The role of a University curriculum design in intercultural sensitivity of students

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This 3-year research project is about an extend, to what the perceived intercultural orientation of the teaching style, group work and the environment determine the intercultural sensitivity of university graduates. This paper reports on the second round of data collection. A surprising finding is shown there is no significant change in the level of intercultural sensitivity or its five scales between the two samples. Doing correlation and regressions analysis it showed the research model as 10.1% of the variance in the intercultural sensitivity of students. Perceived intercultural orientation of the teaching style and intercultural orientation of the environment had a minor significant positive relationship with intercultural sensitivity, where intercultural orientation of the group work had no significant correlation with intercultural sensitivity. Based on these findings, we dare to assume that active mixing students in cross-cultural project groups does not necessarily lead to a stronger intercultural sensitivity. Future research should explore and test other antecedents of intercultural sensitivity that can be brought about by the university curriculum design.

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1. INTRODUCTION

In the last few decades companies were getting more internationally and globally oriented. This movement has also brought a need to build intercultural challenges for their employees. Lots of expatriates each year go to other countries to work in a different cultural environment. A research has been done on how to train expatriates to become ready for their international career opportunity. Thus, Bhawuk and Brislin (1992) made a review of cross-cultural training programs developed over the years. While in the 1950-s-1960s the first academic research was done on intercultural training, already in the 1980s such research was flourishing and oriented towards many training programs. In this article I am investigating intercultural sensitivity of university graduates. Since university graduates are assumed to become (the global) leaders of tomorrow, it is interesting to see whether the university curriculum has a role in developing of their cross-cultural sensitivity. Specifically, I focus on such curriculum elements as perceived intercultural orientation of the teaching style, the group work and the environment of the university. This is very important to investigate since companies are looking for graduates who are able to work in a global context with a global mindset, according to Rhinesmith (1992). According to Jokinen (2005) the need for leaders with appropriate global competencies is high, but the realization of their training is still lacking behind. I assume that if universities can influence the intercultural sensitivity of their students it will be of great advantage for the student, but also for the university, since it is able to give students an extra competence which implies competitive advantage. Inspired by such ideas, this research is conducted to examine if the university curriculum can influence the intercultural sensitivity of students. Three aforementioned factors were chosen because of the fact the university can influence them.

Building on the arguments above, the first goal of this research is to investigate to what extend university's curriculum designs can influence the intercultural sensitivity of students.

The second goal of this research is to improve the reliability of the questionnaire used, since this is a research project within a three years perspective.

To investigate the influence of the curricula design on the intercultural sensitivity of the students, I will use the following research question: To what extent do perceived intercultural orientation of the teaching style, group work and the environment determine the intercultural sensitivity of university graduates?

2. WHAT INTERCULTURAL SENSITIVITY IS

2.1 Intercultural sensitivity

The topic intercultural sensitivity, to others better known as cross-cultural sensitivity, intercultural competence or global competence is very broad. Many scholars have tried to define what it is, but there is no consensus yet. In the early years intercultural sensitivity was seen as "the ability to distinguish how others differ in their behavior, perceptions or feelings" according to Chen (1997) referring to Bronfenbrenner, Harding, and Gallwey (1958). Bhawuk and Brislin (1992) state when somebody wants to be effective in another culture it is important to be interested in the other culture, to see the (small) difference between your culture and the one you are visiting and you are willing to modify your behavior to show respect to the people of the other culture. By modifying one's behavior one is shifting away from your one's culture and become closer to the other culture. This definition emphasizes not only the awareness of the difference, but also the act upon it. Both Hunter (2004) and Deardorff (2006) recognized the need for a definition and they both did a Delphi study to come to a (working) definition of intercultural sensitivity. Hunter tried to define *global competence* and Deardorff tried to define *intercultural competence*. According to Hunter's (2004, p. 81) Delphi research global competence is: "having an open mind while actively seeking to understand cultural norms and expectations of others, and leveraging this gained knowledge to interact, communicate and work effectively outside one's environment." Deardorff's definition which received the highest rank from the Delphi panel was one of (Byram, 1997, p. 34) "Knowledge of others; knowledge of self; skills to interpret and relate; skills to discover and/or to interact; valuing others' values, beliefs, and behaviors; and relativizing one's self. Linguistic competence plays a key role." Having observed different definitions, I conclude that there is not much difference in the different terms, they all take into account that somebody has to be open for other cultures, that it is about perceptions, feelings and emotions, distinguishing and behavior. Understanding norms and values of other cultures and have knowledge about others, and also yourself, shape the core of intercultural sensitivity. The last definition I discuss here is the one of Chen and Starosta (1998, p. 231), which has been used in the research previous year: "the active desire to motivate themselves to understand, appreciate, and accept differences among cultures.". Taking all the above definitions of intercultural sensitivity in mind a distinction can be made between definitions which are about accepting and knowing differences (Bronfenbrenner et al., 1958; Chen & Starosta, 1998) and definitions which also have an action involved to overcome the differences in practical situations (Bhawuk & Brislin, 1992; Deardorff, 2006; Hunter, 2004). A lot of scholars developed models to measure the level of intercultural sensitivity one is at, or the multicultural effectiveness of one. In this research the Intercultural Sensitivity Scale (ISS) of Chen and Starosta (2000) will be used. The ISS measures the intercultural sensitivity of somebody on the basis of five scales: interaction engagement, respect for cultural differences, interaction confidence, interaction enjoyment and interaction attentiveness. Because this research wants to build on the research which is done in the past, the same measure for intercultural sensitivity will be used, otherwise it will be very hard to compare the results.

2.2 Group work, teaching style and environment as ICS antecedents

2.2.1 Group work

One of the challenges in business life is to collaborate in teams that may require extra competences if teams are formed by members from different cultures. According to Brett, Behfar, and Kern (2006) there are four challenges to overcome in teams; direct versus indirect communication, trouble with accents and fluency, differing attitudes towards hierarchy and authority and conflicting norms for decision making. Four strategies to overcome the problems were discussed in their article. One of the strategies, adaptation, requests acknowledging the differences in culture, which comes close to a person who is very intercultural sensitive. Kozlowski and Bell (2003, p. 12) suggest in their study that the demographic diversity has been researched by many scholars with different outcomes. "Studies have reported that diversity has positive (Bantel, 1994; Gladstein, 1984), negative (Haleblian & Finkelstein, 1993; Jackson et al., 1991; Pelled, Eisenhardt, & Xin, 1999; Wiersema & Bird, 1993), or even no effects on team effectiveness (Campion, Medsker, & Higgs, 1993)." It is known

groups or teams are, in general, harder to manage when they consist of members from different cultural backgrounds. If it is known how group work affects the level of somebody's intercultural sensitivity, universities can adapt their curriculum design to improve the quality of the students. That is why group work is taken as one of the independent variables in this research.

2.2.2 Teaching style

Previous research has shown the importance of multicultural education. For example in the paper of Barry and Lechner (1995) the conclusion was drawn that students see multicultural education as something positive. Although the conclusion of the authors is that teacher training programs have to have both theory and practice during the whole duration of the program, on the long term. In that way students can acquire the skills of dealing with other cultures. Their research shows that the teacher is an important factor for students able to impact intercultural sensitivity since students see the teachers as somebody who trains them dealing with multicultural problems in education. Also Leeman and Ledoux (2003) recognize the fact that preservice teachers need training and practice to learn about diversity and intercultural education. Leeman and Ledoux (2003) argue that teachers have to be able to take ethnic-cultural diversity and racism into account and to overcome problems when they occur and "be able to implement several intercultural approaches" (Leeman & Ledoux, 2003, p. 282). Gay (2002) brings the message that teaching requires "mastery of content knowledge and pedagogical skills" (Gay, 2002, p. 106). She argues that too many teachers have not the skills to teach to a multicultural group of students. She claims that culturally responsive teaching let students learn more thoroughly and easily (Gay, 2000). As argued in the beginning, in this research teaching style will be an independent variable to see the influence of teaching style on intercultural sensitivity.

2.2.3 Environment

With the environment in this research is meant all environmental 'prerequisites' on the university campus, like English signs, English speaking personnel, and a well-equipped campus for multicultural groups. In their article, Lee and Janda (2006) give ten recommendations to create a successful multicultural campus. One of them, for example, is starting an office on diversity and equality which have experts on the field of multiculturalism and give advice how to create multicultural friendly environment. Also for expatriates it is very important to feel well in their new environment. For expatriates it is shown that the family situation and relational abilities are the two main factors which determine the chance the expatriates will leave earlier or stay in his new country (Tung, 1987). I argue that also student's at a university need ways to be social active and have other multicultural supportive facilities to feel well at the university. This is why in this research environment is the third independent variable of whom the influence on intercultural sensitivity will be investigated.

2.3 Research framework

The influence of *the group work, the teaching style and the environment* on intercultural sensitivity will be investigated because each of these variables is assumed to be linked in the business environment to coping with culture. I think all three variables are also connected to the educational field, especially in the field of coping with different cultures in classrooms and curricula. The concept of Intercultural Sensitivity is the one made by Chen and Starosta (2000), which consists out of five different aspects: *interaction engagement, respect for cultural differences, interaction confidence, interaction enjoyment and*

interaction attentiveness. The relationship between the independent and dependent variable is shown in figure 1.
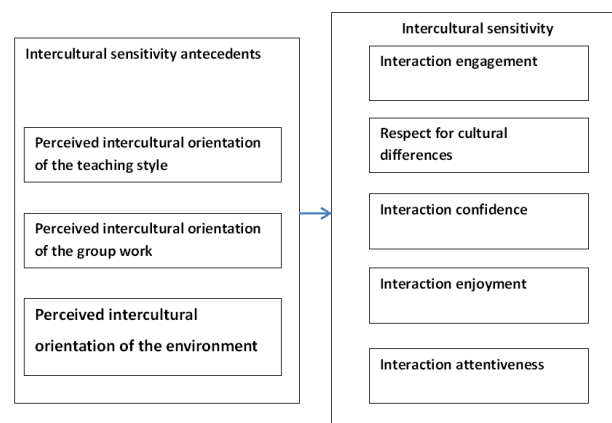

Figure 1. Relationship between the three independent variables with the intercultural sensitivity of students

Since this is the first research project where teaching style (training), group work (team work) and the environment are taking into a perspective of education instead of the business environment, I built three hypotheses to test if these factors really are related to the concept of intercultural sensitivity in an educational environment.

H1: There is a significant strong positive relation between the perceived intercultural orientation of the teaching style and intercultural sensitivity: a. with interaction engagement; b. with respect for cultural differences; c. with interaction confidence; d. with interaction enjoyment; e. with interaction attentiveness.

H2: There is a significant strong positive relation between the perceived intercultural orientation of the group work and intercultural sensitivity: a. with interaction engagement; b. with respect for cultural differences; c. with interaction confidence; d. with interaction enjoyment; e. with interaction attentiveness.

H3: There is a significant strong positive relation between the perceived intercultural orientation of the environment and intercultural sensitivity: a. with interaction engagement; b. with respect for cultural differences; c. with interaction confidence; d. with interaction enjoyment; e. with interaction attentiveness.

With a significant strong relation I mean a relation of at least $\beta > 0.7$, with a significance level of at least $p < 0.5$.

3. METHODOLOGY

3.1 Study design

This study is a longitudinal study of a population students at the University of Twente, the Netherlands. The students started with their study in September 2012. There were two measuring moments, one in 2013 and one in 2014 and a third will be in 2015. In 2014 it was not recorded which students were asked and could not be linked to the 2013 responses, so no paired sampling was conducted. 11 bachelor studies at the first measuring moment and at 8 bachelor studies at the second measuring moment were included in the empirical research. The selection of studies of the year 2014 was based on the responses in 2013, where studies with less than 20 respondents were excluded. The study was performed through a questionnaire, where all scales were measured by a 5-point Likert scale, see appendix 1 and 2. The intercultural sensitivity part is taken over from Chen and Starosta (2000). At the second measurement a sample of the same population was questioned to see the change of the dependent variable. In 2015, the third measurement will take place, to see if some trends could be discovered.

3.2 Operationalization of the constructs

The definitions I use for the aspects of the dependent variable and the number of items used to measure these aspects are shown in table 1. The perceived cultural orientation of the teaching style, the perceived cultural orientation of the group work and the perceived intercultural orientation of the environment are self-administered. The definitions are, in the same order as above: The perceived openness of a teacher towards other cultures, encouragement of cross-cultural sensitivity and activities during lessons, and the invitation to learn from different cultures; The perceived students group composition of different cultural backgrounds, and students' cross-cultural approach to group work processes; The perceived excellence of the university facilities and support for students from different cultural backgrounds.

Table 2. Definitions of the dependent variables (Chen & Starosta, 2000)

Interaction Engagement	Feeling of participation in intercultural communication
Respect for cultural differences	How participants orient to or tolerate their counterparts' culture and opinion
Interaction Confidence	How confident participates are in the intercultural setting
Interaction Enjoyment	Participants' positive or negatieve reaction toward communicating with people from different cultures
Interaction Attentiveness	Participants' effort to understand what is going on in intercultural interaction

3.3 Sampling

The selection procedure of the sample was done on basis of a study year. It was intended to hand out the questionnaire to people who started their study in September 2012 at the University of Twente. In 2014 I tried to reach the same group of people to compare the results and possibly see interesting changes. At the second measuring moment the following studies were covered: Bedrijfskunde (Dutch Business Administration), International Business Administration, Bestuurskunde (Dutch Public Administration), Civiele Techniek (Dutch Civil Engineering) Electrical Engineering, Gezondheidswetenschappen (Dutch Health Sciences), Industrieel Ontwerpen (Dutch Industrial Design), European Studies. The studies Psychologie (Dutch Psychology), Scheikundige technology (Dutch Chemical Technology) and Advanced Technology were not covered in the second measuring moment, but were measured during the first measuring moment. The questionnaire for International Business Administration and European Studies was handed-out online since they had no lectures at the university. A Facebook group with 342 members has been used and an website for users registered for the Internship course where also 256 people were reached. It is assumed that people were a member of the website and of the Facebook group but I don't assume the same people filled the questionnaire out since I only collected 35 responses from them. In total I handed out 161 questionnaires of which 150 were returned, so the response rate was 93%. The online response rate is 8.8 percent, with 46 responses. Looking at the gender of the respondents in 2013 58.6 percent of the respondents were male, in 2014 64.3 percent. Most of the respondents in 2013 and 2014 live in the Netherlands or Germany, others are from all over the world. Both gender and country of origin can be found in table 2.

3.4 Changes in questionnaire and its reliability

Since I wanted to improve the reliability of the questionnaire I've changed a few items. All the changes in the second questionnaire you can see in appendix 3. The first measuring moment looked at the influence of the three independent variables on the intercultural sensitivity. But, in a consensus with other researchers, it was decided to explore additionally to

Table 1. Countries of origin and gender of respondents (2013 and 2014)

Year	2013	%	2014	%
The Netherlands	273	64.5	148	75.5
Germany	113	26.7	29	9.7
Other Countries	37	8.7	19	9.7
Male	248	58.6	126	64.3
Female	168	39.7	68	34.7
Other gender – no answer	7	1.7	2	1.0
Total N	423	-	196	-

what extent intercultural sensitive people behave in reality, and how this corresponds with their perceived intercultural sensitivity. Therefore I have developed eight questions to measure the actual behavior of the participants. I did this by formulating questions related to intercultural sensitivity, but show the actual behaviour. For example, if somebody actively tries to mingle with people with a different cultural background in project groups. This is just a beginning and needs to be developed in the future years for this research project. At the moment I want to use actual behavior as a control variable The actual behavior questions also can be found in appendix 2.

Since I wanted to look at the relation between intercultural sensitivity and group work, teaching style and the environment and use and compare it with results from previous year, I decided to use the same questionnaire with slight adjustments, appendix 3, so the results aren't influenced by the design of the questionnaire. The reliability test results are shown in table 3. The *Interaction Engagement* scale has a Cronbach's Alpha of .620, which is not very high to consider the scale reliable. Looking at the change in the alpha when leaving items out of the questionnaire, the highest increase of the reliability is when leaving out item IEng_06, appendix 4. The reliability would increase to .632, an increase of just .012, making the scale less valid because of using less items to measure what I want to measure. This is why I didn't skip any item and used the scale was surprisingly low, the scale had a Cronbach's Alpha of only .408, which is too low to consider this scale to be reliable. Looking at the scale, it only consisted out of three items, which is not much to measure a scale. Comparing the items it seemed that leaving out item IAtt_03 would increase the Cronbach's Alpha to .481, an increase of .073, which is much for just leaving out one item (appendix 5). Looking at the frequency of item three many people answered possibility 3 out of 5 (appendix 6), this was an indication to compare it with the other items of the scale in a crosstab (appendix 7).

Table 3. Alpha levels of the dependent variable, scales of the dependent variables, independent variables and actual behaviour

	α 2013	#items 2013	α 2014	# items 2014
Intercultural Sensitivity				
Interaction Engagement	0.620	7	0.727	7
Respect for cultural differences	0.740	6	0.800	6
Interaction Confidence	0.766	5	0.768	5
Interaction Enjoyment	0.689	3	0.692	3
Interaction Attentiveness	0.408	3	0.548	4
Perceived cultural orientation of the teaching style	0.695	6	-	-
Perceived cultural orientation of the group work	0.726	3	-	-
Perceived cultural orientation of the environment	0.653	4	-	-
Actual Behaviour	-	-	0.479	8

questionnaire I discovered even two more dimensions resulting in a total of five dimensions. Dimension 1 covers item 26 and 32 (appendix 2), they are both about how the culturally distinct counterpart could interpret my words or actions. Dimension 2 covers question item 27 and 33, they are both about being part of a multicultural diverse group of people. Dimension 3 covers item 28, it is not related to item 29 as suggested by the statistics. It is not about working together with people from different cultures as item 29 is. Dimension 4 covers item 29, it is not related to item 28 content wise. The last dimension, dimension 5, covers item 30 and 30, which both are about showing interest in the norms of the other culture (appendix 2, 3 & 8). Since there are so many dimensions and the reliability is very low, I decided not to use this 'scale' in the analysis this year. The actual behavior 'scale' needs an improvement for further use. Firstly a theoretical basis is needed, then questions have to be made, not the other way around.

In the crosstab I expected to see a pattern from upper left to lower right, which was not true for these crosstabs. This was also an indication something was wrong with the item. Keep using the item is not good for the reliability, deleting the item is not good for the scale, since it only consists out of two items which makes the scale even less valid. Rewriting the item was the best option, since also I myself didn't fully understand the meaning of the questions as a non-native English speaking person. Therefore I have rewritten the item to: *I have a feeling of enjoyment towards differences between my culturally-distinct counterpart and me*. I also decided to add another item to make the scale more valid and hopefully more reliable: *During interactions with people from other cultures I try to check that the other person understands what I mean*. (Appendix 3) The Cronbach's Alpha's of the independent variables all are above or near the .700, except for the Alpha of the *Perceived intercultural orientation of the environment*, which Alpha is .653 (table 3). Leaving out one item doesn't increase the Alpha. For the purpose of this research, comparing the results of this measurement with the results of last years' measurement, it is not wise to change the questionnaire too much, so that is why I decided that I'm happy with these Alpha levels and continued with the research with the slightly revised version of the questionnaire.

All α-levels have risen in comparison with the previous year. Of the first four scales of the dependent variable in the table no questions were changed in a way the meaning is different. The α-level of the interaction attentiveness scale increased dramatically with 0.140. Comparing the reliability of the items of this scale, I conclude that rewriting the third item and adding a forth item were the right thing to increase the reliability. In the future the reliability of this scale has to be increased more, since the reliability of this scale still is too low to consider it reliable enough, around .70. The reason the overall reliability increased can be related to the fact that the student understands the questionnaire more since the level of the English languish skills has assumingly increased in their second year at the University. The reliability of the actual behavior scale with eight items is very low, 0.479. Factor analysis of the scale suggested three dimensions (appendix 8). Looking at the content of the

3.5 Analysis

To check for the dimensions of the actual behavior variable I did a Varimax factor analysis. Compared with the statistical results I used the content of the questionnaire to distinguish different dimensions of Actual Behavior since it was shown it was not a scale. To see if there are significant differences over years I looked at the mean, standard deviation and the significance level to make conclusions. Because the data is of nominal or ordinal level I used independent t-tests to see whether the difference in values is significant, since the data is of different samples of the same group on different times. I use .05 significance levels and I assumed that the variance of the two samples was the same, unless the Levene's Test showed a significance level <.05. I controlled the dependent variable and its scales for gender, English or non-English language-based study program, if somebody lives shorter or longer than five years in the Netherlands, if somebody origins from the Netherlands or Germany, if somebody ever lived abroad, is somebody has the intention to study abroad and for the fact if somebody has foreign friends. To analyze the correlations between the independent and the dependent variable Kendall's Tau-b was used because of the ordinal level of the measurement. A linear regression analysis was used to estimate the effect of the independent variable on intercultural sensitivity. Multicollinearity analysis was used to check for a high correlation between the independent variables, if this occurs this is a problem.

4. FINDINGS

4.1 Comparing the dependent variable and its scales

Comparing the means and standard deviation for the dependent variable a difference is shown, as can be seen in appendix 9 and 10. This difference is not significant as p=.245, this means that there is no significant difference in the intercultural sensitivity level between both years. In appendix 9 the results for checking each of the scales for significant differences between the years are shown precisely. Only interaction confidence and interaction attentiveness show significant difference. Interaction

confidence showed a significant drop in 2014, but interaction attentiveness show a significant raise in 2014.

When controlling the intercultural sensitivity for gender in both years it is obvious that in 2013 there was a significant difference between male and female levels of ICS. For the variable and for all the scales except interaction enjoyment, there was a significant difference between male and female. Female have a significant higher score on intercultural sensitivity and all its scales, except for interaction confidence, than male. In 2014 this difference has disappeared, only for the interaction confidence scale there still is a significant difference, but for both male and female the score is lower than in 2013.

When controlling for the language of the programme, in 2013 the variable show a significant difference. People who follow an English language-based study programme are significantly more intercultural sensitive than people who do not follow an English language-based study programme. In 2014 this effect is not present any more.

Only in the year 2014 there was asked about the duration of stay in the Netherlands. I made a distinction between people who lived for a maximum of five years in the Netherlands and people who lived more than 5 years in the Netherlands. 5 years is an arbitrary boundary. Only for the interaction attentiveness scale there is a significant difference. People who live shorter in the Netherlands than five years show a significant higher interaction attentiveness level than people who live longer in the Netherlands.

There is a remarkable difference in the year 2013 between people who originate from the Netherlands and Germany. People from Germany score significantly higher on the dependent variable, and also on its scales. Looking at 2014, this effect only exists for the interaction attentiveness scale.

In 2013 there is a significant difference when somebody has lived abroad. On the dependent variable and its scales the scores from people who ever lived abroad are significantly higher than people who did not live abroad. In 2014 this effect is still there for the dependent variable, but not for every scale. The scales respect for cultural differences and interaction enjoyment do not show a significant effect any more.

When somebody has the intention to study abroad there is a significant effect for the dependent variable and its scales, for both years. If somebody wants to study abroad the score on intercultural sensitivity is significantly higher than people who do not want to study abroad.

If somebody has foreign friends, for both years there is a significant difference on the dependent variable and its scales. Somebody who have foreign friends scores higher on intercultural sensitivity than somebody who does not have foreign friends. In 2014 this effect only is not applicable for the

Table 4. Correlations between independent variables and dependent variable with its scales

		Mean	Std.	1	2	3	4	5	6	7	8
1. Intercultural sensitivity	Correlation Coefficient	3.68	0.44								
2.Interaction Engagement	Correlation Coefficient	3.52	0.48	.62**							
3. Respect for cultural differences	Correlation Coefficient	4.06	0.62	.57**	.42**						
4. Interaction Confidence	Correlation Coefficient	3.60	0.64	.52**	.33**	.22**					
5. Interaction Enjoyment	Correlation Coefficient	4.00	0.70	.63**	.40**	.44**	.41**				
6.Interaction Attantiveness	Correlation Coefficient	3.21	.060	.40**	.32**	.19**	.17**	.11**			
7.Perceived cultural orientation of the teaching style	Correlation Coefficient	2.92	0.61	.09**	.08*	.08*	.08*	-.01	.15**		
8. Perceived cultural orientation of the group work	Correlation Coefficient	2.30	0.84	-.05	-.03	-.07*	.01	-.15**	.07*	.34**	
9. Perceived cultural orientation of the environment	Correlation Coefficient	3.80	0.63	.20**	.20**	.19**	.15**	.13**	.11**	.20**	.09**

**. Correlation is significant at the 0.01 level (1-tailed).

*. Correlation is significant at the 0.05 level (1-tailed).

respect for cultural differences scale.

4.2 Relation between the independent and dependent variable

Performing the Kendall's-Tau b test to check for correlations, there are actually two significant correlations found. The perceived intercultural orientation of the teaching style and the perceived intercultural orientation of the environment are significantly positively correlated with intercultural sensitivity. As can be seen in table 4, the correlations are very weak, .20 and .09, but both are very significant p<.01. The perceived intercultural orientation of the group work is not significantly correlated with intercultural sensitivity, but shows a few correlations with some of the scales. The perceived cultural orientation of the teaching style is significantly positively correlated with each of the scales, except of interaction enjoyment. For the perceived intercultural orientation of the environment the findings are all significantly positive correlations with each of the five scales. But the correlations are weak, between .11 and .20 with all significant levels below p=.01. The perceived intercultural orientation of the teaching style is only not significantly correlated with the interaction enjoyment scale.

First I controlled for multicollinearity, but all the levels are below 5, so there is no multicollinearity. The R square value of the model is .101, which means 10.1 percent of the variance can be explained by the three independent variables, which is very low. Other factors account for almost 90 percent of the total variance. (Appendix 11) Looking for each of the independent variables separately, the perceived intercultural orientation of the teaching style counts for 2 percent of the variance, the intercultural orientation of the group work for just 0.2 percent, but the environment accounts for 6.6 percent.

5. DISCUSSION

5.1 Changes in intercultural sensitivity

It is a great surprise that the score of intercultural sensitivity of students between both years does not differ significantly. It could be expected to have raised, since at the University of Twente there are a lot of international students with whom you can get in touch. It is surprisingly that two scales do change, meaning there is difference between the different aspects of intercultural sensitivity. Students seem to become less confident when interacting with people from a different cultures. This can be as they did not have any actual international contact, but when having it was very difficult. This can be an explanation why the interaction attentiveness has raised significantly. That the scores controlled for gender in 2013 were significantly different for male and female was not that surprising, but that these significant scores were almost gone in 2014, except for interaction confidence, was very surprising. Research to explain this difference would be interesting. In 2014 there was no significant difference between people who follow an English language-based programme and those who do not. I can imagine that the students in between the two measuring moments got active at sport-, culture-, study-, student- or other associations at the campus of the University of Twente. This can bring together all the students and mingle them with each other so that the difference in the intercultural sensitivity faded away. It is very remarkable to see that the only difference between people who live longer and shorter than five years in the Netherlands is the level of interaction attentiveness. I assume that people who live shortly at the a new place have to put extra effort into being understood and understand the conversation partner. This finding is very strange when compared with the results which came from if somebody has the intention to study abroad in the future. If somebody wants to study abroad, he is significantly more intercultural sensitive

Table 5. Regression analysis of the independent variables (grouped and alone) with intercultural sensitivity

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations		
		B	Std. Error	Beta	t	Sig.	Zero-order	Partial	Part
1	(Constant)	2.930	.142		20.681	.000			
	Teaching style	.121	.041	.164	2.947	.003	.150	.143	.137
	Group work	-.102	.029	-.190	-3.569	.000	-.075	-.173	-.166
	Environment	.166	.035	.237	4.814	.000	.262	.230	.224
1	(Constant)	3.352	.107		31.318	.000			
	Teaching Style	.112	.036	.151	3.114	.002	.151	.151	.151
1	(Constant)	3.765	.064		58.781	.000			
	Group Work	-.037	.026	-.070	-1.426	.155	-.070	-.070	-.070
1	(Constant)	2.982	.128		23.351	.000			
	Environment	.184	.033	.262	5.534	.000	.262	.262	.262

The regression levels of the independent variables can be found in table 5. As can be seen, all the independent variables are significant when taken into account together. The biggest regression is for the perceived intercultural orientation of the environment, with a 0.237 positive regression.

than those who do not want. This can be an interesting subject for future research, since this effect is shown for both years. Also other studies suggest that actually study abroad can increase the intercultural sensitivity even more (Anderson, Lawton, Rexeisen, & Hubbard, 2006), which is interesting to investigate further in future research. Students who live shorter than five years in the Netherlands are foreigners who planned to study abroad. But when they live for a short period (shorter than

five years) in the foreign country, they only are more concerned about understanding and being understood by the locals. Maybe the arbitrary boundary of five years it too large since most of the students came to the Netherlands in the summer of 2012, which actually is two years. For future research and next years' measurement it is wise to set the limit to three years and do new analysis with this data with also that boundary. Comparing the Dutch students with the German students the results are the same with the duration of stay in the Netherlands in 2014. In 2013 the duration of stay was not measured, so no conclusions can be drawn. It would be interesting to see if there is going to be a difference between these two control variables. It is interesting to see that within one year only interaction attentiveness is higher at German students, but the four other scales are on the same level as the Dutch students. On the dependent variable the scores of the Dutch raised, the scores of the German students lowered at the second measuring moment. It is interesting to do research if this will be a trend or just a onetime phenomenon. The fact that people who have lived abroad are more intercultural sensitive in 2013 seems not very strange, since they already have intercultural experience. The fact that the differences are becoming smaller in 2014 could be no surprise if you've taken into account the lively campus and association's life at the University of Twente which means there is a lot of intercultural activity. Maybe this also is an explanation for the fact that in 2014 the respect for cultural differences scale is not significantly different any more between people who have or do not have international friends. This also can be because of someone had to work together with international people, or because of international conflicts which stressed the differences between cultures, for example the war in Syria or the war between Ukraine and Russia.

5.2 Relations between the independent variable with intercultural sensitivity

It is very surprising to see that the correlations of the independent variables are very low. Since I expected from the literature to have significant strong positive relations between the independent variables and the dependent variable and its scales. The total variance which can be explained is 10.1 percent. The negative relation between the perceived cultural orientation of the group work and the level of intercultural sensitivity is very surprising to see, although not significantly, but also in the literature studies show that group work do not affect or do negatively affect team effectiveness (Campion et al., 1993; Wiersema & Bird, 1993). This research suggests group work is not related to intercultural sensitivity. Some programmes are very active with mingle students into groups which consists out of people with different cultural background to make students be intercultural sensitive. This research shows that this has nothing to do with becoming more interculturally sensitive. This can be an interesting development to take into account for future research. Due to the fact these three independent variables only explain 10.1 percent of the variance other factors have to be of more influence on intercultural sensitivity. The perceived intercultural orientation of the environment has to greatest influence on intercultural sensitivity, although still little. For the future maybe composition of the cultures within the classroom, international experience, and the level of intercultural teaching materials (books, powerpoint presentations etcetera) can be research done about.

The limitations of this research project are at first the low reliability of the interaction attentiveness scale, this needs to be improved to do more reliable statements. Also because of the change of two questions of the interaction attentiveness scale , I

can't exclude this change as a factor of the change in value of the scale. Also the actual behaviour scale needs improvement, this year the scale was not developed enough so it couldn't be used in this research project. The sample was not paired, but this makes it possible to do more in-depth research and do more funded statements about the outcomes. The questions in the questionnaire were not all the same, for next year a combination of both the questionnaires would be favorable.

6. CONCLUSIONS

Despite of acknowledged limitations, this research has shown some very interesting results. Looking at the levels of intercultural sensitivity, I observe that they did not significantly change during this research project. Two of the five dimensions changed over time, but it can be that they are negatively correlated. People who lived abroad, want to study abroad or have international friends are significantly more intercultural sensitive than people who do not. At the first measuring moment there were a lot of significant differences when controlling for gender, living abroad etcetera. In 2014 there was less differences, which implies that in earlier years there may be differences between male and female, but that over time these differences fade away because of some factor. One interesting fact is the total significance in both years of students who have the intention to study abroad. In future research it can be of value to see why this effects persists. The relation of the perceived intercultural orientation of the teaching style and environment with intercultural sensitivity is very weak but significantly positive. The relation with the perceived cultural orientation of the group work with intercultural sensitivity is not significant.

At the beginning of the research paper I formulated three main hypothesis, which resulted in 15 sub-hypotheses. I did not find any significant strong positive relation between one of the independent variables with the intercultural sensitivity of one of its scales. So I rejects all the hypotheses. (Table 4)

This study was motivated by the research question, To what extent do perceived intercultural orientation of the teaching style, group work and the environment determine the intercultural sensitivity of university graduates. As I showed, the intercultural orientation of the teaching style, group work and environment determine only 10.1 percent of the intercultural sensitivity of university graduates, this means 89.9 percent of the variances has to be explained by other factors.

I conclude that the perceived intercultural orientation of the teaching style has a minor effect on the determination of intercultural sensitivity of university graduates. This means that the teacher has only very little influence on the intercultural sensitivity of university graduates. For future research I suggest to take learning materials into account, since a lot of students do not go to every lecture, but are supposed to read the materials for the preparation for their exams. For education it makes no influence to have a teacher who has less attention for cultural differences during lectures, since it only determines 2 percent of the variance of intercultural sensitivity.

I conclude the perceived intercultural orientation of the group work does not determine the intercultural sensitivity of university graduates. This shows that programmes which are very actively mingling people with cultural different backgrounds between groups do not achieve a higher intercultural sensitivity among their university graduates. If the goal is to create a higher intercultural sensitivity among the students, stop mingling them. For theoretical purposes there has to be looked at other possible antecedents for intercultural

sensitivity, since the perceived intercultural orientation of the group work is not correlated to intercultural sensitivity.

The perceived intercultural orientation of the environment determines for more than 6.5 percent the level of intercultural sensitivity of university graduates, which is an interesting fact. For future research I want to suggest to look at the effect of the environment on the antecedents of intercultural sensitivity. It may be that if the environment is supportive, meaning that the antecedents determining intercultural sensitivity are higher when the environment is perceived supportive than when the environment is not perceived supportive.

If actual behaviour is taken in to account next year the concept of actual behaviour needs to be developed more, since this year it was not thought about it thoroughly enough, an in-depth theoretical background is needed.

Since this is a research project with a scope of three years I want to make a few recommendations. At first, the next researcher should try to get a paired sample as this makes analyzing more interesting. Also, to look if it is possible to analyze the duration of stay in the Netherlands in smaller steps. When talking about new research fields I suggest to look for other antecedents of intercultural sensitivity since these are not the ones determining intercultural sensitivity very strong; specifically to look at the content of the teaching materials, the composition of different cultures in the classrooms and the international experience a student can gain during his study, as the data shows for both years students who want to study abroad show a significantly higher intercultural sensitivity than students who do not.

7. AKNOWLEGDEMENTS

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9. APPENDICES

1. Questionnaire 2013
2. Questionnaire 2014
3. Changes in questionnaire
4. Cronbach's alpha after leaving out IEng_06
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6. Frequency of item IAtt_03
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8. Factor analysis actual behavior with the three dimensions and with the five dimensions
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10. Number of respondents, mean, standard deviation of all independent t-tests
11. Multicollinearity check of the independent variables

Appendix 1: Questionnaire 2013

Intercultural Sensitivity Survey

Part I

Indicate your choice by marking an 'x' in the blank before your choice.

1. Your Age: _____ [Age]

2. Your gender: __ Female __ Male __ I prefer not to answer [Gender]

3. Your student number: s_____ *(Your student number will not be used for analyzing results and will be treated confidentially.)* [Student_number]

4. Your study programme: __ BK __ IBA (Hereafter we use the word "programme".) [Study_programme]

5. Which year did you start with this study programme? _____ [Start_programme]

6. Which country are you from? _____ [Country]

7. Have you ever lived abroad? __ No __ Yes [Live_abroad], Where? _____ [Live_abroad_where]

8. Do you plan to study abroad in the near future? (E.g. for your minor or master) __ Yes __ No [Study_abroad]

9. Do you have friend(s) from countries other than your home country? __ Yes __ No [International_friends]

Part II

Below is a series of statements, which do not imply right or wrong answers. Please work quickly and record your first impression by indicating the degree to which you agree or disagree with the statement. Put the number corresponding to your answer in the blank before the statement.

5 = strongly agree; 4 = agree; 3 = uncertain; 2 = disagree; 1 = strongly disagree

__ 1.   Overall, teachers are aware of the culturally-diverse groups in the programme. [OTS_01]

__ 2.   I feel that teachers usually prepare the lectures taking in consideration the cultural diversity of the students. [OTS_02]

__ 3.   In my view, teachers try to make students aware of the cultural differences within the classroom. [OTS_03]

__ 4.   Teachers encourage foreign students to express and present examples from their home cultures, and   cases modeled by their cultural settings. [OTS_04]

__ 5.   Teachers usually use examples from different cultural and educational settings for exposing the theories during the lectures. [OTS_05]

__ 6.   I feel that the courses encourage an atmosphere of respect towards cultural differences. [OTS_06]

__ 7.   The programme stimulates the integration of diverse cultural backgrounds when creating group assignments. [OGW_01]

__ 8   It is usually required to form project groups with a mixture of people with different countries of origin. [OGW_02]

__ 9.   The group assignments require an application of diverse cultural backgrounds. [OGW_03]

__ 10. The university campus is well-equipped for foreign students. [OEnv_01]

__ 11.   Student support personnel speak English well. [OEnv_02]

__ 12. Documents, necessary for the study progress, are available in English. [OEnv_03]

__ 13. Accommodation on the UT campus is friendly for an international audience. [OEnv_04]

Part III

Below is a series of statements concerning intercultural communication. There are no right or wrong answers. Please work quickly and record your first impression by indicating the degree to which you agree or disagree with the statement. Put the number corresponding to your answer in the blank before the statement.

5 = strongly agree; 4 = agree; 3 = uncertain; 2 = disagree; 1 = strongly disagree

__ 1. I enjoy interacting with people from different cultures. [IEng_01]

__ 2. I think people from other cultures are narrow-minded. [RCD_01]

__ 3. I am pretty sure of myself in interacting with people from different cultures. [IConf_01]

__ 4. I find it very hard to talk in front of people from different cultures, because of cultural differences. [IConf_02]

__ 5. I always know how to talk when interacting with people from different cultures. [IConf_03]

__ 6. I can be as sociable as I want to be when interacting with people from different cultures. [IConf_04]

__ 7. I don't like to be with people from different cultures. [RCD_02]

__ 8. I respect the values of people from different cultures. [RCD_03]

__ 9. I get upset easily when interacting with people from different cultures. [IEnj_01]

__ 10. I feel confident when interacting with people from different cultures. [IConf_05]

__ 11. I tend to wait before forming an impression of culturally-distinct counterparts. [IEng_02]

__ 12. I often get discouraged when I am with people from different cultures. [IEnj_02]

__ 13. I am open-minded to people from different cultures. [IEng_03]

__ 14. I am very observant when interacting with people from different cultures. [IAtt_01]

__ 15. I often feel helpless when interacting with people from different cultures. [IEnj_03]

__ 16. I respect the ways people from different cultures behave. [RCD_04]

__ 17. I try to obtain as much information as I can when interacting with people from different cultures. [IAtt_02]

__ 18. I would not accept the opinions of people from different cultures. [RCD_05]

__ 19. I am sensitive to my cultural-distinct counterpart's subtle meanings during our interaction. [IAtt_03]

__ 20. I think my culture is better than other cultures. [RCD_06]

__ 21. I often give positive responses to my culturally different counterpart during our interaction. [IEng_04]

__ 22. I avoid those situations where I will have to deal with culturally-distinct persons. [IEng_05]

__ 23. I often show my culturally-distinct counterpart my understanding through (non-)verbal cues. [IEng_06]

__ 24. I have a feeling of enjoyment towards differences between my culturally-distinct counterpart and me. [IEng_07]

Appendix 2: Questionnaire 2014

<u>Intercultural Sensitivity Survey</u>

Dear student,

This questionnaire is meant to help with understanding students' cross-cultural sensitivity. Please answer each question with your personal views in mind.

Thank you for your cooperation.

Part I: Questions about your demographic background and past exposure to multicultural environments

1. Your Age: _____

2. Your gender: __Female __Male

3. How long have you been studying in UT: (Express your answer in years. E.g. 1.5 years) _____

4. In what study programme did you start your studies in UT? _____

5. How long have you lived in the Netherlands? _____

6. Which country are you from: _____

7. Have you ever lived abroad: __Yes _____No

8. Do you plan to study abroad in the near future? __Yes __No

9. Do you have foreign friend(s): __Yes __No

Part II: Statements concerning intercultural communication

> There are no right or wrong answers. Please work quickly and record your first impression by indicating the degree to which you agree or disagree with the statement. Put the number corresponding to your answer in the blank before the statement.
>
> 5 = strongly agree; 4 = agree; 3 = uncertain; 2 = disagree; 1 = strongly disagree

___ 1. I enjoy interacting with people from different cultures.

___ 2. I think people from other cultures are narrow- minded.

___ 3. I am pretty sure of myself in interacting with people from different cultures.

___ 4. I find it very hard to talk in front of people from different cultures.

___ 5. I always know what to say when interacting with people from different cultures.

___ 6. I can be as sociable as I want to be when interacting with people from different cultures.

___ 7. I do not like to be with people from different cultures.

___ 8. I respect the values of people from different cultures.

___ 9. I get upset easily when interacting with people from different cultures.

___ 10. I feel confident when interacting with people from different cultures.

___ 11. I tend to wait before forming an impression of culturally-distinct counterparts.

___ 12. I often get discouraged when I am with people from different cultures.

___ 13. I am open-minded to people from different cultures.

___ 14. I am very observant when interacting with people from different cultures.

___ 15. I often feel useless when interacting with people from different cultures.

___ 16. I respect the ways people from different cultures behave.

___ 17. I try to obtain as much information as I can when interacting with people from different cultures.

___ 18. I would not accept the opinions of people from different cultures.

___ 19. During interactions with people from other cultures I recognize the presence of a potential double meaning behind verbal expressions.

___ 20. I think my culture is better than other cultures.

___ 21. I often give positive responses to my culturally different counterpart during our interaction.

___ 22. I avoid those situations where I will have to deal with culturally-distinct persons.

___ 23. I often show my culturally-distinct counterpart my understanding through verbal or nonverbal cues.

___ 24. I have a feeling of enjoyment towards differences between my culturally-distinct counterpart and me.

___ 25. During interactions with people from other cultures I try to check that the other person understands what I mean.

___ 26. I am sensitive to how people from other cultures can interpret my words.

___ 27. I actively try to mingle with people from other cultures.

___ 28. I base my opinion about other cultures only on my personal experience with them.

___ 29. When I work in a group with people with a different mother tongue, I propose to communicate in my own mother tongue/native language

___ 30. When working with people with cultural backgrounds different from my own, I ask them questions about problem solving approaches in their cultures.

___ 31. I talk to other group members about recent developments in their home countries (like the conflicts in Syria).

___ 32. When working with people from other cultures, I avoid sensitive topics (like 9/11 with Americans or gay rights with Russians).

___ 33. I have friends with a different cultural background than my own.

Appendix 3: Changes in questionnaire

Item	Question 2013
Gender	Your gender: __ Female __ Male __ I prefer not to answer
Student number	Your student number: s_____ *(Your student number will not be used for analyzing results and will be treated confidentially.)*
Study duration	Which year did you start with this study programme? _____
Study programme	Your study programme: __ BK __ IBA
Duration in the Netherlands	-
Lived abroad	Have you ever lived abroad? __ No __ Yes, Where? _____
Iconf_02	I find it very hard to talk in front of people from different cultures, because of cultural differences.
Iconf_03	I always know how to talk when interacting with people from different cultures.
IEnj_02	I often feel helpless when interacting with people from different cultures.
OTS_01	Overall, teachers are aware of the culturally-diverse groups in the programme.
OTS_02	I feel that teachers usually prepare the lectures taking in consideration the cultural diversity of the students.
OTS_03	In my view, teachers try to make students aware of the cultural differences within the classroom.
OTS_04	Teachers encourage foreign students to express and present examples from their home cultures, and cases modeled by their cultural settings.
OTS_05	Teachers usually use examples from different cultural and educational settings for exposing the theories during the lectures.
OTS_06	I feel that the courses encourage an atmosphere of respect towards cultural differences.
OGW_01	The programme stimulates the integration of diverse cultural backgrounds when creating group assignments.
OGW_02	It is usually required to form project groups with a mixture of people with different countries of origin.
OWG_03	The group assignments require an application of diverse cultural backgrounds.
Oenv_01	The university campus is well-equipped for foreign students.
Oenv_02	Student support personnel speak English well.
Oenv_03	Documents, necessary for the study progress, are available in English.
Oenv_04	Accommodation on the UT campus is friendly for an international audience.
IAtt_03	I am sensitive to my cultural-distinct counterpart's subtle meanings during our interaction.
IAtt_04	-
AB_01	-
AB_02	-
AB_03	-
AB_04	-
AB_05	-
AB_06	-
AB_07	-
AB_08	-

Item	Questionnaire 2014
Gender	Your gender: __ Female __ Male
Student number	-
Study duration	How long have you been studying in UT: (Express your answer in years. E.g. 1.5 years)
Study programme	In what study programme did you start your studies in UT? _____
Duration in the Netherlands	How long have you lived in the Netherlands? _____
Lived abroad	Have you ever lived abroad: __ Yes __ No

Iconf_02	I find it very hard to talk in front of people from different cultures.
Iconf_03	I always know what to say when interacting with people from different cultures.
IEnj_02	I often feel useless when interacting with people from different cultures.
OTS_01	-
OTS_02	-
OTS_03	-
OTS_04	-
OTS_05	-
OTS_06	-
OGW_01	-
OGW_02	-
OWG_03	-
Oenv_01	-
Oenv_02	-
Oenv_03	-
Oenv_04	-
IAtt_03	During interactions with people from other cultures I recognize the presence of a potential double meaning behind verbal expressions.
IAtt_04	During interactions with people from other cultures I try to check that the other person understands what I mean.
AB_01	I am sensitive to how people from other cultures can interpret my words.
AB_02	I actively try to mingle with people from other cultures.
AB_03	I base my opinion about other cultures only on my personal experience with them.
AB_04	When I work in a group with people with a different mother tongue, I propose to communicate in my own mother tongue/native language
AB_05	When working with people with cultural backgrounds different from my own, I ask them questions about problem solving approaches in their cultures.
AB_06	I talk to other group members about recent developments in their home countries (like the conflicts in Syria).
AB_07	When working with people from other cultures, I avoid sensitive topics (like 9/11 with Americans or gay rights with Russians).
AB_08	I have friends with a different cultural background than my own.

Appendix 4: Cronbach's alpha after leaving out IEng_06

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
IEng_01	20.5074	7.515	.471	.323	.534
IEng_02	21.3966	8.615	.206	.082	.625
IEng_03	20.5320	7.252	.558	.363	.504
IEng_04	21.3300	8.577	.325	.117	.586
IEng_05_r	20.8818	8.267	.250	.109	.613
IEng_06	21.6502	9.097	.163	.058	**.632**
IEng_07	21.2931	7.897	.391	.189	.563

Appendix 5: Cronbach's alpha after leaving out IAtt_03

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
IAtt_01	6.29	1.875	.280	.104	.248
IAtt_02	6.28	1.558	.313	.115	.165
IAtt_03	6.63	2.155	.145	.023	**.481**

Appendix 6: Frequency of item IAtt_03

I am sensitive to my cultural-distinct counterpart's subtle meanings during our interaction.

I am sensitive to my cultural-distinct counterpart's subtle meanings during our interaction.
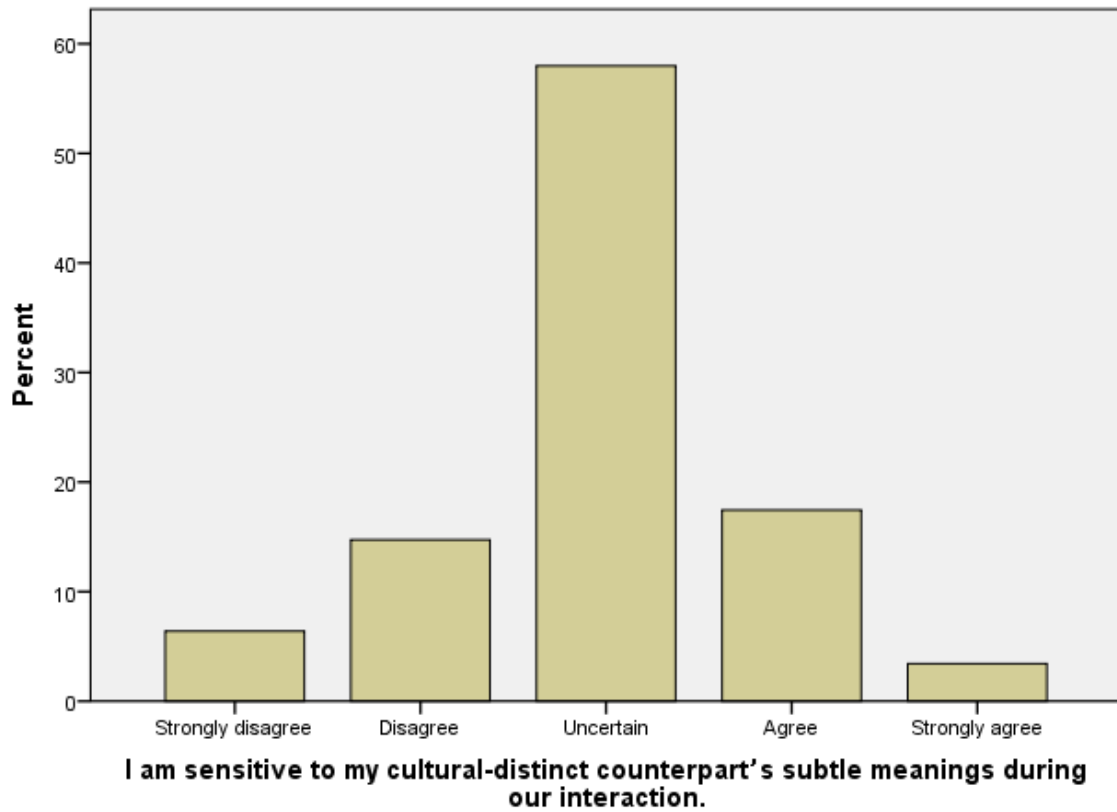
Appendix 7: Crosstab of IAtt_03 with items IAtt_01 and IAtt_02

Crosstab item IAtt_01 – IAtt_03

			IAtt_03					
			1 Strongly disagree	2 Disagree	3 Uncertain	4 Agree	5 Strongly agree	Total
IAtt_01	1 Strongly disagree	Count	4	2	4	1	0	11
		% of Total	1.0%	0.5%	1.0%	0.2%	0.0%	2.7%
	2 Disagree	Count	0	7	28	8	2	45
		% of Total	0.0%	1.7%	6.9%	2.0%	0.5%	11.1%
	3 Uncertain	Count	11	25	119	21	5	181
		% of Total	2.7%	6.2%	29.3%	5.2%	1.2%	44.6%
	4 Agree	Count	8	23	77	32	6	146
		% of Total	2.0%	5.7%	19.0%	7.9%	1.5%	36.0%
	5 Strongly agree	Count	3	3	7	9	1	23
		% of Total	0.7%	0.7%	1.7%	2.2%	0.2%	5.7%
Total		Count	26	60	235	71	14	406
		% of Total	6.4%	14.8%	57.9%	17.5%	3.4%	100.0%

Crosstab item IAtt_02 – IAtt_03

			IAtt_03					
			1 Strongly disagree	2 Disagree	3 Uncertain	4 Agree	5 Strongly agree	Total
IAtt_02	1 Strongly disagree	Count	3	2	5	2	0	12
		% of Total	0.7%	0.5%	1.2%	0.5%	0.0%	2.9%
	2 Disagree	Count	5	11	39	7	2	64
		% of Total	1.2%	2.7%	9.6%	1.7%	0.5%	15.7%
	3 Uncertain	Count	9	20	98	25	3	155
		% of Total	2.2%	4.9%	24.1%	6.1%	0.7%	38.1%
	4 Agree	Count	5	25	74	24	5	133
		% of Total	1.2%	6.1%	18.2%	5.9%	1.2%	32.7%
	5 Strongly agree	Count	4	2	20	13	4	43
		% of Total	1.0%	0.5%	4.9%	3.2%	1.0%	10.6%
Total		Count	26	60	236	71	14	407
		% of Total	6.4%	14.7%	58.0%	17.4%	3.4%	100.0%

Appendix 8: Factor analysis actual behavior with the three dimensions and with the five dimensions

Rotated Component Matrix[a]

	Component		
	1	2	3
AB_01	.673	.037	-.018
AB_02	.625	.434	.077
AB_03	.147	-.059	.584
AB_04	-.354	.088	.788
AB_05	.105	.786	.163
AB_06	.114	.761	-.266
AB_07	.515	-.364	.375
AB_08	.583	.256	-.342

Extraction Method: Principal Component
Analysis.
 Rotation Method: Varimax with Kaiser
Normalization.
a. Rotation converged in 6 iterations.

Rotated Component Matrix[a]

	Component		
	1	2	3
AB_01	.673	.037	-.018
AB_02	.625	.434	.077
AB_03	.147	-.059	.584
AB_04	-.354	.088	.788
AB_05	.105	.786	.163
AB_06	.114	.761	-.266
AB_07	.515	-.364	.375
AB_08	.583	.256	-.342

Extraction Method: Principal Component
Analysis.
 Rotation Method: Varimax with Kaiser
Normalization.
a. Rotation converged in 6 iterations.

Appendix 9: Independent t-tests for the control variables with the dependent variable and its scales

Total scales compared	Equal variances assumed	Both years compared			
		t	Sig. (2-tailed)	Mean Difference	Std. Error Difference
ICS	x	-1.16	.25	-.04	.04
IEng	x	-1.80	.07	-.08	.04
RCD	x	-.92	.36	-.05	.05
Iconf	x	3.50	.00	.19	.06
IEnj	x	-1.12	.26	-.07	.06
IAtt	x	-4.39	.00	-.23	.05

Gender	Equal variances assumed	2013				Equal variances assumed	2014			
		t	Sig. (2-tailed)	Mean	Std. Error		t	Sig. (2-tailed)	Mean	Std. Error
ICS	x	2.19	.03	.10	.04	x	-.28	.78	-.02	.07
IEng	x	2.47	.01	.12	.05	x	1.58	.12	.12	.08
RCD		5.98	.00	.34	.06	x	.45	.65	.04	.10
Iconf	x	-3.11	.00	-.20	.06	x	-2.51	.01	-.24	.10
IEnj	x	1.38	.17	.10	.07	x	-.13	.89	-.01	.10
IAtt	x	1.86	.06	.11	.06	x	-.01	.99	.00	.09

English language-based programme	Equal variances assumed	2013				Equal variances assumed	2014			
		t	Sig. (2-tailed)	Mean	Std. Error		t	Sig. (2-tailed)	Mean	Std. Error
ICS	x	-6.64	.00	-.28	.04	x	-.89	.38	-.06	.07
IEng	x	-6.47	.00	-.30	.05	x	-1.50	.13	-.12	.08
RCD	x	-6.42	.00	-.38	.06	x	-.04	.97	.00	.10
Iconf	x	-4.00	.00	-.25	.06	x	-.44	.66	-.04	.10
IEnj	x	-4.01	.00	-.28	.07		-.43	.67	-.05	.11
IAtt		-3.16	.00	-.19	.06	x	-1.11	.27	-.10	.09

Lived longer than 5 years in Holland	Equal variances assumed	2013				Equal variances assumed	2014			
		t	Sig. (2-tailed)	Mean	Std. Error		t	Sig. (2-tailed)	Mean	Std. Error
ICS						x	.90	.37	.07	.08

	Equal variances assumed	2013				Equal variances assumed	2014			
		t	Sig. (2-tailed)	Mean	Std. Error		t	Sig. (2-tailed)	Mean	Std. Error
IEng						x	1.95	.05	.17	.09
RCD						x	-.33	.74	-.04	.11
Iconf						x	-.55	.58	-.06	.11
IEnj						x	-.16	.88	-.02	.12
IAtt						x	2.96	.00	.30	.10
Dutch versus German	Equal variances assumed	**2013**				Equal variances assumed	**2014**			
		t	Sig. (2-tailed)	Mean	Std. Error		t	Sig. (2-tailed)	Mean	Std. Error
ICS	x	-6.85	.00	-.32	.05	x	-1.10	.27	-.10	.09
IEng	x	-6.59	.00	-.34	.05	x	-1.69	.09	-.17	.10
RCD	x	-5.72	.00	-.38	.07	x	-.17	.86	-.02	.13
Iconf	x	-3.72	.00	-.26	.07	x	.32	.75	.04	.13
IEnj	x	-3.27	.00	-.25	.08	x	-.79	.43	-.11	.13
IAtt	x	-5.38	.00	-.35	.07	x	-2.07	.04	-.24	.11
Ever lived abroad	Equal variances assumed	**2013**				Equal variances assumed	**2014**			
		t	Sig. (2-tailed)	Mean	Std. Error		t	Sig. (2-tailed)	Mean	Std. Error
ICS	x	5.85	.00	.30	.05	x	2.92	.00	.20	.07
IEng	x	4.67	.00	.27	.06	x	2.81	.01	.22	.08
RCD	x	3.02	.00	.23	.07	x	.84	.40	.08	.10
Iconf	x	4.61	.00	.35	.08	x	3.62	.00	.36	.10
IEnj	x	3.76	.00	.31	.08	x	.41	.68	.04	.11
IAtt	x	4.99	.00	.36	.07	x	3.30	.00	.29	.09
Want to study abroad	Equal variances assumed	**2013**				Equal variances assumed	**2014**			
		t	Sig. (2-tailed)	Mean	Std. Error		t	Sig. (2-tailed)	Mean	Std. Error
ICS	x	5.92	.00	.27	.05	x	4.32	.00	.27	.06
IEng	x	5.71	.00	.28	.05	x	4.16	.00	.30	.07
RCD	x	3.88	.00	.26	.07	x	2.54	.01	.23	.09
Iconf	x	4.86	.00	.33	.07	x	3.07	.00	.28	.09
IEnj	x	4.60	.00	.34	.07	x	2.22	.03	.21	.10
IAtt	x	2.38	.02	.16	.07	x	3.87	.00	.31	.08

Have international friends	Equal variances assumed	2013				Equal variances assumed	2014			
		t	Sig. (2-tailed)	Mean	Std. Error		t	Sig. (2-tailed)	Mean	Std. Error
ICS	x	6.85	.00	.33	.05	x	3.23	.00	.21	.07
IEng	x	7.43	.00	.38	.05	x	3.12	.00	.24	.08
RCD		5.12	.00	.32	.06	x	1.53	.13	.15	.10
Iconf	x	5.38	.00	.38	.07		3.14	.00	.28	.09
IEnj	x	4.05	.00	.32	.08	x	2.03	.04	.20	.10
IAtt	x	3.33	.00	.23	.07	x	2.23	.03	.19	.09

Appendix 10: Number of respondents, mean, standard deviation of all independent t-tests, in the same order as in appendix 8

		2013				2014			
	Year	N	Mean	S.D.	Std. Error Mean	N	Mean	S.D.	Std. Error Mean
Intercultural sensitivity	2013	419	3.68	.44	.02	419	3.68	.44	.02
	2014	196	3.72	.44	.03	196	3.72	.44	.03
Interaction Engagement	2013	419	3.52	.48	.02	419	3.52	.48	.02
	2014	196	3.60	.51	.04	196	3.60	.51	.04
Respect for cultural differences	2013	419	4.06	.62	.03	419	4.06	.62	.03
	2014	196	4.11	.64	.05	196	4.11	.64	.05
Interaction Confidence	2013	419	3.60	.64	.03	419	3.60	.64	.03
	2014	196	3.41	.65	.05	196	3.41	.65	.05
Interaction Enjoyment	2013	417	4.00	.70	.03	417	4.00	.70	.03
	2014	196	4.07	.66	.05	196	4.07	.66	.05
Interaction Attentiveness	2013	414	3.21	.60	.03	414	3.21	.60	.03
	2014	196	3.43	.58	.04	196	3.43	.58	.04
Gender		N	Mean	S.D.	Std. Error Mean	N	Mean	S.D.	Std. Error Mean
Intercultural sensitivity	1 Female	168	3.74	.42	.03	68	3.72	.45	.05
	2 Male	246	3.64	.44	.03	126	3.73	.44	.04
Interaction Engagement	1 Female	168	3.60	.46	.04	68	3.68	.48	.06
	2 Male	246	3.48	.49	.03	126	3.56	.52	.05
Respect for cultural differences	1 Female	168	4.27	.50	.04	68	4.14	.67	.08
	2 Male	246	3.93	.66	.04	126	4.10	.62	.06
Interaction Confidence	1 Female	168	3.48	.65	.05	68	3.25	.66	.08
	2 Male	246	3.68	.61	.04	126	3.49	.63	.06
Interaction Enjoyment	1 Female	167	4.06	.67	.05	68	4.07	.69	.08
	2 Male	245	3.97	.71	.05	126	4.08	.65	.06
Interaction Attentiveness	1 Female	165	3.27	.58	.05	68	3.44	.58	.07
	2 Male	244	3.16	.62	.04	126	3.44	.58	.05
English Program		N	Mean	S.D.	Std. Error Mean	N	Mean	S.D.	Std. Error Mean
Intercultural sensitivity	No	221	3.55	.42	.03	107	3.68	.38	.04
	Yes	190	3.83	.42	.03	71	3.74	.54	.06

		N	Mean	S.D.	Std. Error Mean	N	Mean	S.D.	Std. Error Mean
Interaction Engagement	No	221	3.39	.49	.03	107	3.54	.47	.05
	Yes	190	3.69	.44	.03	71	3.66	.55	.07
Respect for cultural differences	No	221	3.89	.62	.04	107	4.09	.57	.06
	Yes	190	4.27	.57	.04	71	4.09	.77	.09
Interaction Confidence	No	221	3.49	.64	.04	107	3.36	.61	.06
	Yes	190	3.74	.60	.04	71	3.41	.70	.08
Interaction Enjoyment	No	221	3.88	.71	.05	107	4.03	.57	.06
	Yes	188	4.15	.67	.05	71	4.08	.79	.09
Interaction Attentiveness	No	220	3.12	.57	.04	107	3.39	.54	.05
	Yes	186	3.31	.64	.05	71	3.49	.60	.07
Five years in the Netherlands		N	Mean	S.D.	Std. Error Mean	N	Mean	S.D.	Std. Error Mean
Intercultural sensitivity	No					42	3.77	.52	.08
	Yes					148	3.70	.42	.03
Interaction Engagement	No					42	3.73	.57	.09
	Yes					148	3.56	.49	.04
Respect for cultural differences	No					42	4.08	.78	.12
	Yes					148	4.11	.60	.05
Interaction Confidence	No					42	3.35	.67	.10
	Yes					148	3.41	.65	.05
Interaction Enjoyment	No					42	4.05	.75	.12
	Yes					148	4.07	.64	.05
Interaction Attentiveness	No					42	3.66	.59	.09
	Yes					148	3.36	.57	.05
Dutch / German orignin		N	Mean	S.D.	Std. Error Mean	N	Mean	S.D.	Std. Error Mean
Intercultural sensitivity	Dutch	272	3.57	.42	.03	148	3.69	.41	.03
	German	112	3.89	.38	.04	29	3.79	.58	.11
Interaction Engagement	Dutch	272	3.41	.47	.03	148	3.55	.49	.04
	German	112	3.75	.44	.04	29	3.72	.60	.11
Respect for cultural differences	Dutch	272	3.94	.62	.04	148	4.11	.60	.05
	German	112	4.33	.54	.05	29	4.13	.85	.16
Interaction Confidence	Dutch	272	3.49	.65	.04	148	3.38	.63	.05
	German	112	3.75	.57	.05	29	3.34	.71	.13
Interaction	Dutch	271	3.93	.70	.04	148	4.05	.62	.05

		N	Mean	S.D.	Std. Error Mean	N	Mean	S.D.	Std. Error Mean
Enjoyment	German	111	4.18	.61	.06	29	4.16	.81	.15
Interaction	Dutch	269	3.08	.59	.04	148	3.36	.56	.05
Attentiveness	German	110	3.43	.54	.05	29	3.59	.59	.11
Have you ever lived abroad?		N	Mean	S.D.	Std. Error Mean	N	Mean	S.D.	Std. Error Mean
Intercultural	1 Yes	85	3.92	.43	.05	55	3.87	.47	.06
sensitivity	2 No	332	3.62	.42	.02	141	3.67	.42	.04
Interaction	1 Yes	85	3.74	.48	.05	55	3.76	.54	.07
Engagement	2 No	332	3.47	.47	.03	141	3.54	.48	.04
Respect for	1 Yes	85	4.24	.59	.06	55	4.17	.68	.09
cultural differences	2 No	332	4.02	.62	.03	141	4.09	.62	.05
Interaction	1 Yes	85	3.88	.58	.06	55	3.67	.62	.08
Confidence	2 No	332	3.53	.63	.03	141	3.30	.63	.05
Interaction	1 Yes	85	4.25	.71	.08	55	4.10	.69	.09
Enjoyment	2 No	330	3.94	.68	.04	141	4.06	.65	.05
Interaction	1 Yes	85	3.49	.52	.06	55	3.65	.58	.08
Attentiveness	2 No	327	3.13	.61	.03	141	3.35	.56	.05
Do you plan to study abroad in the near future? (E.g. for your minor or master)		N	Mean	S.D.	Std. Error Mean	N	Mean	S.D.	Std. Error Mean
Intercultural	1 Yes	285	3.77	.43	.03	93	3.86	.42	.04
sensitivity	2 No	121	3.50	.42	.04	98	3.59	.43	.04
Interaction	1 Yes	285	3.62	.46	.03	93	3.75	.49	.05
Engagement	2 No	121	3.33	.46	.04	98	3.46	.49	.05
Respect for	1 Yes	285	4.14	.60	.04	93	4.23	.60	.06
cultural differences	2 No	121	3.89	.63	.06	98	4.00	.66	.07
Interaction	1 Yes	285	3.71	.60	.04	93	3.54	.64	.07
Confidence	2 No	121	3.38	.65	.06	98	3.26	.63	.06
Interaction	1 Yes	284	4.11	.66	.04	93	4.18	.62	.06
Enjoyment	2 No	120	3.76	.73	.07	98	3.97	.69	.07
Interaction	1 Yes	283	3.26	.60	.04	93	3.60	.57	.06
Attentiveness	2 No	119	3.10	.61	.06	98	3.29	.55	.06
Do you have friend(s) from countries other than your home country?		N	Mean	S.D.	Std. Error Mean	N	Mean	S.D.	Std. Error Mean
Intercultural	1 Yes	316	3.76	.43	.02	133	3.79	.43	.04

		N	Mean	SD		SE	N	Mean	SD		SE
sensitivity	2 No	103	3.43	.38		.04	63	3.58	.43		.05
Interaction	1 Yes	316	3.62	.45		.03	133	3.68	.50		.04
Engagement	2 No	103	3.24	.47		.05	63	3.44	.49		.06
Respect for	1 Yes	316	4.14	.63		.04	133	4.16	.62		.05
cultural differences	2 No	103	3.82	.52		.05	63	4.01	.65		.08
Interaction	1 Yes	316	3.69	.61		.03	133	3.50	.67		.06
Confidence	2 No	103	3.32	.65		.06	63	3.21	.55		.07
Interaction	1 Yes	314	4.08	.71		.04	133	4.13	.62		.05
Enjoyment	2 No	103	3.76	.63		.06	63	3.93	.72		.09
Interaction	1 Yes	311	3.26	.63		.04	133	3.50	.58		.05
Attentiveness	2 No	103	3.04	.48		.05	63	3.30	.56		.07

Appendix 11: Multicollinearity check of the independent variables

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
						Change Statistics			
Together	.318[a]	.101	.094	.41973	.101	15.487	3	414	.000
Teaching style	.151[a]	.023	.020	.43627	.023	9.697	1	417	.002
Group work	.070[a]	.005	.002	.44024	.005	2.032	1	417	.155
Environ-ment	.262[a]	.069	.066	.42617	.069	30.630	1	416	.000

a. Predictors: (Constant), OEnv_Scale_4, OGW_Scale_3, OTS_Scale_6