td>
<td>92.2%</td>
<td>96.0%</td>
</tr>
<tr>
<td>Academic family background</td>
<td>91.4%</td>
<td>95.7%</td>
</tr>
<tr>
<td>Non-academic family background</td>
<td>90.1%</td>
<td>94.3%</td>
</tr>
<tr>
<td>&lt; 3 months</td>
<td>89.6%</td>
<td>95.1%</td>
</tr>
<tr>
<td>3 - 6 months</td>
<td>87.9%</td>
<td>93.5%</td>
</tr>
<tr>
<td>&gt; 6 months</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Below 21</td>
<td>90.3%</td>
<td>96.7%</td>
</tr>
<tr>
<td>Below 25</td>
<td>93.6%</td>
<td>96.3%</td>
</tr>
<tr>
<td>25 and more</td>
<td>90.5%</td>
<td>83.3%</td>
</tr>
<tr>
<td>Studies</td>
<td>90.9%</td>
<td>95.1%</td>
</tr>
<tr>
<td>Internship</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>
Table 11: continued

<table>
<thead>
<tr>
<th>Research</th>
<th>NA</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other</td>
<td>88.0%</td>
<td>87.5%</td>
</tr>
<tr>
<td>10 hours and less</td>
<td>91.6%</td>
<td>94.4%</td>
</tr>
<tr>
<td>11 - 20 hours</td>
<td>90.0%</td>
<td>97.1%</td>
</tr>
<tr>
<td>More than 20 hours</td>
<td>87.8%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Study Abroad Center in-person</td>
<td>90.5%</td>
<td>98.3%</td>
</tr>
<tr>
<td>Orientation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study Abroad Center online Orientation</td>
<td>92.0%</td>
<td>93.0%</td>
</tr>
<tr>
<td>College-specific Orientation</td>
<td>88.8%</td>
<td>94.8%</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>100.0%</td>
<td>90.9%</td>
</tr>
<tr>
<td>Generic programs and qualifications</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Education</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Arts and humanities</td>
<td>86.1%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Social sciences, journalism and information</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Business administration and law</td>
<td>95.1%</td>
<td>88.2%</td>
</tr>
</tbody>
</table>
Table 11: continued

<table>
<thead>
<tr>
<th>Category</th>
<th>Journaling</th>
<th>Reflection sheets</th>
<th>Group discussion</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural sciences, mathematics and statistics</td>
<td>93.3%</td>
<td>100.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information and Communication Technologies</td>
<td>NA</td>
<td>NA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engineering, manufacturing and construction</td>
<td>82.8%</td>
<td>92.9%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agriculture, forestry, fisheries and veterinary</td>
<td>91.7%</td>
<td>94.9%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health and welfare</td>
<td>95.8%</td>
<td>90.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Services</td>
<td>NA</td>
<td>NA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>93.4%</td>
<td>100.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Journaling</td>
<td>88.5%</td>
<td>96.1%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reflection sheets</td>
<td>87.5%</td>
<td>95.2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group discussion</td>
<td>88.7%</td>
<td>96.9%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>100.0%</td>
<td>100.0%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

memo© Mobility Scan Report, 2016
Contact with locals

Contact with locals is an important aspect of international mobility, and generally students who report more interaction with locals have increased positive change in their employability and intercultural competence (memo© Mobility Scan Report, 2016). In this study, the majority of students interacted mainly with students from their home country during their experience abroad. Forty percent of students reported contact with local students, which is less, although not statistically significantly so, compared to peer institutions and the memo© average. Students who were abroad for more than three months and studied the Social and Natural sciences reported substantially, although not statistically significantly more contact with local students than other respondents in the study.

Attitudes toward future international experiences

The final student perception measured with this tool is students’ attitudes toward future travel, study, and work abroad. Post-survey responses indicated that 82.1% of students could imagine themselves living abroad in the future, an increase of 8.7% from the pre-survey responses. According to the memo© Mobility Scan Report (2016), “after the stay abroad, all students older than 21 years of age and also those in the field of Natural sciences declared they ‘can easily imagine’ moving to another country. While 82.1% of students agreed, this is still lower than the peer average of 85% and the memo© average of 87.4%.

About 10% of students perceived international mobility as more positive post-return than they did prior to departure, in particular students over 21, those studying Business, Natural science, or Health and welfare, and students’ journaling or intentionally completing reflection papers while abroad. The overall share of students willing to work abroad or in an international context was still lower than peer institutions or the memo© average (see tables 12 and 13 below).
Table 12: Prospects of Living Abroad in the Future

<table>
<thead>
<tr>
<th></th>
<th>Prior to the stay abroad</th>
<th>Change</th>
<th>After the stay abroad</th>
</tr>
</thead>
<tbody>
<tr>
<td>Your university</td>
<td>73.4%</td>
<td>8.7%</td>
<td>82.1%</td>
</tr>
<tr>
<td>Same size and type HEIs</td>
<td>78.9%</td>
<td>6.1%</td>
<td>85.0%</td>
</tr>
<tr>
<td>memo© average</td>
<td>82.8%</td>
<td>4.5%</td>
<td>87.4%</td>
</tr>
</tbody>
</table>

memo© Mobility Scan Report, 2016

Table 13: Prospects of Working Abroad in the Future

<table>
<thead>
<tr>
<th></th>
<th>Prior to the stay abroad</th>
<th>Change</th>
<th>After the stay abroad</th>
</tr>
</thead>
<tbody>
<tr>
<td>Your university</td>
<td>71.8%</td>
<td>10.5%</td>
<td>82.3%</td>
</tr>
<tr>
<td>Same size and type HEIs</td>
<td>78.7%</td>
<td>6.1%</td>
<td>84.7%</td>
</tr>
<tr>
<td>memo© average</td>
<td>81.9%</td>
<td>3.0%</td>
<td>84.8%</td>
</tr>
</tbody>
</table>

memo© Mobility Scan Report, 2016

Host institution academics

Overall, students confirmed that the workload at their home institution was more rigorous than the work expected of them at their host institution abroad. Only students of Social sciences and those completing reflection sheets regularly expressed that their workload abroad was too high. They also felt more supported in academic issues at their host institution on average than those responding at peer institutions and memo© average. Students with non-academic family backgrounds and studying Natural and Health sciences especially felt personally supported, while those studying business or engineering and those abroad for more than three months were more critical.
Home institution support while abroad

Students in this study were quite satisfied overall with the support they received from their home institution. 23.6% of students described the support provided as “available, but too limited” (memo© Mobility Scan Report, 2016, p. 22), which is less than those at peer institutions at 29.6% and the memo© average of 32.7%. Only students abroad for longer than three months and studying Social sciences or Engineering showed higher levels of dissatisfaction. Generally, students were satisfied with the accessibility of course materials and program information while abroad, especially students older than 25 and those studying Arts and humanities or Health and welfare. The overall percentage, 92.3%, of students who responded that information abroad was “easy to find” (p. 22) was higher compared to peer institutions at 86.9% and the memo© average of 83.8%.

Non-academic and social support while abroad

The additional financial and administrative support the home institution provided to respondents in this study is not statistically different compared to peer institutions and memo© average, with students age 21-24 and with more than 20 hours of pre-departure preparation appreciating the financial support the most. The administrative support was particularly appreciated, with the only less satisfied group being students abroad for more than three months. Respondents in this survey positively evaluated non-academic and social support and were more satisfied, on average, that students at peer institutions and memo© average. The help provided by the host institution was assessed even more positively and 100% of students completing regular reflection sheets were fully satisfied with the social support they received while abroad.
**Previous international experience**

“Less than half of your outgoing students stated they have been previously abroad several times and only a fraction confirmed they have stayed abroad for a longer time, which both is substantially below your peer institutions and memo© average” (memo© Mobility Scan Report, 2016, p. 24). While previous international travel experience is lower than average, reasons for which will be discussed at length in the next chapter, the number of students who were in contact with students of different cultural backgrounds while abroad was comparable to peers and the memo© average.

**Motivation for going abroad and team working skills**

In the pre-survey, study respondents stated that their main reason for going abroad was to “get new insights about themselves and to get acquainted with the host country, its culture, society, and history” (memo© Mobility Scan Report, 2016, p. 24). This is different from peer institutions and the memo© average, which focus more on career opportunities at home and abroad and language acquisition as primary motivators to go abroad.

The data show that students evaluate their experience based on the activities they participated in that were related to their motivations. This would suggest that students’ expectations are being met during their experience abroad.

With respect to teams, 75% of respondents stated prior to going abroad that they had positive attitudes towards working in teams. In their post-return surveys, their positive attitudes towards teams increased, but their perceptions of the benefits of international groups were more negative. This is similar to the attitudes of students at peer institutions and the memo© average.
Regression Analysis

The memo© Mobility Scan Report provides data to show how students developed during their study abroad program, both in comparison to themselves and to students at peer institutions, as well as to the memo© average over time. The report also provides data that identifies correlates for growth or regression for each memo© factor.

Due to the proprietary nature of the assessment, the researcher was unable to run a regression analysis to determine if there are statistically significant predictors of positive change, either as a result of student demographics or program characteristics. The memo© consultant who analyzed the data included trends in the data as correlates of positive or negative growth, but did not include a regression analysis to determine any statistically significant predictors.

The memo© Mobility Scan Report (2016) provides data on how each memo© factor is affected by demographics and program characteristics and provides memo© Total data, an average of all ten personality factors. Overall, while students in this study began with slightly higher values that those of their peers and the memo© average, the memo© Total did not change before and after the study abroad experience (p.13), while the memo© average did increase for students responding to other memo© studies. As stated earlier, significance was only tested for binary categories of gender, academic family background, and the <21 and 21-25 age groups in the following memo© aspects; confidence, tolerance, self-awareness, sociability, problem-solving, curiosity, self-assessment, decisiveness, position-defending, adaptability, memo© total, memo© employability, and memo© intercultural competence.

Since there was no statistically significant change in overall memo© Total values, it is important to look at individual descriptive statistics and results related to employability and intercultural competence in order to determine which characteristics influenced the increase or
decrease of values. Again, as the analysis was not completed, the statistical significance of the increase or decrease in values is unknown unless noted with an asterisk. Correlates of increased or decreased values may or may not be statistically significant, as the regression analysis was not completed by the consultant.

**Correlates of increased values**

Gender was a correlate of increased values, with female students beginning and ending with slightly higher values overall, with 71.8% of women improving their memo© total values, compared to 70.4% of men. Students without a family background, or first generation, experienced a positive change of 2% in their memo© total values, as did students going abroad for less than three months, with 1% improvement of memo© totals. Students who participated in the online Study Abroad Center pre-departure orientation improved overall values while abroad, as did students in the arts and humanities and business. With respect to activities while abroad, students who completed reflection sheets, 17.9% of students, improved more than students who wrote in a journal, 62.7% of students, or participated in group discussions, 76.9% of students.

**Correlates of decreased values**

There are a few factors that predict loss of values related to employability and intercultural competence. Specifically, those with an academic family background lost .5% on overall memo© Total values, students who prepared for more than 20 hours lost 3.5% on total values, and those who come from the engineering discipline lost 2.2% on total memo© values. There are many potential reasons for these losses, which will be discussed at length in chapter 5.

Again, the consultants did not provide regression analysis to determine statistically significant predictors of increased or decreased values and the researcher was unable to complete
that analysis, given the proprietary nature of the memo© tool. This is a limitation of the study, which will also be discussed in the next chapter.

Summary

The analysis from CHE Consult in conjunction with the researcher’s conclusions based upon institutional knowledge and the literature provide a comprehensive picture of the data. This chapter focused on the findings, while chapter 5 will focus on conclusions and implications of the data. In some areas, respondents began with higher values and plateaued where their peers excelled. In other memo© factors, respondents in this study were right on trend with the data from peers and the memo© average. In other areas, respondents in this study began with lower than average values and either regressed or did not increase their values at a rate on track with their peers. While the data showing the variance in positive and negative values and its relationship to peers and the memo© average is interesting and informative, the research questions are concerned with predictors of increased and decreased values so that those predictors might inform program design. This provides international educators with direction to assist them with managing their institutional portfolio for education abroad. The consultants did not complete the analysis that would identify statistically significant predictors.

Chapter 5 will explore the implications of these results and offer explanations for some of the areas in which respondents exceeded their peers and areas in which they fell short. It will also discuss some limitations of this data, including national trends in study abroad rates and logistical differences for mobility between the United States and Europe. Finally, chapter 5 will provide suggestions for future research to further assist international educators with the management of their institutional study abroad portfolios.
Chapter 5. DISCUSSION AND CONCLUSIONS

This study was a pilot project at Iowa State University, assessing students studying abroad in the spring, spring break, and summer terms of 2016. The goal of the study was to inform study abroad program design and provide guidance to international educators developing study abroad programs. The results of the study provide insight into which program characteristics have positive or negative effects on student development while studying abroad. Due to the nature of the analyses and the lack of statistical hypotheses testing for a number of comparisons, insight provided by the results is limited. Although limited this information provides some direction to international educators in prioritizing the types of programs to which they funnel the greatest amount of resources, both financial and employee.

The researcher is interested in this topic because of the impact study abroad has on students’ intercultural competence and future employability. Students are unable to quantify the value in study abroad with respect to those skills, but know that the experience has changed their personality and decision-making process, as well as many of their personal beliefs. The researcher chose to focus on assessment of study abroad to help students and institutions quantify the benefits to make them clearer to students, their parents, and other stakeholders. The goal of quantifying the benefits of study abroad is to remove many of the barriers students and their parents have to the practice; mainly that study abroad is a party or extended vacation and only results in additional student debt.

One of the goals of many international educators when developing programs is to increase students’ intercultural competence and employability, to both develop a students’ personality to be more interculturally competent and to develop the skills which their future employers value most. International educators can use information from this study when
developing programs so they can choose to spend more time and resources on programs that tend to result in the greatest student growth in intercultural competence and employability. They can also identify the programs that do not result in student development and make changes to those programs or eliminate them from their study abroad portfolio.

The research questions in this study focused on program design, particularly which program characteristics resulted in the greatest student development. These characteristics were program length, pre-departure activities, and activities while abroad.

**Discussion of Findings**

This study aligns with many of the national trends regarding the descriptive statistics of students studying abroad. The gender distribution has a ratio greater than 2:1; 70.8% of students studying abroad were female. The program duration and student age also follow national trends, with 76.4% of students studying abroad for less than three months and 73.3% of students under the age of 21. Nationally, 66.7% of students studying abroad for less than three months and 87.6% of students studying abroad are traditional-aged undergraduates (IIE Open Doors Report, 2016). The discussion of findings in this chapter will touch briefly on areas aligned with national trends, but focus primarily on the items of the survey that are unique to the home institution and to this study.

Many of the results generated, specifically those related to pre-departure activities and activities while abroad, were influenced by the culture and structure of study abroad at the home institution and are indicative of how study abroad programs are developed and managed differently throughout a large, decentralized university. These findings are able to inform
recommendations for the home institutions as they develop and manage their study abroad program portfolio.

Recommendations for international educators and for future research are included in each section of discussion, with a recap of recommendations included at the end of this chapter.

**Program length**

Study abroad programs at Iowa State University range in length from nine days to an academic year, with the majority of students in this study enrolled in programs shorter than six weeks. This study surveyed students studying abroad on spring semester programs, spring break programs, and summer programs ranging in length from nine days to four months. Program length is a highly debated topic in international education. Many administrators and international education professionals believe that students should be studying abroad for no less than a full semester, otherwise they will not engage enough cross-culturally (Spencer and Tuma, 2007). That said, the international education community “recognized that if the goal of giving vastly more students an overseas experience was to be realized, short-term programs were key to that vision (p. x).

Within the past decade, short-term faculty-led programs have increased at most institutions of higher education and many times outnumber traditional semester offerings (Spencer and Tuma, 2007). This trend can be explained by some of the barriers to study abroad listed in earlier chapters, specifically a student’s fear of missing out and their worry that a semester abroad will delay their time to degree. Cost is not necessarily a barrier related to this trend, as a semester abroad can be more economical than two or three weeks in the summer during peak tourist season, depending on the destination.
Those who question the effectiveness of short-term programs believe a student must immerse him or herself in a culture and live there for a semester in order for the experience to have the greatest impact. Additional factors that would enhance a semester abroad would be language acquisition and a homestay living experience with a local family.

International educators generally agree with the belief that a semester or longer is ideal for a full immersion experience, but also understand that it is better for students to go abroad for one to three weeks than not at all. The hope is that the short-term program will give students a sense of exhilaration and accomplishment and give them the confidence to travel somewhere for a longer period of time. This is why it is important for students to study abroad for the first time as early in their academic career as possible. If they return from a short-term study abroad program with the desire to study abroad for a full semester, there must be time for them to work with their academic advisor and professors to fit a semester into their degree program.

In this study, 76.4% of those surveyed were abroad for less than three months and 23% were abroad for 3-6 months. memo© totals for students abroad for less than three months increased by 1.1% on average, while those who were abroad for 3-6 months increased their memo© total by .4%. There are areas in which those studying abroad for longer periods improved more than those who were abroad for shorter periods. Most notably students studying abroad for 3-6 months improved their overall intercultural competence totals .3%, while those studying abroad less than three months did not improved their overall intercultural competence score at all (memo© Mobility Scan Report, 2016). This would be in alignment with the belief that increased cultural competency results when students spend a longer period abroad, but it is unknown if the differences are statistically significant predictors in this particular study. If statistical significance is known and if increased intercultural competence is the student’s goal,
then an education abroad advisor should recommend a period of study abroad longer than three months.

**Recommendations**

International educators should continue to build their program portfolios around semester or academic year offerings, but when a short-term program is the only option, program development should be intentional, and provide students with activities and an itinerary that lends to their accelerated growth and development. Students benefit during short-term programs, although there are areas in which they might achieve greater growth with a longer program. If a student expresses doubt and claims that a semester program is too expensive, education abroad advisors should thoroughly explain cost models and work with the student to complete a cost-benefit analysis as well as a cost comparison. Short-term study abroad is preferable to no time abroad, and can be helpful for students with family or work commitments, online students, or students enrolled in courses that are sequential and not offered every semester. If students know they can study abroad during the summer or for two weeks over a break and not delay their degree, it is easier for them and their parents to consider study abroad as an option.

**Pre-departure activities**

The Forum on Education Abroad has developed Standards of Good Practice for education abroad Professionals to guide their work and ensure they do not omit crucial pieces of the education abroad process. Standard Four is Student Selection, Preparation, and Advising and informs education abroad practice in the application process (Forum on Education Abroad, 2015). Once students are selected, they receive pre-departure orientation information, either from education abroad advisors, faculty program directors, or occasionally on-site prior to the start of their program abroad.
Content varies in pre-departure courses, but generally includes topics such as health and safety abroad, managing money, culture shock, and an introduction to the culture of the country to which the class is traveling. If a school offers programs to many destinations, it may offer one general pre-departure orientation to cover health and safety and understanding different cultures and not focus on country specifics. Some institutions build additional content into their pre-departure course, such as various personality assessments to facilitate communication and team building between participants.

The home institution of students responding in this study provides pre-departure content in a variety of ways. The Study Abroad Center provides in-person and online general pre-departure orientation. The individual Colleges provide program-specific orientations, sometimes as part of a course taken as a pre-requisite to travel and sometimes as a non-credit offering. Most study abroad courses require some form of pre-departure orientation, although the credit and time requirements vary based on how the course is structured and when the travel takes place. Additionally, students are encouraged to prepare on their own time. This preparation can include reading guidebooks, watching movies made in their host country, listening to language learning podcasts, and any number of other activities students complete independently.

This study includes a research question directly related to pre-departure content: Is there pre-departure content or are their pre-departure activities that result in greater student development as it relates to intercultural competence and employability? There may be programs at Iowa State University that offer pre-departure courses with unique content or suggestions for students to better prepare for their time abroad. It would be beneficial to others working in the field of international education to know what those activities are so they might build those activities into pre-departure courses at their institution.
In this study, the findings show that 91% of the students who completed the pre-survey and 94.8% who completed the post-survey felt well-prepared for their experience abroad, compared to 97.7% pre and 90.4% post for peer institutions and 97.7% pre and 89.4% post for the memo© average. As the consultant did not complete the analysis to determine statistical significance for the category of preparedness, it is not possible to know if these results are statistically significant, although they are a testament to the effectiveness of the pre-departure courses provided by the home institution, and should be encouraging for those providing this content to students studying abroad.

Effectiveness of pre-departure preparation in this study is measured by the responses of students who felt prepared prior to their study abroad experience. The form of pre-departure activity after which the highest percentage of students felt prepared prior to going abroad was the Study Abroad Center online Orientation, with 92% of students feeling well prepared prior to going abroad. Students attending College-specific orientations felt less prepared, with 88.8% and 90.5% of students attending the Study Abroad Center in-person Orientation felt prepared prior to going abroad.

Students also reflected on their preparedness after they returned from their time abroad, and this is where the data differ from peer institutions and the memo© average. Prior to travel, 91% of students at the home institution felt prepared to study abroad, compared to the 97.7% of students at both peer institutions and memo© average. Although the students at peer institutions and memo© average began their journey feeling more prepared, they actually felt less prepared, on the whole upon their return, with 90.4% and 89.4% respectively reflecting that they had been well prepared for their study abroad. On the contrary, 94.8% of students responding to the post-survey reflected that they had been well prepared for their experience abroad. Once again,
although the statistically significance of these results is unknown, this data demonstrates the effectiveness of pre-departure preparation at the home institution and the international educators offering these sessions should feel confident that they are sharing relevant and helpful information to their students.

The time devoted to pre-departure preparation and its effect on overall memo© total values also provides information international educators can take into consideration when planning and delivering pre-departure courses. With regard to memo© total values, students who prepared 10 hours or less increased their total values by 1.7%, whereas those who prepared 11-20 hours had an average decrease of 1.5% on their memo© totals and those who prepared for more than 20 hours had an average decrease of 3.5% on their memo© total values.

This decrease might relate to expectations for a study abroad program and the idea that increased preparation might result in more expectations from a study abroad experience. Those expectations might not be met to the satisfaction of the student, which could lead to the decreased memo© total values. The students who prepared less would, by the same reasoning, have fewer expectations of their experience and therefore would not have certain ideas that needed to be fulfilled in order to grow and benefit.

The types of pre-departure preparation also generated differing results, with students specifying “Other” pre-departure activities increasing their memo© Total values by 3.6%, compared to the Study Abroad Center online orientation increasing values by 1.6%, the Study Abroad Center orientation decreasing values by 1% and the College-specific orientation decreasing values by .2%. 
Recommendations

International educators at the home institution involved in this study should focus on balancing preparation with expectations. Students who spend more than 10 hours in a pre-departure course, while still achieving growth in memo© Total values, do not see growth as high as students who prepared for 10 hours or less. This data might tie to expectations, so it could behoove international educators to talk about expectations with students and prepare them for the fact that their imagined expectations might not match reality.

The home institution should encourage the colleges to review the content in the Study Abroad pre-departure courses, both online and in-person, to ensure that the College-specific orientations include that information. Both the Study Abroad Center and the colleges should note that 94.8% of students felt well prepared after their experience, compared to the 91% who felt well prepared before traveling abroad. This indicates that the material offered in the pre-departure preparation courses is effective and does prepare students to go abroad.

Further research should be conducted on the types of pre-departure preparation students are completing on their own that is resulting in a 3.6% increase in memo© Total values. If researchers could determine what the students surveyed are doing, they could recommend all students participate in those activities.

Activities while abroad

The most difficult research question to answer is the question that asks about the effects of activities while abroad on student development as it relates to intercultural competence and employability. No two study abroad programs will be the same, just as no two students are the same, but there are activities used frequently in study abroad programs to help students process
their experience. In this study, students were asked about journaling, reflection sheets, and group discussion.

With respect to memo© total values, reflection sheets resulted in higher post-return results, with an average of 2.2% improvement. Group discussion improved totals an average of 1.1% and journaling 1%. Given that none of the activities resulted in negative growth, international educators should continue to encourage students to use any and all of these processing methods.

Reflection sheets and group discussion might be most helpful because they provide prompts to students. After a long day of group travel, lectures, discussions, strange foods, foreign languages, etc., students are exhausted. Exhausted students might not possess the energy to journal independently or remember the details of their experiences that day. Reflection sheets and group discussions ask students questions intended to make them think, to make them uncomfortable, and to grow through that discomfort. That growth might be reflected in the memo© total values, although more research is needed.

Recommendations

Further research is necessary and should focus on the specific prompts in reflection sheets and group discussion. There are some questions that provoke more thought than others, and study abroad program directors should consider identifying the questions that prompt the deepest thought and use those in their reflection sheets and group discussion. This process might differ depending on the field, the location of the program, and the group dynamics in any given course. There are also situations unique to each program that depend on the weather, the local political situation, the time of year, local holidays, values of currency, etc. These are a few of the reasons why assessment of student learning during study abroad is difficult. Again, no two
study abroad programs are the same. The program itinerary and program director might be identical, but the make-up of students varies from year to year, and with that the group dynamics.

**Strengths and Limitations of the Study**

The purpose of this study was to establish the impact of study abroad program characteristics on student development as it relates to intercultural competence and employability. The instrument chosen to assess study abroad is an instrument that has been widely used in Europe with Erasmus students and been validated three times.

The researcher worked with stakeholders throughout Iowa State University to educate students, faculty, academic advisors, administrators, and international educators about the study and its potential benefits on study abroad recruitment. Approximately 1221 students studied abroad during the spring, spring break, and summer terms of 2016 and with a 100% response rate, the data would have encompassed all study abroad programs, majors, and student demographics.

**Strengths**

The memo® instrument was chosen specifically because it is a longitudinal approach to study student development during a study abroad program and relates that development to personality factors related to intercultural competence and employability. It is important for international educators to be able to demonstrate the long-term value of study abroad to students, their parents, faculty, and administrators. Students who possess skills employers’ value will be more likely to be employed upon graduation. This reflects positively on the university’s post-graduation employment rates and employed alumni may eventually become donors and invest in the university.
Students who took the pre survey received a personalized report explaining how their skills related to intercultural competence and employability compare to the skill development of students at peer institutions and all Erasmus students surveyed before their study abroad program. Upon completion of the post survey, students receive an additional report comparing their results once again to the Erasmus students’ post survey results as well as to their own pre survey results. These individualized reports are a strength of this study and are unique to the memo© tool. (See appendix J for a sample report.) Other assessment instruments provide a report of the data from the overall population and students do not receive personalized feedback. This makes it difficult to determine the effectiveness of a study abroad program for an individual.

Another strength of this instrument was the ease of assessment. It is an online survey administered by memo©. The home institution was tasked with determining an avenue through which memo© could distribute the registration link. Once registered, the home institution was not responsible for following up with students to ensure they completed the pre and post surveys. All follow-up was handled by the consultants, which could be considered a limitation and is addressed in the next section. Theoretically, adding the registration link to students’ required learning content through ISUAbroad was a simple way to ensure students received reminders to view the registration link. Although the administration process is simple for the home institution, that simplicity may have had a negative effect on the response rate.

**Limitations**

**Low rate of student mobility in the United States.**

The primary limitation of this study is the low rate of student mobility from the United States. “Nationally, the number of U.S. students studying abroad for credit during the 2014-2015
academic year grew 2.9 percent from 304,467 students to 313,415 students. This represents just over 1.5 percent of all U.S. students enrolled at institutions of higher education in the United States and about 10 percent of U.S. graduates” (NAFSA, 2017). There are many reasons why the vast majority of students do not study abroad, especially compared to the number of European students who study abroad.

Logistically, it is easier for European students to study abroad than students from the United States. The European Union provides an infrastructure in Europe for students to move between countries easily and inexpensively. For U.S. students, study abroad to anywhere but Canada or Mexico will require a trans-oceanic flight. Such flights are expensive and require a parent to send their child thousands of miles away. Conversely, the parent of a European student can send their child from Italy to the Netherlands and they will cross a territory only 17 km longer than the width of the state of Texas (Googlemaps, 2017 & Netstate, 2016). The physical distance is much smaller when a European student travels to another country in Europe, which may reduce the anxiety parents may feel when they send their children abroad.

Low response rate to the memo© pre and post surveys.

The low response rate to this survey is compounded by the low rate of students studying abroad from the United States. The response rate was approximately 10% with a 9% margin of error. This response rate is not atypical for a quantitative study with a large sample population, but is low for this study and a limitation that has an impact on the results. One hundred fifteen responses may not be representative of the entire population of students studying abroad at Iowa State. Fortunately, because the instrument chosen has been used to assess development for over 100,000 individuals worldwide, the sample can be measured against that larger population also.
The low response rate can be addressed in a number of ways, should the home institution choose to administer the memo© instrument in the future. It would be helpful to enlist the assistance of the faculty program directors earlier in the process, so they might speak to their students about the surveys and their purpose at the earliest stages of the student study abroad process. If students know about the surveys from the beginning and are expecting to take them and receive their individualized feedback, they might be incentivized to complete both surveys.

Faculty program directors or the individuals offering the pre-departure courses could set aside time during the pre-departure course for students to complete the pre-survey. This might be problematic, as the pre-survey should be completed around two weeks prior to departure, but if there were a pre-departure session scheduled anyway, it would be easy for the instructor to encourage students to complete the pre-survey during class.

Many study abroad courses do not meet as a group after the course abroad is completed. This does not provide an opportunity to incentivize or encourage the completion of the post-survey, especially given the recommended completion window of 30 days post-return. The confidential nature of responses to the surveys, a necessity of the Institutional Review Board process, also prevents faculty members and education abroad advisors from knowing who has completed the surveys and who has not. That makes it impossible to require completion, of either survey.

The best way to increase the response rate is to provide more education about the survey, its components, timeline, purpose, etc. Students should be told in different ways and frequently why taking the survey is beneficial for them, and the focus should remain on the individual benefit they will receive in the form of the memo© reports. Educators should employ every
tactic possible to appeal to the students’ sense of obligation to complete the surveys, but should also address completion of the survey as it relates to the barriers that exist to study abroad.

For example, if a student’s parents were not supportive of their study abroad, the student can show them their final report that compares their pre and post results. They can highlight their growth in skills related to employability and combine that information with what they learn in returnee sessions about incorporating a study abroad experience into a résumé or interview.

Eventually, as word spreads and students have tangible results post-study abroad, the assessment tool can be used as a marketing and recruitment tool to perspective students and their parents. Area employers might also be enlisted to support the process and recruit talent from the university.

No control group.

An important limitation of this study is the lack of a control group. The memo© survey does not include a survey for students not studying abroad and the survey questions would not be applicable to a control group. CHE Consult is considering developing a control group survey in order to further validate the instrument, but it does not yet exist. The absence of a control group is a limitation, primarily because there is no proof that a student would not have developed in similar ways abroad as a student engaged on campus. There are assessment instruments that measure student engagement and can measure increase of capacity for empathy and improvement in intercultural competence (Davidson, 2015), but those instruments do not relate student development to employability, which is a criteria of the assessment instrument Iowa State chose.
Spelling and terminology.

CHE Consult developed the memo© tool to assess students exchanged between European countries through the Erasmus program. While Europe is a westernized country that values similar qualities in employees, there are cultural differences and terminology specific to European students within the instrument. For example, words within the survey are spelled with the British English spelling, i.e. programme and realise. Students who are unfamiliar with spelling differences may see these words and think the developers of the survey made a spelling error, which could result in mistrust of the instrument and negatively affect the response rate. There are also terms such as sandwich year with which students might not be familiar.

The memo© analyses uses the terms “winners” and “losers”. Although students are not aware of the use of these two terms, they do not provide a constructive way to label students and their outcomes. Throughout their analyses, memo performs two-tailed tests obviously believing that study abroad can result in loss. The use of the word “loser” is also indicative of the belief that study abroad can be detrimental.

The survey also uses the terms “academic background” and “non-academic background”. The term “non-academic background” is the same as what higher education in the United States refers to as “first generation college students.” As the memo© tool becomes more widely used in the United States, the consultants should consider updating the language of their surveys and reports to reflect the terminology of the country in which the instrument is being administered.

In defining the terms “intercultural competence” and “employability” and reviewing the factors assigned to the two concepts within the memo© tool, many of the factors and aspects of the definitions overlap. It might be advantageous for memo© to focus more on the fact that the
personality factors related to the two terms are similar, and sometimes identical, which might streamline the explanation of the tool and introduce it to a wider audience.

**Faculty communication.**

This project was an effort between the researcher and her Capstone client, with the assistance of the Study Abroad Center at Iowa State University. While all international educators on campus knew the survey was being conducted, they were not formally consulted in the decision-making process, and therefore did not feel invested in the project. If these individuals had felt invested in the process and the results, they might have focused additional efforts on promotion of the assessment, which might have increased the response rate. As stated in chapter 2, the literature recommends that faculty be consulted at every step of the assessment process.

While this study did receive input from administrators and Associate Deans who are former full-time faculty and may have partial faculty appointments, the full-time faculty members of each College were not consulted. This lack of consultation resulted in e-mails from faculty to the researcher questioning the methods and expressing displeasure with the implementation of the survey. The researcher responded to the faculty, explaining the limited time-line and assuring the faculty that in future assessment efforts, faculty perspective would be sought out and be included in the process. This limitation is the result of lack of communication between the researcher and stakeholders.

**Analysis by consultants.**

While the consultants did provide evidence of reliability of the memo© instrument, the proprietary nature of the instrument prohibited them from sharing the exact structure of the
scales used in their calculations. This prohibited the researcher from replicating their analyses and hypotheses testing.

The data and reports indicate that all statistical comparisons were made using T-tests, regardless of the number of groups included in each analysis. For some of the comparisons, Analysis of Variance (ANOVA) would have been superior than merely performing multiple two-group comparisons (Fisher, 1918). Moreover, all t-tests were conducted with an Alpha of .05; no Bonferroni correction or other attempt was made to acknowledge the likelihood of Type I errors when using multiple tests.

As stated earlier, significance was only tested for the binary categories of gender, academic family background, and age (under 21 and 21 to 25). It is not possible to determine if most increases or decreases are statistically significant. Also, as no regression analysis was completed, it is not possible to know if any predictors of increase or decrease are statistically significant. Any results in this study are correlates. This results in difficulty making recommendations to international educators on their program design and portfolio management. Many of the increases and decreases may be statistically significant and the data from this study may have resulted in statistically significant results on which to base recommendations. Unfortunately, those analyses were not completed and the proprietary nature of the instrument does not permit the researcher to complete those analyses.

While the purpose of this study was not to critique the work of memo; it must be said that their lack of hypotheses testing could be very misleading. Many of the small changes observed in this study and assumed to be a result of the study abroad treatment may actually be due to pure chance or normal maturation. Institutions should review the instrument thoroughly and develop a list of questions to ensure clear and realistic expectations.
Research Questions and Hypotheses

The research questions were:

1. Do longer programs result in positive change in memo© Total values?
2. Does time spent on pre-departure activities impact positive change in memo© Total values?
3. Are there activities students complete while abroad that result in positive change in memo© Total values?

To answer these questions it is best to examine the memo© Total Values to see which of the identified program characteristics resulted in increased or decreased values. It was necessary to change the terminology of the questions to match the terminology referenced in the memo© Mobility Scan Report. Now that the home institution has gone through one cycle of administration of the tool and has received one comprehensive report on the data, should they choose to use the instrument in the future, it will be easier to formulate questions and to add questions that were not included in the pilot study.

Initial hypotheses:

Hypothesis 1: Longer programs result in positive change in memo© Total values.
Hypothesis 2: Students who spend more time on pre-departure preparation will have positive change in memo© Total values.
Hypothesis 3: Students who participate in journaling and/or reflection sheets during the program abroad will have positive change in memo© Total values.
Hypothesis 1 can be confirmed, but only in the area of intercultural competence. There were no areas related to employability where program length resulted in statistically significantly higher values.

Hypothesis 2 is not confirmed in this study. The data show that students who spent less than 10 hours on pre-departure activities gained 1.7% in overall memo© Total Values, while students who spent 11-20 hours and 20 or more hours lost in overall memo© Total Values by 1.5% and 3.5% respectively. These comparisons were not tested for statistical significance and are likely due only to chance.

Hypothesis 3 can be confirmed. Students who wrote in a journal, completed reflection sheets, and participated in group discussion increased their memo© Total values by 1%, 2.2%, and 1.1% respectively.

Conclusion

This was a pilot study using an instrument designed in Germany to assess European students that is administered from the Czech Republic to students in the United States. While the response rate was low, the responses provided data that is helpful for the international educators and faculty developing study abroad programs at Iowa State University. The consultants did not run all of the analysis for statistical significance; therefore, if the home institution chooses to administer this assessment in the future, they should request that analyses be completed to their specifications.

The survey itself should be updated to reflect the terminology and spelling used in the United States system of higher education. It should also include more questions about activities students complete while abroad. This information might best be generated by surveying faculty
and staff who are involved with the development of program itineraries and ask them what they do to ensure students intentionally reflect on their experience abroad. Once a list is formulated, the question can be expanded within the memo© tool, provided it is utilized in the future, to better determine the types of activities resulting in the most growth.

The home institution in this study was only the second university in the United States to use the memo© tool and implemented its use in this study before the first institution to use it had received their report. If the researcher had known of the methods of statistical analysis during the Capstone project in which she recommended an instrument for this study, this method would have received further vetting and ultimately may not have been chosen. Again, appendix K is a suggested list of questions to ask memo© or any consultant considered for administration of an assessment tool. The memo© tool does measure actual positive and negative growth as opposed to perceived and relates growth to factors of intercultural competence and employability. Those factors make this tool unique and the tool provided a starting point for assessment at the home institution.

Ultimately, the tool and the subsequent analyses provided by memo was insufficient to assess intercultural competence and employability of students participating in this study. The anticipation of the home institution was that the consultants at memo© would adhere to social sciences research best practices, take every measure to avoid Type 1 errors, analyze with the intent of determining statistically significant difference, or provide the data to the home institution so that the necessary analysis could be completed. The language throughout the report received by the home institution refers to increases, decreases, more, less, substantial, insubstantial, etc. but does not refer to results in terms of statistical significance. In the future, institutions vetting this instrument should make the expectations of analysis clear and ensure that
the language of the contract thoroughly describe the statistical analysis and the terms in which the data should be presented.

**Recommendations for Future Research**

Future studies that use this survey should add explicit language in the contract to describe the expectations of analysis, should focus on further education about the instrument and distribute that information earlier in the process and to more stakeholders on campus. It would also be helpful to include more information about the development of the survey and invite a consultant from CHE Consult, or any potential consultant, to the university to answer specific questions posed by faculty, staff, and administrators about the memo© tool. This would provide an explanation of benefits and logistics of the instrument from an external expert, and would give stakeholders the opportunity to ask questions. Appendix K is a recommended list of questions stakeholders might want to consider for future assessment efforts.

Once an assessment instrument is confirmed, the university should roll out a marketing campaign and issue a press release to publicize the tool and use it as a platform to market study abroad. Education Abroad professionals on campus should work with trademark and licensing and university marketing to develop a branding strategy, so the chosen assessment becomes synonymous with study abroad.

Career Services would also be an ally in releasing information about the tool and should work with education abroad professionals to market programs to prospective study abroad students. Career services is instrumental in the career integration of study abroad and is the logical service unit to help returning students understand what they have learned while abroad, to know how to bring it up in an interview, and the best way to add the experience to their resume.
International educators at Iowa State University should form a committee made up of people from each college and including faculty and students so there will be more buy-in with future assessment efforts on campus. The expertise exists on campus to develop a home-grown instrument, but this would take time and resources that may not exist. The assessment effort also should be directed by an individual who is responsible for Campus Internationalization, ideally a Senior International Officer who is directing all International efforts at Iowa State University.

The researcher recommends that international educators responsible for study abroad program development, in conjunction with faculty program leaders and administration, implement the suggestions from the findings and continue to assess student development during study abroad, although they must determine if the memo© tool is the best fit for the institution. If additional suggestions for further education on the instrument are implemented and the response rate increases, the data should be analyzed and programs adjusted to reflect each additional report of the data. Eventually all programs should be adjusted to the point where they result in significant student development as it relates to intercultural competence and employability.

As co-curricular transcripts become more widely used at universities and institutions of higher education, Iowa State University might want to consider highlighting study abroad, not only in the grade report, but as a separate section. This section could include information about the student’s experience and, if statistically significant positive change has resulted from their program, that could be listed as well. Many employers and all graduate programs require students to submit transcripts. Co-curricular transcripts provide those stakeholders with additional student information, and the inclusion of a study abroad experience would diversify the applications of Iowa State’s students as they search for employment post-graduation.
In future research, this study would include a question about program location as a characteristic of study abroad that influences student development and would ask the question: Which program locations result in the most student development as it relates to intercultural competence and employability?

It would also be beneficial to encourage faculty to complete the surveys. Not only to model behavior for their students, but to assess areas in which faculty might develop their intercultural competence and give them a personal incentive to develop programs that are as effective as possible.

The researcher recommends that a committee of faculty and graduate students be formed within the School of Education to develop a list of questions intending to further vet this instrument and ensure that the analyses completed by the consultants match best practices in the field. A suggested list of questions is in appendix K.

In order to ascertain the ideal study abroad program that results in maximized student development as it relates to intercultural competence and employability, more research is needed. The researcher recommends that the home institution consider the memo© instrument in the future as one of many alternatives. If the tool is chosen again, the institution should implement the suggested recommendations in order to ensure it provides the information needed to inform the development of education abroad portfolios.

A future research agenda related to this topic would include follow-up qualitative interviews with participants from the study who completed both the pre and post surveys. This would provide qualitative data to compare to the quantitative memo© data to further explain the effects of program design elements on student development.
The researcher also hopes to increase access to study abroad experience for underrepresented groups, and is currently applying for a grant that would allow her to develop a short-term program for American Indian students focused on how different indigenous groups experience colonization differently. This program would be developed with the intention of publishing a qualitative study on the American Indian student experience abroad.
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APPENDIX A: CLIENT LETTER

David Holger  
Associate Provost for Academic Programs  
Dean of the Graduate College  
1550 Beardshear Hall  
Iowa State University  
Ames, IA 50011

June 11, 2015

Linda Hagedorn  
Associate Dean  
School of Education  
E262 Lagomarcino Hall  
Iowa State University  
Ames, IA 50011

June 11, 2015

Dear Dr. Hagedorn,
I am pleased to confirm my participation as client for the Capstone requirement for Katie Davidson. Katie will be working with my office, the Council on International Programs, the Study Abroad Center, and the College International Programs staff to select an instrument for assessing student development during study abroad experiences.

There is currently no consistent method of assessment and it is important for data to be collected in order to tailor university and college study abroad marketing efforts to better appeal to both students and their parents.

I look forward to working with Katie on this project and implementing the chosen assessment tool at Iowa State.

Please feel free to contact me with questions or concerns: holger@iastate.edu; 515-294-7184.

Thank you,

David Holger
APPENDIX B: DEARDORFF'S PROCESS MODEL OF INTERCULTURAL COMPETENCE

APPENDIX C: MEMO© COMMUNICATION TIMELINE

Memo© Communication Timeline

November 13th - CIP reviews communication timeline
November 16th (week of) - Katie Davidson & Dr. Holger finalize e-mail communication language
November 20th - EAC meets, reviews Memo details for College Coordinators' benefit*
November 20th - E-mail goes out to Spring/Spring Break/Summer 2016 Faculty Program Directors
December 1st - Final link to Pre-Assessment is available for testing
December 8th - E-mail goes out to Academic Advisers via Adviser Newsletter
December 15th - Link to Pre-Assessment goes live in ISUAbroad
APPENDIX D: LANGUAGE OF LEARNING CONTENT IN ISUABROAD

Language of Learning Content in ISUAbroad

Dear student,

This is an invitation to participate in a career skills survey to assess the effect of your international experience on your individual personality & employability. After you complete the 15-20 minute survey, you will receive a pdf of your personalized report (MAKE SURE TO SAVE THE PDF). You will be able to compare your reports before and after you study abroad as well as to other students who have taken the survey.

PLEASE FOLLOW THIS LINK TO REGISTER FOR THE PRE SURVEY: http://zm3835.customervoice360.com/uc/iowa/ Once you register you will receive the link to participate in the survey from MEMO consultants.

Benefits of the survey:
- Measures your intercultural competence
- Measures your increase in employability
- Gives you personalized feedback before and after
- Shows how your results measure against other students who have taken the survey Worldwide

Enjoy your time abroad and look for the invitation to the postsurvey once you return to see how your employability skills and intercultural competence developed.

Thank you for completing this survey!

Do you have questions or need technical support? Please contact the memo team at memo@checonsult.de. Learn more about the assessment tool at www.memotool.net.
APPENDIX E: ASTIN’S INPUTS-ENVIRONMENT-OUTPUTS MODEL

Astin, 1991, p. 18
9/1/15: Choose an instrument – leaning toward Memo
10/1/15: Submit for IRB Approval
12/1/15: Administer pre/post assessments in ISUAbroad (Spr ‘16, Spr Break ‘16, Summer ‘16)
   ▪ Determine communication language
   ▪ Pilot project is client funded
12/1/16: Receive report
Spring 17: Write up data
Spring 17: Determine next steps (Davidson, 2015)
APPENDIX G: MEMO© COMMUNICATION TO FACULTY

Good afternoon,

Thank you for leading a study abroad program this summer semester, 2016. We appreciate your efforts to ensure Iowa State students receive a global education.

This year we will be conducting a pilot study of an assessment tool to measure student development during their study abroad program as it relates to factors of employability. The Council on International Programs has discussed the pilot and strongly supports its administration in spring and summer of 2016. This tool is called Memo, and more information can be found here: [http://www.che-consult.de/services/memoc/](http://www.che-consult.de/services/memoc/)

The assessment consists of a 15-20 minute survey administered both before and after their study abroad program. Your students have all received a link to register for these assessments via ISUAbroad and will receive individualized reports upon completion. We ask that you strongly encourage (quasi require) them to complete both the pre- and post-experience versions of the survey.

For more information on research questions, administration of the tool, or anything related to this study, please contact Katie Davidson at katied@iastate.edu.

Thanks again for your assistance with this important project.
APPENDIX H: MEMO© COMMUNICATION TO ADVISORS

Dear Advisors,

In 2016, we will be conducting a pilot study of an assessment tool to measure student development during their study abroad program as it relates to factors of employability. This tool is called Memo, and more information can be found here: http://www.che-consult.de/services/memoc/

The assessment will be sent to your students studying abroad in the spring, spring break, and summer of 2016 and consists of a 15-20 minute survey administered both before and after their study abroad program. Students will all receive a link after December 21st to register for these assessments via ISUAbroad and will receive individualized reports upon completion. We ask that you strongly encourage them to complete both the pre- and post-experience versions of the survey.

For more information on research questions, administration of the tool, or anything related to this study, please contact Katie Davidson at katied@iastate.edu.

Thank you,

Dave

David K. Holger
Associate Provost for Academic Programs and
Dean of the Graduate College
Professor of Aerospace Engineering
1550 Beardshear Hall
Iowa State University
Ames, IA 50011-2021
Voice 515-294-7184
FAX 515-294-8844
APPENDIX I: INSTITUTIONAL REVIEW BOARD DOCUMENTATION

IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY

Institutional Review Board
Office for Responsible Research
Vice President for Research
1138 Pearson Hall
Ames, Iowa 50011-2207
515-294-5566
FAX 515-294-4267

Date: 11/3/2015
To: Katie Davidson
2270C Vet Med Ames, IA 50011-1250

From: Office for Responsible Research

Title: Assessment of Student Development While Abroad

IRB ID: 15-529

Study Review Date: 10/30/2015

The project referenced above has been declared exempt from the requirements of the human subject protections regulations as described in 45 CFR 46.101(b) because it meets the following federal requirements for exemption:

- (1) Research conducted in established or commonly accepted education settings involving normal education practices, such as:
  - Research on regular and special education instructional strategies;
  - Research on the effectiveness of, or the comparison among, instructional techniques, curricula, or classroom management methods.

- (2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey or interview procedures with adults or observation of public behavior where
  - Information obtained is recorded in such a manner that human subjects cannot be identified directly or through identifiers linked to the subjects; or
  - Any disclosure of the human subjects' responses outside the research could not reasonably place the subject at risk of criminal or civil liability or be damaging to their financial standing, employability, or reputation.

The determination of exemption means that:
- You do not need to submit an application for annual continuing review.
- You must carry out the research as described in the IRB application. Review by IRB staff is required prior to implementing modifications that may change the exempt status of the research. In general, review is required for any modifications to the research procedures (e.g., method of data collection, nature or scope of information to be collected, changes in confidentiality measures, etc.), modifications that result in the inclusion of participants from vulnerable populations, and/or any change that may increase the risk or discomfort to participants. Changes to key personnel must also be approved. The purpose of review is to determine if the project still meets the federal criteria for exemption.

Non-exempt research is subject to many regulatory requirements that must be addressed prior to implementation of the study. Conducting non-exempt research without IRB review and approval may constitute non-compliance with federal regulations and/or academic misconduct according to ISU policy.

Detailed information about requirements for submission of modifications can be found on the Exempt Study Modification Form. A Personnel Change Form may be submitted when the only modification involves changes in study staff. If it is determined that exemption is no longer warranted, then an Application for Approval of Research Involving Humans Form will be required and approved before proceeding with data collection.

Please note that you must submit all research involving human participants for review. Only the IRB or designee may make the determination of exemption, even if you conduct a study in the future that is exactly like this study.

Please be aware that approval from other entities may also be needed. For example, access to data from private records (e.g.
student, medical, or employment records, etc.) that are protected by FERPA, HIPAA, or other confidentiality policies requires permission from the holders of those records. Similarly, for research conducted in institutions other than ISU (e.g., schools, other colleges or universities, medical facilities, companies, etc.), investigators must obtain permission from the institution(s) as required by their policies. An IRB determination of exemption in no way implies or guarantees that permission from these other entities will be granted.

Please don't hesitate to contact us if you have questions or concerns at 515-294-4566 or IRB@iastate.edu.
APPENDIX J: SAMPLE OF INDIVIDUALIZED MEMO© REPORT

YOUR memo© RESULTS
A picture of your personality
These are key aspects of your personality as assessed by the memo© tool AFTER your stay abroad, compared to the results of other students from around the world who also participated in the survey:

Dear student,

the figure above displays your scores in ten memo© factors representing key personality traits. The values are calculated from the questions you answered in the survey and are compared to the results of tens of thousands of individuals who also participated. The higher the values, the better you performed in comparison with others.

You are the only person who will ever have access to your particular results, so do not forget to SAVE THEM.

1. About memo© factors
2. About the memo© survey
3. What to do with the results
1. About memo© factors

In the chart at the top of this feedback, your scores for ten memo© factors, memo© employability, memo© intercultural competence and memo© total value are displayed. For each, your percentile is displayed, representing the proportion of previously tested students whose results are worse than yours. I.e. if your score is 50%, you are a perfectly median student in that factor – half of the students who participated before have a better score than you and half worse. The higher the number, the more you can consider that particular factor your personal strength. The lower, the more space for improvement you have and you should consider focusing on development in that aspect of your personality.

memo© factor: Confidence

High values on this factor point to a high degree of self-sufficiency and a strong conviction of one’s own abilities – aspects that may positively impact academic success.

Individuals with high values on this factor may, however, also be inflexible and set in their ways.

Low values show doubt about one’s own abilities and perseverance, which might be grounded in negative experiences or insecurity.

memo© factor: Decisiveness

High values point to an active and decisive individual, who may have a critical attitude toward the content of his or her study programme.

Low values suggest that the individual is more likely to reconsider his or her decisions to accommodate the opinions of others.

memo© factor: Problem-solving

High values reflect a “problem-solve” who does not like to delve into the insoluble aspects of a task but focuses on the doable, and also likes a challenge. Such individuals may either be very pragmatic in their approach to academic education, considering it as a means to solve practical problems, or else very theory-oriented in that they are attracted to problem-solving as an academic exercise.

Low values reflect an individual who is well aware of problems or the problematic aspects of a situation and might be more concerned with identifying the problem than with solving it. Accordingly, such an individual would be less goal-oriented and may have an altogether less future-oriented perspective on things.

memo© factor: Self-assessment

High values for this factor indicate that a person knows his or her strengths and weaknesses. This capacity for self-assessment not only leads to a more relaxed relationship to other people or new demands, but also might prevent disappointment with the higher education institution.

Low values, on the other hand, suggest an altogether higher stress level that can be caused by a misjudgement of one’s own abilities, accompanied by difficulty understanding the demands and requirements of the study programme.
**memo© factor: Curiosity**

High values for this factor indicate that a person is not only open to new experiences but actively seeks them out. This also applies to new academic challenges.

Low values hint at an altogether more reluctant attitude towards new experiences and a greater appreciation of what is familiar.

**memo© factor: Tolerance**

High values for this factor mean that a person is capable of tolerating the behaviour and values of other people without compromising his or her own values.

Low values mean that a person feels very uncomfortable if confronted with other people’s different values and ways of life. Such individuals may espouse a more traditional view of things, based on their own perspective and experience as influenced by family, society and established norms and values. Deviation from what is conceived of as “normal” is perceived as threatening or at least discomforting.

**memo© factor: Adaptability**

An individual with high values deals well with negative experiences and therefore does not fear possible future setbacks. In an academic context, this goes along with physical well-being and a belief in one’s own ability.

Students with low values for this factor feel exhausted and overwhelmed, which can be accompanied by further symptoms such as sadness, sleeplessness or a certain helplessness. Such students find it hard to find and accept help or support.

**memo© factor: Position-defending**

High values characterize an individual who easily engages in and enjoys discussions, feels passionately about things and also does not hesitate to voice his or her opinions in an academic environment.

An individual with low values keeps his/her opinions to him/herself, not only because of weaker convictions but also in order to avoid confrontations. Such an individual is more hesitant to engage in discussions in seminars.

**memo© factor: Self-awareness**

High values indicate that the person is convinced that he or she can influence the outcome of their ambitions and efforts (such as study results), and that these are not a matter of luck or coincidence. This perspective is accompanied by a high degree of self-awareness and a good assessment of what is expected.

Low values not only suggest that a person does not feel that he or she really can make a difference with respect to the outcome of a certain task or situation, but they also feel a certain ambiguity about the demands and conditions of the task or situation.

**memo© factor: Sociability**
High values refer to an individual who not only likes to socialize, but who cannot cope well with being alone. For these individuals, an active social life coincides with good emotional well-being.

Low values show a person who does not like to mingle, but is better able to deal with negative feelings such as rejection and is less concerned about the opinions of others.

**memo© total**

The memo© total value is composed of all other factors so that it represents the overall state of your personality. The memo© total comprises of aspects of study adaptation as well as aspects reflecting the ability to deal with foreign concepts, cultures and values. High values reflect a comprehensive ability to adapt to the demands of an international study context, while low values may indicate a person with substantial dormant potential needing to be developed.

**memo© employability**

The memo© employability value is calculated as the mean of six individual factors: Confidence, Curiosity, Decisiveness, Problem-solving, Self-assessment and Tolerance. This value comprises of aspects of your ability to deal with foreign concepts, find solutions to challenges and to work towards success. High values on the memo© employability value represent a comprehensive ability to assert oneself in the labour market and to start a successful career. In contrast, people with a low value might struggle in their professional career even if their field-specific skills and knowledge are well-developed. It has been proven that alumni with a high memo© employability value are more likely to reach managerial positions within a couple of years after graduation and are less threatened by unemployment than those with lower scores.

**memo© intercultural competence**

The memo© intercultural competence score comprises of the values of the factors of Curiosity, Tolerance, Adaptability, Position-defending, Self-awareness and Sociability. The fact that the first two factors named are shared with memo© employability only illustrates the close link between career opportunities and openness to new experiences. Students with high values in intercultural competence show a personal readiness to act in unexpected situations, a willingness to discuss openly their views and a disposition to cooperate with new people. In contrast, low values might represent introversion and neuroticism which might prevent you from making the most of your stay abroad.

2. **About the memo© survey**

memo© is a psychometric test developed to measure the effects of international mobility on a student’s personality. By participating in the survey prior to and after your stay abroad, you receive information about your major personality traits, thanks to which you can assess your career and academic prospects, identify potential for improvement and evaluate the progress you have made.

Moreover, your university receives a unique set of data that allows it to assess the efficiency of individual programmes and to identify risk groups that need better guidance in mobility. By participating in the survey you are helping to improve the foreign placement experience for yourself as well as for generations of students to come.
The Erasmus Impact Study developed by CHE Consult for the European Commission in 2014, and based on the memo© methodology, revealed that 92% of employers consider personality traits relevant in recruitment (with five of the six memo© factors being on or above this level), which is more than for field-specific skills and job-related experience.

As recent research shows, a student’s personality is crucial for his or her career success. In the labour market of the 21st century, information quickly becomes out-dated and job-specific skills can in most cases be trained on demand – and even have to be, since many of the top job positions of tomorrow do not even exist yet and, as confirmed by EIS as well as other research, job volatility and position-switching is common among young people nowadays. However, personality is decisive not only on the job market but also in your study progress, academic career and personal and social life. So be sure to develop yours!

The factors have been developed based on extensive research in this area and validated on a sample of tens of thousands students, alumni and academic staff. If you want to learn more about the methodology, visit our webpage memo-tool.net.

Your institution will receive a data report that contains only aggregated data which does not allow the identification of individual students. Neither names nor other personal information such as email addresses will be stored linked to the results data.

3. What to do with the results

In general, personality is slow to change through maturation. However, major life experiences (such as international mobility) can have an effect and change your behaviour and thinking. Learning about where you stand prior to mobility helps you find your ideal focus so as to benefit most from your experience abroad. Re-taking the test after you return helps you fairly assess what you have gained from your stay. Your student counsellor or advisor might be the right person to talk to if you want to learn more about how to improve your personality traits and prepare better for the future. Although, the main advice is simple: be open to new experience, do not avoid different cultures, challenge yourself and keep growing.

Knowing yourself is the first step to success. Nevertheless, it helps when also others know of your strengths. Download, save and print this personal feedback to have it ready for your future employers. Recruiters receive tons of CVs daily but with memo© you can make yours unique. Visit our webpage memo-tool.net to learn more about memo©. If you would like to give us your feedback on this personal report or on the survey, please send an e-mail to: memo@checonsult.de.
APPENDIX K: SUGGESTED LIST OF QUESTIONS FOR CONSULTANTS

1. Can questions be customized?
2. Will we receive the raw data?
3. What information is proprietary and how does that impact the internal analysis the institution might complete?
4. Will you assist us in developing a marketing and communication plan to students and other stakeholders in order to increase the response rate?
5. Which techniques will you use to analyze the data and why?
6. Are you amenable to conducting additional analysis should it be necessary?
7. Do you analyze for statistical significance?
8. Are you amendable to changing terminology in the surveys/reports?
9. Would you be willing to send a consultant to campus to meet with stakeholders in order to provide an opportunity for them to ask additional questions?