French bread, Spanish bulls, Dutch bikes, Irish beers

Testing the development of intercultural competencies of American exchange students in France, Spain, the Netherlands and Ireland.

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MA Thesis

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Abstract

This thesis studied the development of intercultural competencies of American exchange

students in France, Spain, the Netherlands and Ireland. A statistical analysis of the results of

the Intercultural Development Inventory (IDI) showed no significant results for differences in

gaining intercultural competencies between male and female students. There were also no

statistically meaningful results found to indicate that an exchange in one particular host

country would lead to more advancement along the scale of the Developmental Model of

Intercultural Sensitivity (DMIS).

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Foreword

Having studied abroad multiple times myself, I have a personal interest in the topic of my thesis. After finishing my pre-university education, my first foreign exchange period took place in Richland Center, Wisconsin, where I lived with an American host family and studied at the local community college for one year. In the third year of my bachelor American Studies, I attended another American college for a semester; this time the College of Charleston in South Carolina. My latest exchange period was part of the second year of my master Intercultural Communication, when I participated in the European Master of Intercultural Communication (or Eurocampus) in Spain. This is an intensive four month program of lectures and assignments offered by visiting professors for a group of fifteen European students. As our group also took the Intercultural Development Inventory at the beginning and at the end of the semester, I was inspired to use the IDI for my MA thesis. Through a job advertisement, I came in contact with the Dutch office of an American exchange organization. During our initial conversation I found out that the organization had been using the IDI among their American exchange students for several years. I was redirected to the people at the American office, who provided me with a useful corpus of IDI results for this thesis. The data were selected so that I could compare the students' IDI results on gender and on differences between host countries. I considered a comparison of these results with those of the Eurocampus students, but I found the group to be too small and heterogeneous for a useful comparison. Therefore, I dismissed that option.

My gratitude goes out to the organization that provided me with the IDI data and suggestions on what to do with them as well as allowing me to sit in several seminars of the Dutch culture course attended by American students. Furthermore, I would like to thank professor Schouten for his statistical insights, professor ten Thije for his helpful comments, and professor Supheert for her many thorough readings of this thesis.

1 Introduction

Every year many students leave to study abroad for a summer, semester or a full academic year. Driven by various motives to live in a foreign country for a period of time, exchange students hope to experience living in an unfamiliar culture to gain new perspectives on themselves and on their own culture (Stewart & Talburt 1999: 163). Some students also hope to improve their language and communication skills as they submerge themselves into a new cultural environment. Exchange organizations, such as Youth for Understanding (YFU), American Field Service (AFS) and Council on International Educational Exchange (CIEE) play an important role in facilitating exchange periods for students. Many international exchange organizations, such as these three, were founded in the United States after the Second World War with an ideological motive to improve international relations and intercultural understanding. Over the last sixty years, studying abroad has become increasingly important in a culturally interdependent world, while the ideological motive has principally remained the same.

To explore the value and effectiveness of study abroad programs, several tests have been developed and many studies try to find appropriate ways to measure which skills exchange students improve during their period abroad and which variables influence their progress. This thesis will look at the development of intercultural competencies of American exchange students over the course of a semester in four different European countries. The test and model that was used to measure the intercultural competencies of these students is the Intercultural Development Inventory (IDI) and the Developmental Model of Intercultural Sensitivity (DMIS). The IDI results of American exchange students in the European host-countries lie at the basis of the analysis for this thesis. The data were provided by one

particular American international education organization.[1] From the head office in the US, the organization offers educational exchange programs in more than forty different countries all over the world. The organization not only emphasizes quality education, but also provides mentors for their students throughout their exchange period to facilitate the development of intercultural communication skills. In addition, the organization offers a culture course for their exchange students. The students who participate in this course are taught about culture specific elements as well as culture general elements. Culture specific elements in the course are the language and culture of the host country in which the students reside. Culture general elements, on the other hand, are designed to teach the students about intercultural communication, cultural differences and are also self-reflective in nature. Students take part in multiple tests to develop themselves, not only on cultural sensitiveness but, for example, also on self-awareness on learning styles and (the impact of) their own cultural values. Students receive academic credit for enrolling in this course, but taking this course is voluntary.

To measure the development of sensitiveness to cultural differences and capability to respond to them, i.e. the student's intercultural competencies, the exchange organization asks its students to take the Intercultural Development Inventory (IDI). The IDI is a 50-item test developed by Milton J. Bennett and Mitch Hammer in 1999, which measures people's sensitivity to cultural differences across a scale of different stages as described in Bennett's Developmental Model of Intercultural Sensitivity (DMIS, from 1986). The stages in the DMIS range from an ethnocentric to an ethnorelative worldview. The IDI score thus indicates an individual's sensitivity to cultural differences and a certain level of effective intercultural communication skills that goes along with this worldview.

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[1] For confidentiality reasons, the international organization for educational exchange has asked to remain anonymous in this study.

Movement along the DMIS scale, progressive or regressive development of intercultural competencies, is influenced by many variables. A comprehensive study that considered numerous variables is the Georgetown Consortium Project, a multi-year study which analyzed the IDI results of 1200 American exchange students (Vande Berg, Connor-Linton, & Paige 2009). The study showed that women displayed a higher IDI change score in a comparison of pre- and post- IDI scores, while men sometimes retreated along the DMIS scale (Vande Berg, Connor-Linton, & Paige 2009: 51). To see if this is also the case for the corpus of this thesis, consisting of 249 American exchange students, I will compare the pre- and post- IDI results and the development of intercultural competencies based on gender. My first research question therefore is: Are there differences in gender in the development of intercultural competences within the American exchange students (of the corpus) over the course of a semester?

The American exchange students in this corpus studied in four different European countries: Ireland, France, the Netherlands and Spain. A comparison between the IDI results of the American exchange students in the different host-countries might reveal a different type of student (more or less sensitive to cultural differences) who would choose to study in a particular country. Thus my second research question is: Are there differences in the development of intercultural competences between American exchange students (within the corpus) in the four different countries over the course of a semester?

2 Theoretical framework

Intercultural competencies

Many definitions of culture exist in the literature of intercultural communication. Depending on the different context in which *culture* is used, small nuances can be found in the way the concept is understood. British theorist Terry Eagleton, gives an account of the development of the meaning of culture. He elaborates on Raymond Williams' historical account of the history of the word *culture*, how the concept evolved "from its etymological roots in rural labor, to meaning something like 'civility,' and then in the eighteenth century becomes more or less synonymous with 'civilization,' in the sense of a general process of intellectual, spiritual and material progress" (Eagleton 2000: 7). This development was a product of the Enlightenment. In a reaction to this meaning, the Romanticist (and anti-colonialist) notion of "culture" came to define it as a way of life in the nineteenth century. Eighteenth century German philosopher Herder describes culture as "a diversity of specific life-forms, each with its own peculiar laws of evolution" (Eagleton 2000: 12). Herder was one of the first to propose an existence of multiple cultures: cultures of different nations and periods of time and of different cultures of socio-economic classes within the nation itself (Eagleton 2000: 13). Herder's notion defined the early development of cultural anthropology in the twentieth century, but is still relevant in defining culture in modern cultural anthropology. As this thesis uses the concept of culture in a context of studying abroad, with a comparison of different countries, an anthropological approach seems to be fitting. Culture in this sense involves certain models that attempt to concretize cultural differences between countries. Most anthropological models are designed to describe how differences in values and orientations to life are expressed in the behavior of the dominant group of a particular society. Psychological models usually focus on the fundamental values to compare different cultural groups (Franklin & Spencer-Oatey 2009: 17). An intercultural encounter in a context of studying abroad is then a combination of a

meeting between two (or more) different sets of psychological values and behavioral expressions. This thesis uses a tool (the Intercultural Development Inventory) which identifies both the psychological stage of intercultural sensitivity and the behavior that accompanies a certain stage of intercultural sensitivity when students are faced with cultural differences (Franklin & Spencer-Oatey 2009: 282).

A successful stay abroad, with hopefully many intercultural encounters, may help students develop their intercultural competencies, i.e. the ability to communicate effectively in cross-cultural situations (Penington & Wildermuth 2005: 166). Franklin & Spencer-Oatey explain that fully developed intercultural competencies (or "intercultural interaction competencies") consist of three components: knowledge, skills and attitudes (2009: 201). *Knowledge* of intercultural competencies involves of the knowledge of one's own culture and the host culture as well as a recognition of the differences and awarding an equal value to them (Penington & Wildermuth 2005: 167). Another important aspect to gain more competency is one's *attitude* or the motivation and desire to communicate appropriately in cross-cultural environments (Penington & Wildermuth 2005: 167). Communication and behavioral *skills* are the final component of intercultural competencies (Penington & Wildermuth 2005: 167). Intercultural competencies, consisting of the three components mentioned above, thus comprise the ability to thrive in cross-cultural environments (Penington & Wildermuth 2005: 166).

Both research duos Franklin & Spencer-Oatey and Penington & Wildermuth agree that the combination of classroom-based learning of the knowledge of culture and actual experience is most beneficial in developing intercultural competencies (Franklin & Spencer-Oatey 2009: 202; Penington & Wildermuth 2005: 180). Studying and living in another country as an international exchange student should provide intercultural encounters and confrontations with a cultural other. It is imaginable that knowledge can be taught in a class,
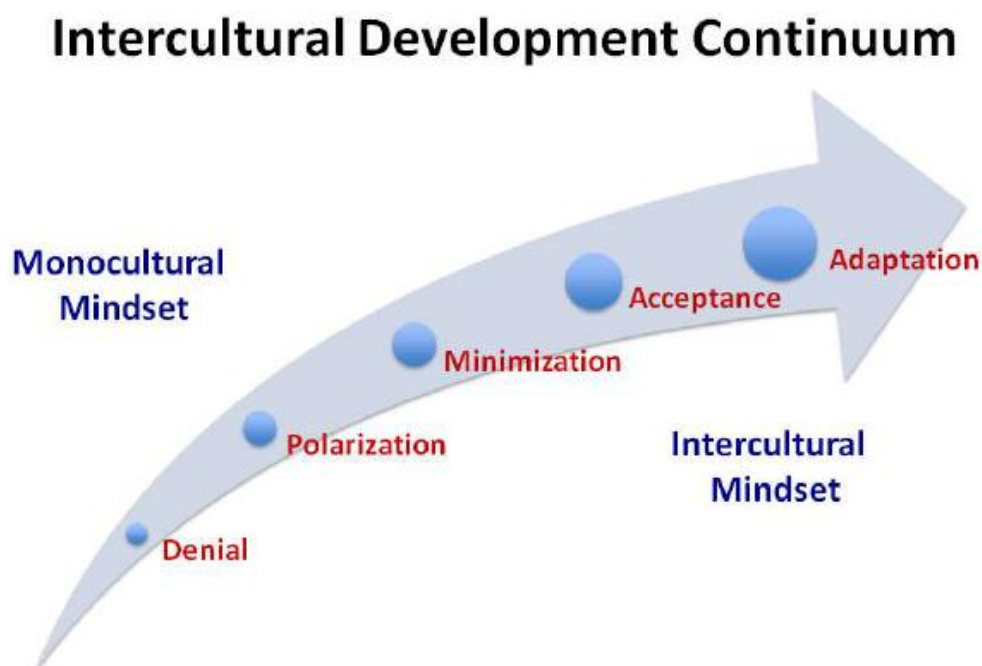
but skills and attitudes will probably improve even more with practical encounters. An exchange period could consequently improve students' ability to communicate effectively in cross-cultural situations.

The DMIS

A widely used model which tries to concretize the development of individuals' orientation to cultural differences is Milton J. Bennett's Developmental Model of Intercultural Sensitivity (DMIS). It attempts to show to what stage people's ability to communicate effectively in cross-cultural situations has advanced. Individuals can reach a place along a continuum of six different stages, ranging from ethnocentric worldviews to ethnorelative worldviews. Even though the name suggests the model only encompasses sensitivity to the cultural other, i.e. only the above mentioned attitudinal component of intercultural competency, the different stages in the model do incorporate the knowledge and skills components. The model emphasizes the importance of attitude in developing knowledge or skills that can be applied in intercultural encounters. A certain orientation such as ethnocentric or ethnorelative also implies a certain ability to communicate and function at the accompanying level of awareness of cultural differences. Bennett, Hammer and Nishida state that "ethnocentrism may diminish intercultural communication competence by reducing culture-specific and culture-general understanding" (Goldstein & Kim 2005: 267). Bennett furthermore states that linguistic or behavioral knowledge of one or more different cultures or of intercultural communication skills alone do not necessarily mean that the knowledge is applied appropriately and effectively. Knowledge and skills of intercultural encounters need to be accompanied by a certain (ethnorelative) worldview to be effective (Bennett 2004: 67). Bennett here introduces the concept of "fluent fools": a condition in which "people may have some of the linguistic or

behavioral skills of another culture without any feeling for how to use those skills in culturally appropriate ways" (Bennett 2004: 67).

Bennett defines an ethnocentric worldview as "the experience of one's own culture as 'central to reality'" (2004: 62). The opposite is ethnorelative, which means that people "experience their own beliefs and behaviors as just one organization of reality among many viable possibilities" (Bennett 2004: 62). The first three stages within the DMIS can be categorized as ethnocentric: *Denial* of cultural difference, *Defense (or Polarization)* against cultural difference, *Minimization* of cultural difference (Bennett 2004: 62). The final three stages are usually categorized as more ethnorelative: *Acceptance* of cultural difference, *Adaptation* to cultural difference, *Integration* of cultural difference into identity (Bennett 2004: 62). The stages will be addressed in more detail later on.

Intercultural Development Continuum

Monocultural Mindset

Adaptation

Acceptance

Minimization

Polarization

Intercultural Mindset

Denial

[2]

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[2] Image retrieved from sample IDI profile report, http://www.idiinventory.com/pdf/idi_sample.pdf

The IDI

Mitchell R. Hammer, Milton J. Bennett and Richard Wiseman developed a tool to measure "the orientations toward cultural differences described in the DMIS" (2003: 421). After its initial development in 1999, the IDI has been revised three times. The latest version that is used and referred to in this thesis is the third version of the IDI, developed in 2007. The Intercultural Development Inventory (IDI) consists of 50 statements reflecting the different stages of the DMIS. Participants express their agreement or disagreement to these statements using a five-point scale. The following table shows how the IDI scores correspond to the DMIS stages (Vande Berg, Connor-Linton, & Paige 2009: 8):

Table 1: Conversion of IDI scores to DMIS stage

IDI score	DMIS level
55 to 69.99	Denial
70 to 84.99	Defense/Reversal
85 to 114.99	Minimization
115 to 129.99	Acceptance
130 to 145	Adaptation

As can be seen in Table 1, an IDI score between 55 and 69.99 means that one finds him- or herself in the stage of *Denial*. An IDI score between 70 and 84.99 means that one will most likely agree with the statements that go with the DMIS stage of *Defense* (the DMIS stages are explained in more detail on page 14 *ff.*). The test can either be taken online or in paper and pencil format. The IDI can be used to gather a group or an individual profile of the DMIS. In addition, participants are asked to respond to ten demographic items, such as age and gender, but they are not mandatory. Four open ended questions are included as well in which participants are asked to recall situations in which they experienced cultural differences, negatively and positively, and how these situations were resolved. In addition to measuring the participants' orientation to cultural differences, the IDI also measures the degree of cultural disengagement (Hammer 2009: 210). This dimension entails the degree to

which an individual (or a group) feels alienated or disconnected from his or her own cultural group identity (Hammer 2009: 210). According to Hammer, this dimension is independent from the six core stages of the DMIS (2009: 211). In an advanced adaptation of the DMIS, Hammer developed the Intercultural Development Continuum (IDC), in which he removed the final stage of the DMIS, Integration. According to Hammer, the cultural marginality that is discussed in *Integration* is not developmental and is similar to the dimension of cultural disengagement. Hammer prefers this separate dimension as he argues that people may experience alienation from their own culture at any IDC stage (Hammer 2009: 210).

Hammer, Bennett and Wiseman tested the IDI on reliability and validity as they created the IDI. They found no negative statistically significant results on reliability and validity, which means that the test measures what it is designed to measure. Michael Paige et al. also tested the IDI for social desirability: the extent to which participants will be influenced to answer the items in a way that is socially desirable (2003). Even though, some statements in the IDI would seem to be susceptible to socially desirable answers, this study showed that there is no statistically significant influence of individuals' social desirability in their answering of the IDI (Paige et al. 2003: 479). The IDI is available in multiple languages, but some researchers have raised doubts about the cultural transferability of the inventory. Greenholz, for example, studied IDI data obtained from a Japanese translation and found that both the IDI and the DMIS do not translate well into languages representing cultures and worldviews other than those close to US American culture (cited in Franklin & Spencer-Oatey 2009: 283).

The 50 IDI items all represent one of the five different stages of the DMIS. The final sixth stage, Integration, is not reflected in any of the test items as it is not part of the IDC which was used for the third version of the IDI. Moreover, the number of items are not equally distributed among all stages and there are differences in the distribution of the items

in the various versions of the IDI. The following table shows how the items are distributed in the third version of the IDI (Paige et al. 2003: 470-472):

Table 2: Distribution of items in IDI v. 3

DMIS Stage	Number of items in IDI
Denial	7
Defense/Polarization	6
Reversal	9
Minimization	9
Acceptance	5
Adaptation (Cognitive & Behavioral)	9
Cultural disengagement	5

The IDI is not freely available, but can be bought from the official website for research and individual and group evaluation purposes. To legitimately explain and understand the statistical make-up of the IDI, it is necessary to complete the IDI qualifying seminar. There are now over 2400 IDI Qualified Administrators worldwide.[3] The different DMIS stages are explained in more detail below and illustrated with sample items from the IDI.

Denial

Within this particular stage cultural differences are not experienced or recognized at all. People's own cultural values are considered the only true and valuable experience of reality. Characteristic for people within the stage of *Denial* is also a tendency to avoid cultural differences and express a disinterest to them (Bennett 2004: 63-64). The following sample items of the IDI are illustrative for *Denial* of cultural difference: "society would be better off if culturally different groups kept to themselves" and "I do not like to socialize very much with people from different cultures" (Paige et al. 2003: 470).

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[3] Since I am not an IDI Qualified Administrator, the information on the IDI and the sample statements presented in this thesis are thus taken from articles by other researchers.

Polarization or Defense & Reversal

In the second stage on the DMIS continuum, Polarization or Defense, people tend to see cultural differences, but in black and white terms. They tend to see a distinction between "us versus them"; "us" representing a superior culture. In their extremity, cultural differences are not seen as a positive occurrence in a society, and often members of racist groups are considered to fall within this stage (Bennett 2004: 64). Within the IDI, *Defense* or *Polarization* items are formulated as: "my culture's way of life should be a model for the rest of the world" and "people from other cultures are not as open-minded as people from my own culture" (Paige et al. 2003: 470). However, sometimes when people spend a long time living in another culture, the "us versus them" orientation can be reversed as they tend to romanticize the host culture and overtly criticize their own culture. Bennett has thus named this development *Reversal*. At this stage, which is a variation of *Defense*, cultural values of the "other" are considered to be superior. Even though this suggests a critical attitude toward one's own culture, the attitude is mainly based on cultural stereotypes (Bennett 2004: 65). Another example from the IDI, "people from other cultures are generally lazier compared to people from my culture," tests *Defense* (Franklin & Spencer-Oatey 2009: 283). This item it is also asked the other way around, thereby reflecting *Reversal*.

Minimization

At the stage of *Minimization* of cultural differences, people tend to overestimate similarities between cultures. Cultural differences are neutralized in familiar categories and "elements of one's own cultural worldview are experienced as universal" (Bennett 2004: 65). People may apply universal values too often to emphasize a common humanity. Examples of *Minimization* items within the IDI include "people are the same despite outward differences in appearance" and "I am sick and tired of hearing all the time about what makes people

different; we need to recognize that we are all human beings, after all" (Paige et al. 2003: 470). *Minimization* items are quite easily identifiable within the IDI; Franklin and Spencer-Oatey, for example, quote one item which states that "technology is creating a single world-wide culture" (2009: 283). Altshuler, Sussman and Kachur mention other items: "there are natural and universal values and norms to which all people on earth ultimately must be held responsible" and "people are the same; we have the same needs, interests, and goals in life" (2003: 393). According to Bennett, the issue that needs to be resolved at *Minimization* to move to the more ethnorelative stages "is the recognition of your own culture or the ability to experience culture as a context" (2004: 67).

Acceptance

The first ethnorelative orientation is *Acceptance* of cultural differences. At this stage people are able to identify their own culture in relation to others, in a bigger cultural context. They also value other cultures as being equally complex and are able to construct culture-general categories to organize cultural differences. People can take an ethnorelative approach by recognizing cultural differences in values such as what is considered to be good or bad. People at *Acceptance* express a willingness to learn how to adapt to cultural differences (Hammer 2009: 209). According to Bennett, the main issue that remains to be resolved to move from *Acceptance* towards *Adaptation* is to become able "to take the perspective of another culture without losing your own perspective" which could occur in the next stage (Bennett 2004: 68). Items within the IDI that represent the stage of *Acceptance* are "I generally enjoy the differences that exists between myself and people from other cultures" and "it is appropriate that people from other cultures do not necessarily have the same values and goals as people from my own culture" (Paige et al. 2003: 471). Altshuler, Sussman, and

Kachur also quote the item "it is appropriate that some basic ideas about good and bad differ from culture to culture" (2003: 393).

Adaptation (Cognitive & Behavioral)

Hammer states that *Adaptation* "involves the capability of shifting perspective to another culture and adapting behavior according to cultural context" (2009: 209). People at this stage possess a very wide range of cultural frameworks as well as the ability to shift between them and serve as a cultural bridge (Hammer 2009: 209). The challenge within *Adaptation* is to hold some cultural authenticity while shifting between other cultural perspectives (Bennett 2004: 69). Paige et al. in their analysis of the IDI in relation to the DMIS discovered two substages within *Adaptation* in the IDI items. The first substage that they distinguished is *Cognitive Adaptation* or Empathy as "the ability to shift perspective into alternative worldviews" (Paige et al. 2003: 471). Sample items of *Cognitive Adaptation* include "I feel there are advantages in identifying with more than one culture" and "in evaluating an intercultural situation, it is better to be able to draw from more than one cultural perspective" (Paige et al. 2003: 472). Consequently the more advanced substage that was found, is *Behavioral Adaptation* or Pluralism, which entails a more comprehensive understanding of the different cultural perspective and adapt to them without much conscious effort (Paige et al. 2003: 471). Items of *Behavioral Adaptation* in the IDI are, for example, "although I am member of my own culture, I am nearly as comfortable in one or more other cultures" and "when I come in contact with people from a different culture, I find I change my behavior to adapt to theirs" (Paige et al. 2003: 472).

Integration

The final stage of the DMIS, though no longer part of the IDC, includes people who are bi- or multicultural. Bennett also states that this does not necessarily mean an improvement of intercultural competencies compared to the stage of *Adaptation* (2004: 69). Within *Integration* of cultural difference the shifting between different cultural frameworks is internalized and not a conscious activity, while accepting that your own identity is not based in one particular culture (Bennett 2004: 69). Bennett explains that "people then construe their identities at the margins of two or more cultures and central to none" (Bennett 2004: 69). They do not necessarily favor one or more culture to which they belong to over the other, but they use whichever cultural framework that is most appropriate for a particular situation and have accepted their multiculturality. As stated before, this cultural marginality is now only measured in the separate dimension Cultural Disengagement.

Previous findings of IDI testing among American exchange students

The Intercultural Development Inventory (IDI) is often used for groups of exchange students to measure their development of intercultural competencies and consequently the effectiveness of the study abroad programs in which they participated. As the IDI can be used to look at individual or group profiles, the results of the post-test (taken at the end of the exchange period) are sometimes used to design a more effective program or course for intercultural learning. The Georgetown Consortium Project, a multi-year study among approximately 1200 US American exchange students which ran from 2003 until 2005 used the IDI to find out what variables positively or negatively influenced students' development of intercultural competencies. The variables that were tested were: gender, academic major, prior language study, previous experience living in another culture, prior study abroad, program duration, enrolling in content courses in the target language, target language courses,

class composition, group mentoring on site, perceptions of cultural similarity/dissimilarity, student housing, time spent with host families, time spent with other US nationals, time spent with host nationals (Vande Berg, Connor-Linton, & Paige 2009). The scores of the exchange students were compared to a group of 138 control students who did not study abroad during the period the research was conducted (2003-2005). The target languages which the American students studied or had studied for a good part also determined which countries they would go to for their exchange. These languages were Arabic, Chinese, French, German, Japanese, Russian, and Spanish (Vande Berg, Connor-Linton, & Paige 2009: 5).

Adriana Medina-Lopéz-Portillo looked at the relation between program duration and IDI gain. She found that two thirds of the ten American participants progressed to the next DMIS stage after a sixteen week study abroad program in Mexico City (2004: 185-186). These results were contrasted with the IDI results of eighteen American participants who studied abroad in Taxco (Mexico) for seven weeks. Only one third of these students progressed to the next DMIS stage, suggesting that a longer duration of the study abroad program results in more development of intercultural sensitivity (Medina-Lopéz-Portillo 2004: 185). The ideal length of the exchange period to gain the highest change score between the pre- and post-IDI is a period of 13-18 weeks (one semester) according to the study of Vande Berg, Connor-Linton, & Paige (2009: 56). Students who participated in a program longer than 18 weeks did not show significant IDI gains (Vande Berg, Connor-Linton, & Paige 2009: 56).

Research question 1

Gender is one of the statistically significant variables in the above mentioned Georgetown Consortium project. The IDI scores of female students increased much more than those of male students during their exchange period (Vande Berg, Connor-Linton, & Paige 2009: 18, 51). Not much research has yet been done on gender differences in the development of

intercultural sensitivity. However, studies on differences in communication styles between men and women in a medical setting suggest that women communicate more effectively (Sprague-Zones, 1995 in Altshuler, Sussman, & Kachur, 2003: 398). A comparison of the IDI scores of the male and female students in the Georgetown Consortium project shows that the female students scored higher on intercultural sensitivity and this suggests that they will also be able to communicate more effectively in cross-cultural situations. The male students sometimes even retreated along the DMIS scale (Vande Berg, Connor-Linton, & Paige 2009: 51). The mean IDI pre-test score for female students was 97.19, while the post-test indicated a progress to 100.94. This is only a small step, as an IDI score of 100 is right in the center of the Minimization stage, which ranges from scores 85-114.99. The mean IDI pre-test score for male students was 94.31, while the post-test indicated a small regression to 93.81 (Vande Berg, Connor-Linton, & Paige 2009: 51). A comparison between the pre- and post- IDI results of the male and female students in the corpus of this thesis will show whether gender is a significant variable in the development of intercultural sensitivity for this corpus as well. The corpus consists of 249 American exchange students who studied for a semester in France, Spain, the Netherlands and Ireland between 2007 and 2011 (more details on the participants can be found in the next chapter, Method). The first hypothesis presents the expected answer to the first research question: are there differences in gender in the development of intercultural competences within American exchange students (of the corpus) over the course of a semester? Since the female students in the Georgetown Consortium project showed significant IDI gain where the male students did not, my hypothesis is as follows:

Hypothesis 1: Female students will show significantly more progress in their IDI scores than male students.

Research question 2

The second research question addresses the comparison between the IDI results in the different host countries: are there differences in the development of intercultural competences between American exchange students (within the corpus) in the four different countries over the course of a semester? The IDI data that were provided by the American international exchange organization not only included gender information, but also information about in which country the exchange took place. The organization selected the results from four different European countries: France, Spain, the Netherlands and Ireland. Significant differences in the IDI scores could be attributed to the host country or show that a different kind of student, either more or less sensitive to cultural differences, would opt to study in Ireland or in France.

The American exchange students participated in a similar culture course offered by the exchange organization in all countries, since it is in this course that the students take the IDI at the beginning and at the end of the semester. The course is made up of culture specific and culture general elements. In addition to the IDI, the American exchange students in this study's corpus were, for example, also confronted with other self-reflective test instruments such as the Kolb Learning Style Inventory (LSI) and the Cultural Detective® during the culture course. These aspects of the course are determined by the head office of the organization in the United States. Since this is one factor the American exchange students have in common, it would thus also be interesting to find out if there are significant differences in the progress of intercultural competencies between the American exchange students at the different locations. If there are, could this be explained by the country where the exchange took place or by the differences in the culture course. Since this study only analyzes the IDI scores and not the content of the course, not much can be said on the quality of the course. It is thus more likely that another variable could be involved.

The Georgetown Consortium project explored differences between host countries with the variable *perceptions of cultural similarity/dissimilarity*. In addition to the IDI, the exchange students in this study also rated their host country on a scale from very similar to very dissimilar to the United States. American exchange students in the Georgetown project showed the greatest IDI gain if their exchange took place in a culture that they rated as "dissimilar" to their own culture. Statistically significant IDI gains were also found for the rating "somewhat dissimilar," but not for the "very similar", "similar", or "very dissimilar" cultures from their own culture (Vande Berg, Connor-Linton, & Paige 2009: 22). I expect Ireland and the Netherlands to be rated as fairly similar to the US, because in Ireland people speak the same language and in the Netherlands many people also speak English and the classes of the American exchange students are also taught in English. I expect the French and Spanish culture to be perceived as more dissimilar to US culture. The scores of the five different countries, the USA, Ireland, the Netherlands, France and Spain in Geert Hofstede's research on cultural dimensions in the different countries seem to confirm that these four countries are "somewhat similar" or "dissimilar" to the USA. Hofstede studied multiple countries in his IBM study of originally four dimensions: Power Distance, Individualism versus Collectivism, Masculinity versus Femininity, Uncertainty Avoidance. A fifth dimension, Long Term Orientation, was added later. The results for the above mentioned five countries are shown in Graph 1.

Graph 1 Hofstede's dimensions
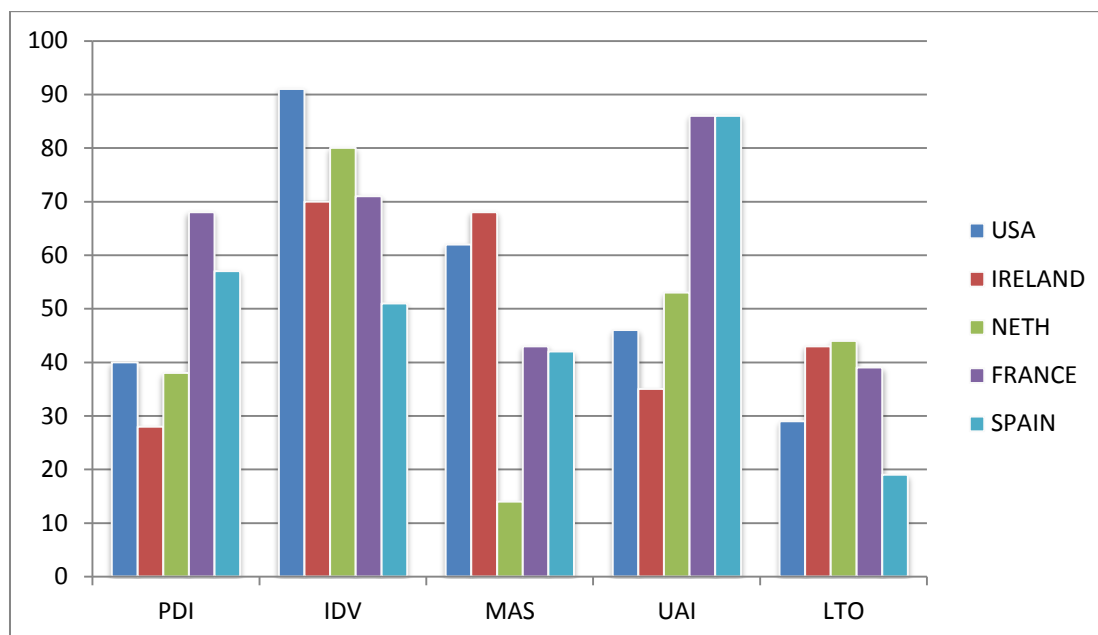
This graph shows that on most cultural dimensions, except for Masculinity, Ireland, the Netherlands and the USA seem to be close to each other in Hofstede's ranking. On most dimensions, except for Individualism and Long Term Orientation, France and Spain show similar results in Hofstede's ranking. However, the differences in the scores of France and Spain compared to the USA are much larger on most dimensions than the differences between Ireland and the Netherlands compared to the USA. As the cultures of France and Spain appear to be less similar to US culture in a cultural comparison of Hofstede's dimensions than Ireland and the Netherlands, my hypothesis is as follows:

Hypothesis 2: American students in France and Spain will show significantly more progress in their IDI scores than American students in Ireland and the Netherlands.

3 Method

Design

The aim of this study is to find out whether gender influences American students' development of intercultural competencies and whether the host country has any influence on the development of these intercultural competencies. The Intercultural Development Inventory (IDI) was used to measure the students' intercultural competencies. An American international educational exchange organization provided and selected the IDI results of a group of American students who studied for one semester in France, Spain, the Netherlands and Ireland. Information on specific locations was not revealed.

In this study the independent variables are gender and (host) country. Independent variables in statistical studies are variables that are more or less consistent and can be controlled by the researcher. The dependent variables are the pre- and post-IDI scores and the change score, because these are the variables that this study intends to measure and they are expected to depend on gender and on host country.

Since the development of intercultural competencies is likely to be determined by multiple variables, a Univariate Analysis of Variance (UNIANOVA) was conducted using the statistical analysis program SPSS 17.0. This particular analysis allows for a simultaneous test of a statistically significant difference between more than one group on one dependent variable. Both hypotheses could thus be studied using this statistical model, the UNIANOVA.

The results of the UNIANOVA thus show whether the two variables (gender and host country) are significant. To test if there is a statistically significant difference between the change score of the American students in the different countries, a Post Hoc test was conducted. Scheffe's Post Hoc test provided a table in which the IDI change scores of every country is separately calculated against the three other countries to see if there are statistically significant differences between the countries. Since gender was not a variable that was studied

for this hypothesis, the results of the different countries include the IDI scores of male and female students and those IDI results of which the gender was unknown, unless otherwise stated.

Participants

To answer the research questions on the gender differences in the IDI results and the differences between the IDI results of the different European countries, the test results of a total of 249 American undergraduate university students were used. These American students participated in an international exchange program for one semester between the Fall of 2007 and the Fall of 2011 via the international educational exchange organization that provided the IDI data for this thesis. The results from France, Spain and Ireland are a combination of four semesters, while the results from the Netherlands are derived from three semesters. The students in this corpus came from several different universities in the United States, from the east to the west coast. The corpus consists of 50 male students and 187 female students.

As mentioned in the Theoretical Framework, the students in the corpus followed a course during the exchange period designed by the international education organization which consists partly of culture specific elements as well as some culture general elements, such as education on intercultural communication. Every semester a new group of students who participate in the exchange organization's culture course take the pre- and post-IDI. Students receive academic credit for enrolling in this course, but taking this course is voluntary. Consequently, not all American exchange students at a certain location take this course. The students who did not take the course also did not take the IDI. The demographics thus represent the participants of the course in a particular country.

Table 3 Demographics of the corpus:

Host country	Number of students tested	Number of male students	Number of female students	Gender unknown
France	32	5	25	2
Spain	96	16	76	4
Ireland	66	13	50	3
the Netherlands	55	16	36	3

The demographics of this corpus reflect the general trend that there are many more American female students than male students who participate in international exchange programs (Goldstein & Kim 2005: 266). Since gender is one of the demographic items in the IDI that is not mandatory to fill in, for some IDI results the gender is unknown.

Procedure

At the beginning and at the end of the exchange period in their host country the students were asked to fill in the IDI test online in their own time (but within a week). The results were then sent to the head office of the international education organization in the United States, where an IDI qualified administrator calculated the test results and sent the individual and group profile reports to the trainer/teacher of the culture course in the host country. The exchange organization has provided the results of these four countries, because they offered the possibility of a comparison between male and female students as well as a comparison between several European countries. The tests results were provided in separate Excel files per country, per semester. Each Excel file contained a list of the number of students that took the IDI test in that semester followed by a column of their pre-IDI score, their post-IDI score, the change score and, finally, their gender. Male students were given the number 1; female students were given the number 2. These numbers for gender were also used in SPSS. Those students who did not fill in their gender were numbered as 9. To allow the program to calculate the results for the countries, they were numbered as follows: 1. France, 2. Ireland, 3.

The Netherlands, 4. Spain. Since each semester a new group of students takes the IDI test, in the conversion of the data into SPSS the division per semester was eliminated and divided the students simply by country.

4 Results

The results for both hypotheses were computed by means of a Univariate Analysis of Variance test in the statistical analysis program SPSS 17.0. The dependent variable in these UNIANOVA's is the change score. Additional UNIANOVA's were conducted to look for significant differences in gender for the dependent variables pre-IDI score and post-IDI score. To explain the IDI results of all participants in more detail, other tables present the mean IDI scores of American male and female exchange students in the different countries. The second hypothesis was further analyzed with Scheffe's Post Hoc test. The dependent variable for both hypotheses is the IDI change score, because the test shows whether or not gender or the country of exchange significantly influences the IDI change score. The significance level is 0.05, any number below that means the results are statistically significant. The complete tables are presented in the appendix. The conversion of the IDI scores to the different DMIS stages is provided in the Theoretical Framework (p. 12).

Testing hypothesis 1

The independent variable gender is tested in the calculations for the first hypothesis. The expectation for the corpus in this study is that female students will show significantly more progress in their IDI scores than male students. The following table presents the results of the UNIANOVA which tested whether the effect of the variable gender is statistically meaningful for progress in IDI scores. The final column shows the outcome of the significance test on the change score of all male and female IDI results in all four host countries.

Table 4.1 Gender test results. Dependent variable: change score

	Type III Sum of Squares	df	Mean Square	F	Sig.
GENDER	1.387	1	1.387	.007	.934

The hypothesis is not confirmed since Table 4.1 shows that the difference in the change score on the gender variable is not significant F (1, 229) = 1.387, p = .934. American female students in the four tested European countries thus do not show significantly more progress in their IDI change score than American male students in the four tested European countries.

The following tables present the mean IDI results in all four host countries separated by male and female students.

Table 4.2 IDI results France

France		N	Mean	Std. Deviation
Male	Pre-IDI	5	88.36	15.83
	Post-IDI	5	97.91	18.07
	Change	5	9.55	14.06
Female	Pre-IDI	25	92.15	17.22
	Post-IDI	25	101.56	18.78
	Change	25	8.69	12.00

In France the female change score average is 8.69 (SD = 12.00) while for male students M = 9.55 (SD = 14.06). Compared to the American female students at the other European locations, the female exchange students in France demonstrate the greatest IDI gain. Even though the female students show less progress in their change scores than the male students, they started out at a higher level of cultural sensitivity, as their pre-IDI scores were higher: pre-IDI M = 92.15 for female students as opposed to pre-IDI M = 88.36 for male students in France. American female students in France thus show somewhat more sensitivity to cultural differences than American male students in France, even though all students remain within the same DMIS stage of Minimization.

Table 4.3 IDI results Spain

Spain		N	Mean	Std. Deviation
Male	Pre-IDI	16	85.84	10.57
	Post-IDI	16	94.14	12.70
	Change	16	8.30	12.38
Female	Pre-IDI	76	92.21	14.84
	Post-IDI	76	98.50	12.77
	Change	76	6.29	14.44

American male exchange students in Spain show a higher mean change score ($M = 8.30$) than American female exchange students ($M = 6.29$). The mean pre-IDI result for American male students of all European host countries is the lowest in Spain ($M = 85.84$, $SD = 10.57$). This IDI score is just at the border of the DMIS stages Defense and Minimization.

Table 4.4 IDI results Ireland

Ireland		N	Mean	Std. Deviation
Male	Pre-IDI	13	90.40	16.11
	Post-IDI	13	94.68	13.30
	Change	13	4.27	13.13
Female	Pre-IDI	50	96.10	16.08
	Post-IDI	50	99.70	15.24
	Change	50	3.60	15.03

In Ireland the female mean of the change score ($M = 3.60$, $SD = 15.03$) is much lower than in France and Spain. For the male students the mean of the change score ($M = 4.27$, $SD = 13.13$) again is higher than the female students in Ireland but lower than the American male and female students in France. Similar to the students in France and Spain, the female students in Ireland overall showed higher pre- and post- IDI scores (pre-IDI $M = 96.10$ to post-IDI $M = 99.70$) than the male students (pre-IDI $M = 90.40$ to post-IDI $M = 94.68$). Still, this progress only occurs within the same DMIS stage: Minimization

Table 4.5 IDI results the Netherlands

The Netherlands		N	Mean	Std. Deviation
Male	Pre-IDI	16	87.86	16.57
	Post-IDI	16	86.20	14.99
	Change	16	-1.65	20.31
Female	Pre-IDI	36	95.08	13.74
	Post-IDI	36	97.81	15.74
	Change	36	2.72	12.36

American female students in the Netherlands overall did progress more than American male students did, who actually showed a regression in their change scores (M = -1.65, SD = 20.31). Even though the mean change score of the female students in the Netherlands displays the lowest progress compared to the female students in the other European countries with a mean score of 2.72 (SD = 12.36), their pre- and post-IDI test scores were still much higher than the male students in the Netherlands (female pre-IDI M = 95.08, post-IDI M = 97.81 compared to male pre-IDI M = 87.86, post-IDI M = 86.20). The male students in the Netherlands hover slightly above the border of the DMIS stages Defense and Minimization.

For the male and female students in all host countries, the standard deviation is quite high. This indicates that there is much variation in the IDI results. Even though the group on average does not move beyond the DMIS stage Minimization, this does not mean that not one student does.

In absolute numbers the tables demonstrate that in France, Ireland and Spain the mean change score is higher for male students than for female students, while the male students in the Netherlands show a regression in their IDI scores. This could thus partly explain why the difference in the change score between male and female students in all four countries combined is not significant. Nevertheless, American female students do show higher pre- and post-IDI results in all host countries than their male counterparts. As the pre-IDI scores for male students are lower than female students in all countries, it seems that the American male

students have most to gain, which could explain why their IDI change score is higher than the IDI change score of American female students in three of the four countries. As the absolute numbers show large differences between male and female students within the separate dependent variables of the pre- and post-IDI score, gender might be of significant influence for these variables. Two additional UNIANOVA's calculated whether gender is statistically meaningful for the pre- and post-IDI results.

Table 4.6 Gender test results. Dependent variable: pre-IDI score

	Type III Sum of Squares	df	Mean Square	F	Sig.
GENDER	1059.138	1	1059.138	4.592	.033

Table 4.7 Gender test results. Dependent variable: post-IDI score

	Type III Sum of Squares	df	Mean Square	F	Sig.
GENDER	1207.651	1	1207.651	5.536	.019

These UNIANOVA's in Table 4.6 and 4.7 indeed show that there are significant gender differences within the pre- and post- IDI results. For the pre-IDI $F (1, 229) = 4.592$, $p = .033$, for the post-IDI $F (1, 229) = 5.536$, $p = .019$. In this corpus, gender thus is of no significant influence on the development of intercultural competencies, even though male and female students do show significant differences in the test scores before and after their exchange period. This means that there are meaningful differences in gender in the level of intercultural sensitivity at the beginning and at the end of the exchange period. The development of sensitivity to cultural differences is similar for both male and female American exchange students in this corpus.

Testing hypothesis 2

The second hypothesis discusses the differences in the development of intercultural competencies in the different host countries. Hofstede's ranking suggests that France and Spain could be categorized as more dissimilar to the United States than Ireland and the Netherlands. Therefore, the expectation is that American students in France and Spain will show significantly more progress in their IDI scores than American students in Ireland and the Netherlands.

Table 5.1 IDI gain in host countries

	Dependent variable: Change score			
Gender	**Country**	**Mean**	**Std. Deviation**	**N**
Total (male and female)	France	8.84	12.11	30
	Spain	6.64	14.06	92
	Ireland	3.74	14.56	63
	the Netherlands	1.38	15.17	52
	Total	4.99	14.35	237

The absolute numbers of the mean change scores in Table 5.1 do support the hypothesis. The mean IDI change score in Ireland for both female and male students is 3.74 ($SD = 14.56$) and in the Netherlands it is 1.38 ($SD = 15.17$). In France and in Spain the mean IDI change score is much higher. American students in France show the most progress with a mean change score of 8.84 ($SD = 12.11$). The students in Spain still progress well within the Minimization stage with a mean change score of 6.64 ($SD = 14.06$). However, a quick look at the average post-IDI scores at the different locations shows that a higher change score does not automatically mean that the students scored higher on their pre- or post-IDI's at those locations. Moreover, all students in the four host countries on average only move within the Minimization stage.

The following table shows whether host country is statistically meaningful for the students' development along the DMIS scale.

Table 5.2 Host country test results. Dependent variable: change score

	Type III Sum of Squares	df	Mean Square	F	Sig.
COUNTRY	1473.378	3	491.126	2.400	.069

Table 5.2 shows that country is not a statistically significant variable ($F_{(3, 229)}$ = 2.400, p = 0.069) on the IDI change score of the American male and female exchange students. This suggests that the country where the exchange takes places has no meaningful effect on the IDI change score. However, since it is close to being significant (α = 0.05), it is interesting to make a comparison between the four different countries and find out if there are significant differences between two or more particular countries on the IDI change score. Scheffe's Post Hoc test in SPSS 17.0 does exactly that. It tests whether the difference in the change score in each host country is statistically significant compared to the other three host-countries. The results of the significance test is shown in the final column of Table 5.3 on the following page.

Since Levene's test was statistically non-significant, $F_{(7, 229)}$ = 1.159, p = .328, this indicates homogeneity of variances, which confirms that the use of Scheffe's Post Hoc test is legitimate (Appendix: Table VI). Homogeneity of variance means that "there is an approximately equal amount of variability in each set of scores" (Allen & Bennet 2010: 112).

Table 5.3 Scheffe's Post Hoc test for host country

(A) COUNTRY	(B) COUNTRY	Mean Difference (A-B)	Std. Error	Sig.
France	Ireland	5.0955	3.17292	.463
	the Netherlands	7.4562	3.27939	.163
	Spain	2.1925	3.00728	.912
Ireland	France	-5.0955	3.17292	.463
	the Netherlands	2.3607	2.67994	.855
	Spain	-2.9030	2.33911	.673
the Netherlands	France	-7.4562	3.27939	.163
	Ireland	-2.3607	2.67994	.855
	Spain	-5.2637	2.48162	.215
Spain	France	-2.1925	3.00728	.912
	Ireland	2.9030	2.33911	.673
	the Netherlands	5.2637	2.48162	.215

Scheffe's Post Hoc test, presented in Table 5.3, shows that the differences in the IDI change scores between the four countries are not significant. For improving intercultural competencies, there is no meaningful difference in which host country the students go on exchange. Though, as could be expected from the absolute numbers, the difference between France and the Netherlands is the closest to being statistically significant ($p = .163$).

5 Analysis

Hypothesis 1

The results of the difference in the IDI change score between American male and female exchange students in the Netherlands, Ireland, Spain and France were not significant and the hypothesis is therefore not confirmed. However, within the pre- and post-IDI results of male and female students, respectively, a significant difference was found. The male students showed lower IDI results on the pre-test and the post-test than female students, meaning that they already started at a somewhat lower level of intercultural competencies and also do not reach the same level of intercultural sensitivity. However, the female students' development of intercultural competencies was not significantly greater than the male students' development. This is an interesting result, considering that earlier research, such as the Georgetown Consortium project, did find significant differences in the improvement of intercultural competencies between American male and females exchange students. Since the absolute numbers of the individual countries show that the Netherlands is the only country in which the change score of the female students is higher than the male students, it is less of a surprise that the hypothesis is not confirmed.

American male exchange students overall started out at a lower level of intercultural competencies than the female exchange students. The Georgetown Consortium project found very little IDI to no gain in the control group who did not study abroad (Vande Berg, Connor-Linton, & Paige 2009: 18). This suggests that they have very little opportunity to develop their intercultural competencies other than in a classroom-based setting. Before studying abroad the students have most likely than also only learned intercultural competencies in class. Gender differences in learning styles could possibly explain the discrepancy between the pre-IDI scores of male and female students.

Karen Kangas Dwyer looked at the relationship between communication apprehension and learning style preferences. She states that high communication apprehension has been shown to relate to communication avoidance, negative perception by others, and negative academic consequences (Dwyer 1998: 137). Dwyer found general gender differences in preferences for learning styles in low and high communication apprehensive male and female students. A particular learning style is consequently related to a particular teaching style (Dwyer 1998: 137). With a good match the student will learn more effectively. This could influence both academic achievement as well as communication skills. Dwyer found that "women, in general, tended to prefer a collaborative sharing of ideas and talents, and prefer a greater variety in teaching methods than men" (1998: 146). Men, on the other hand, were found to prefer an active experimenting style, especially at a younger age (high school and college students). This is in line with Anna Tatarintseva's findings of secondary school students, which comprise that male students are "more nonconforming and peer motivated than their female classmates and tend to learn less by listening. Female students, on the other hand, tend to be auditory, authority-oriented, and better able to sit passively at a conventional classroom desk than male students" (Tatarintseva 2002: 65). If male students thus learn better from actual practical experiences, this could explain why their pre-IDI test is lower than the female students in all four European countries. During the exchange period male students might acquire a sensitiveness to cultural differences more effectively than in a classroom-based setting. Since female students prefer a greater variety in teaching styles than male students, it could explain that they score higher on the pre-IDI test than male students, but not necessarily show more development on intercultural competencies than male students.

In absolute numbers male students show more progression in their IDI change scores than American female students in France, Ireland and Spain. That the American male students in the Netherlands did not improve on their intercultural competencies compared to the

American female students in the Netherlands could possibly be explained by a trend within the Dutch school and university system. Overall in the last decade, there has been a decline within the school performance of boys compared to girls in pre-university education in the Netherlands (Coenen, Meng, van der Velden 2011). Coenen, Meng, and van der Velden identified several skills that are considered increasingly important in preparation for college or university, such as working independently, taking initiative, communicative skills, working together, gathering information, planning (2011: 45-46). These are skills which girls perform better than boys and they are considered to be able to develop them more thoroughly than boys (Coenen, Meng, van der Velden 2011: 45-46). Most likely, these are skills which the colleges and universities expect from their students, but are possibly not taught in a manner suitable for all students. It is, of course, difficult to find out whether international exchange students at college or university level experience much of this trend. However, the American male exchange students might not be supported enough in their participation within the courses of Dutch universities to match their preferred learning style to develop their intercultural competencies. Since the exchange students in this corpus take courses at the Dutch universities, in addition to the culture course offered by the exchange organization, this could possibly explain why male exchange students in the Netherlands are not learning intercultural communicative competencies effectively.

It is important to note, though, that the IDI results in the corpus show that the progress of both male and female students is within the DMIS stage Minimization, in which people tend to overestimate similarities between different cultures. This stage is also still part of what Bennett defined as an ethnocentric worldview, meaning that one's own culture is considered to be superior. Bennett states that the general goal of training intercultural communication is the DMIS stage Adaptation, in which people are able to move between different cultural perspectives both cognitively and behaviorally (Bennett 2004: 68, 69). On average, this goal

is thus not achieved by the American exchange students after one semester abroad. It is also possible that the stages as described in the DMIS are too broad and Hammer's adaptation of the model with the Intercultural Development Continuum is not enough of an adjustment for the model to be effective for measuring small improvements of intercultural competencies among foreign exchange students. The way the DMIS stages are set up, any movement within the same stage suggests that the difference in someone's practical application of intercultural competencies is probably negligible.

Hypothesis 2

The statistical results showed that the second hypothesis is not confirmed either, as the comparison in Scheffe's Post Hoc test indicated that there is no significant difference in the students' IDI change score of one country compared to the other three. Even though there are of course differences in absolute numbers, country is not a significant variable either in the pre- and post-IDI results. While a particular host country might not be of meaningful influence on IDI gain, there are still differences in the IDI results of the students in the average absolute numbers. Both male and female students in France and Spain show a higher IDI change score than the American students in Ireland and the Netherlands.

One possible explanation for this could be the interpretation of perceived cultural differences between the host country and the United States. As explained in the Theoretical Framework, the Georgetown Consortium project found significant IDI gains for American students whose exchange took place in a culture they perceived as "dissimilar" or somewhat "dissimilar" to their own culture (Vande Berg, Connor-Linton, & Paige 2009: 22). No significant IDI gains were found for "very similar", "similar", or "very dissimilar" cultures from their own culture (Vande Berg, Connor-Linton, & Paige 2009: 22). The graph with Hofstede's dimensions showed that Spain and France would more likely be rated as somewhat

dissimilar by American students, while Ireland and the Netherlands would probably be rated as quite similar. If the exchange takes place in a culture that is more dissimilar, the students are more often confronted with cultural differences and could therefore also develop more sensitivity towards them as well as find methods for dealing with them. It is interesting to note, though, that the students in France and Spain had a lower pre-IDI mean result than the students in Ireland and the Netherlands and thus also had most to gain. As the results for the countries in this thesis is not significant, it appears that the similar/dissimilar ratings of the countries with Hofstede's dimensions might be too arbitrary. A country could be perceived as being more similar or dissimilar than Hofstede's dimensions would suggest.

The fact that the American students in France in particular have the highest post-IDI scores of the four European countries, could be explained by the fact that they have the lowest number of male exchange students in the corpus. Even though the first hypothesis found no significant differences in the change score between male and female students, female students overall had higher mean results on the pre- and post-IDI.

Differences in the absolute results between the countries could also be explained by the differences in the culture course which the students participated in throughout their semester abroad. Even though the culture general elements (as described in the Theoretical Framework) are the same in every host country, since they are determined by the international exchange organization, the course is taught by a different teacher in each country and the course content is understandably not completely the same as the culture specific elements are adapted. Language and culture specific examples vary for each of the four host countries. However, as host country is not a significant variable, the differences in the content of the culture course are not of meaningful influence on differences in the development of cultural sensitivity.

Additionally, the students' major could have some influence on their sensitiveness to cultural differences. The Georgetown Consortium project did find statistical significant IDI gains for students of humanities/social sciences compared to students of other majors and the greatest numerical IDI increase in Engineering students (Vande Berg, Connor-Linton, & Paige 2009:19). Unfortunately information about the field of study of the students in this corpus is not available.

Though not significant, differences in the pre-IDI results between the different countries could perhaps also be affected by different motives for choosing a particular country for an exchange period. Some of these motives could be meaningful variables that could not be discussed in this study, simply because this information was not made available and it is not mandatory to reveal to complete the IDI. Certain countries might, for example, attract a certain type of student, either more or less perceptive of cultural differences and/ or willing to learn them. Some American students might also choose a certain country because of their family heritage. If this is the case, they might have already travelled there or at least somehow have been in contact with the host-culture, which might diminish the perception of cultural difference, but could also cause the students to overestimate their intercultural competencies. This is presented in the IDI profile report which includes the actual IDI score and the perceived IDI score. This perceived orientation indicates the place along the DMIS scale where a person rates his or her own capability of understanding cultural differences and applying appropriate behavior. The difference between the two is called the Orientation Gap and this can either indicate an overestimation or an underestimation of one's level of intercultural competence (sample IDI profile, Hammer 2009: 5).

Other variables not discussed in this study, but probably also influence the development of intercultural competencies, are the students' previous experience with studying or living abroad, living with a host family, and the amount of contact with US

nationals, international students and/or host nationals. Furthermore, every semester there might also be one or two "double exchange" students within the group of American students. These are often Asian exchange students who complete their degree in the US, but participate in an additional exchange program by studying a semester in a European country, for example. Their country of origin is not the United States, but they have spent most of their lives living in yet another culture. The IDI results of these students cannot be distinguished from the group results, because information about the nationality and previous experience living in another country was not disclosed. However, the significance of their IDI results on the group average IDI results is probably negligible, because of the small number of these "double exchange" students.

6 Conclusion

This study aimed to find out if the variables gender and country of exchange have a significant influence on the development of intercultural competencies of American exchange students. The Intercultural Development Inventory (IDI) was used to assess the students' intercultural competencies along the scale of the Developmental Model of Intercultural Sensitivity (DMIS). The IDI data were provided by an American international exchange organization. The results consisted of the pre- and post-IDI scores of a group of 249 American exchange students who studied for one semester in France, Spain, the Netherlands and Ireland between 2007 and 2011. The statistical analysis in this thesis indicated that for the students in this corpus the country of exchange or gender has no meaningful influence on the development of intercultural competencies. Nevertheless, all American exchange students, on average, showed some progress in their IDI scores. This suggests that a study abroad experience is valuable for improving intercultural competencies for both male and female students and that it is of no significance in which of the four tested European countries the exchange takes place. The one particularly notable result, that American male exchange students in the Netherlands show a regression in their IDI scores, seems to be an isolated case in this study, although it fits with the trend found in the Georgetown Consortium project in which male students on average in all the tested countries combined showed a regression. However, for both male and female students the actual gain of competencies would appear to be very little in practice as the students on average did not move to another stage of the DMIS scale but remained within the stage of Minimization.

Limitations

The limited progress in intercultural competencies of exchange students might indicate a limitation of the IDI or DMIS, as the model seems too general to measure small improvements of sensitivity to cultural differences. The addition of a questionnaire or interview with more open questions could provide more detailed insight into the individual progress of exchange students. The high standard deviation of the mean IDI score indicates that there is considerable variation in the IDI scores among the students.

Furthermore, some would suggest that a third IDI, administered a few months after return to the home country could reveal the development of intercultural competencies more accurately. Medina-Lopéz-Portillo mentions this as a limitation to her study as well. Vande Berg has suggested that "students may not have internalized the intercultural learning that had begun during their sojourns, and that this learning may continue to occur during the months following their return home" (Medina-Lopéz-Portillo 2004: 191).

Even though this study would not have been possible without the support of the American exchange organization that provided the IDI results, this thesis was at the same time somewhat limited by the restricted access to the data. The selection of the IDI data, the countries and semesters, was made by the international exchange organization.

Other limitations of this study are the sample size and the fact that all host countries were Western European countries. A study of the development of intercultural competencies American exchange students in Asian or Latin American countries might reveal a different trend.

Suggestions for further research

As this thesis could only study the influence of two variables on the development of intercultural competencies, further research could expand on this and include more variables

as was done in the Georgetown Consortium project (Vande Berg, Connor-Linton, & Paige 2009). In addition, a comparison could be made between the development of American and European exchange students.

A more detailed analysis of the content and quality of the culture course and how to deal with different learning and teaching styles might also be helpful for making the course more effective to help students gain more intercultural competencies.

Differences between male and female students in acquiring intercultural competencies can also only partly be explained by differences in learning and teaching styles. Further research could aim to find out why girls show slightly more sensitivity towards cultural differences and why they are said to communicate more effectively.

In addition to the actual orientation along the DMIS scale, the developmental orientation, the IDI also measures the perceived orientation. Often, the perceived orientation is much higher than the developmental orientation. In this case the person overestimates his or her level of intercultural competence. The difference between the two orientations is known as the orientation gap. Generally, the orientation gap in the pre-test is slightly larger than in the post-test. It could be interesting to see if there are differences in the size of the orientation gap, for example between men and women.

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Appendix

Table I Gender test results. IDI change score means

Descriptive Statistics (rounded up to two decimals)				
GENDER	COUNTRY	Mean	Std. Deviation	N
Male	France	9.55	14.06	5
	Ireland	4.27	13.13	13
	the Netherlands	-1.65	20.31	16
	Spain	8.30	12.38	16
	Total	4.20	15.85	50
Female	France	8.69	12.00	25
	Ireland	3.60	15.03	50
	the Netherlands	2.72	12.36	36
	Spain	6.29	14.44	76
	Total	5.21	13.96	187
Total	France	8.84	12.11	30
	Ireland	3.74	14.56	63
	the Netherlands	1.38	15.17	52
	Spain	6.64	14.06	92
	Total	4.99	14.35	237

Table II Gender test results. Dependent variable: change score

Tests of Between-Subjects Effects					
Dependent Variable: Change score					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1743.882[a]	7	249.126	1.218	.294
Intercept	3472.143	1	3472.143	16.971	.000
GENDER	1,387	1	1.387	.007	.934
COUNTRY	1473.378	3	491.126	2.400	.069
GENDER * COUNTRY	269.180	3	89.727	.439	.726
Error	46852.526	229	204.596		
Total	54505.918	237			
Corrected Total	48596.408	236			
a. R Squared = .036 (Adjusted R Squared = .006)					

Table III Total mean IDI results

IDI results distributed by gender and host country						
GENDER	COUNTRY		N	Mean	Std. Deviation	Std. Error Mean
Male	France	Pre-IDI	5	88.36	15.83	7.08
		Post-IDI	5	97.91	18.07	8.08
		Change	5	9.55	14.06	6.29
	Spain	Pre-IDI	16	85.84	10.57	2.64
		Post-IDI	16	94.14	12.70	3.18
		Change	16	8.30	12.38	3.10
	Ireland	Pre-IDI	13	90.40	16.11	4.47
		Post-IDI	13	94.68	13.30	3.69
		Change	13	4.27	13.13	3.64
	the Netherlands	Pre-IDI	16	87.86	16.57	4.14
		Post-IDI	16	86.20	14.99	3.75
		Change	16	-1.65	20.31	5.08
Female	France	Pre-IDI	25	92.15	17.22	3.44
		Post-IDI	25	101.56	18.78	3.76
		Change	25	8.69	12.00	2.40
	Spain	Pre-IDI	76	92.21	14.84	1.70
		Post-IDI	76	98.50	12.77	1.47
		Change	76	6.29	14.44	1.66
	Ireland	Pre-IDI	50	96.10	16.08	2.27
		Post-IDI	50	99.70	15.24	2.16
		Change	50	3.60	15.03	2.13
	the Netherlands	Pre-IDI	36	95.08	13.74	2.29
		Post-IDI	36	97.80	15.74	2.62
		Change	36	2.72	12.36	2.06

Table IV Gender test results. Dependent variable: pre-IDI score

Tests of Between-Subjects Effects					
Dependent Variable: Pre-IDI score					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	2094.007[a]	7	299.144	1.297	.253
Intercept	1053963.309	1	1053963.309	4569.305	.000
GENDER	1059.138	1	1059.138	4.592	.033
COUNTRY	434.691	3	144.897	.628	.597
GENDER * COUNTRY	38.700	3	12.900	.056	.983
Error	52821.509	229	230.662		
Total	2085248.737	237			
Corrected Total	54915.515	236			
a. R Squared = .038 (Adjusted R Squared = .009)					

Table V Gender test results. Dependent variable: post-IDI score

Tests of Between-Subjects Effects					
Dependent Variable: Post-IDI score					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	3057.627[a]	7	436.804	2.002	.056
Intercept	1180593.450	1	1180593.450	5411.945	.000
GENDER	1207.651	1	1207.651	5.536	.019
COUNTRY	988.407	3	329.469	1.510	.213
GENDER * COUNTRY	405.129	3	135.043	.619	.603
Error	49955.406	229	218.146		
Total	2311801.221	237			
Corrected Total	53013.034	236			
a. R Squared = .058 (Adjusted R Squared = .029)					

Table VI Levene's test for Scheffe's Post Hoc

Levene's Test of Equality of Error Variances[a]			
Dependent Variable:Change			
F	df1	df2	Sig.
1.159	7	229	.328
Tests the null hypothesis that the error variance of the dependent variable is equal across groups.			
a. Design: Intercept + GENDER + COUNTRY + GENDER * COUNTRY			

Table VII Scheffe's Post Hoc test

Multiple Comparisons						
Change						
Scheffe						
(I) COUNTRY	(J) COUNTRY	Mean	Std. Error	Sig.	90% Confidence Interval	
		Difference (I-J)			Lower Bound	Upper Bound
France	Ireland	5.0955	3.17292	.463	-2.8834	13.0743
	the Netherlands	7.4562	3.27939	.163	-.7904	15.7027
	Spain	2.1925	3.00728	.912	-5.3698	9.7548
Ireland	France	-5.0955	3.17292	.463	-13.0743	2.8834
	the Netherlands	2.3607	2.67994	.855	-4.3785	9.0998
	Spain	-2.9030	2.33911	.673	-8.7851	2.9791
the Netherlands	France	-7.4562	3.27939	.163	-15.7027	.7904
	Ireland	-2.3607	2.67994	.855	-9.0998	4.3785
	Spain	-5.2637	2.48162	.215	-11.5041	.9768
Spain	France	-2.1925	3.00728	.912	-9.7548	5.3698
	Ireland	2.9030	2.33911	.673	-2.9791	8.7851
	the Netherlands	5.2637	2.48162	.215	-.9768	11.5041
Based on observed means.						
The error term is Mean Square(Error) = 204.596.						