

Developing Intercultural Competence through Collaborative Learning in International Higher Education

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Abstract

In this study it was hypothesized that collaborative learning in international higher education contributes to the development of intercultural competence. Two hundred and fifty-two students of an international business and management study programme of a Dutch university participated in two surveys on collaboration in a group learning activity and one survey on their development of intercultural competence. Additionally, three groups of four to six students took part in focus group interviews. The results indicated that when students perceive that the group process improves, the quality of the collaboration in terms of verbal interaction and equal contribution will also improve. Furthermore, the results revealed that a higher perceived quality of the collaboration relates to an increasing development of intercultural competence. The findings are discussed and related to implications for the use of group learning activities in international higher education.

Keywords: *intercultural competence, collaborative learning, international higher education, international classroom, educational design*

1. Introduction

In an interconnected world, intercultural encounters are part and parcel of our private and professional lives. Intercultural encounters can take place across national borders as well as within the same country borders, between people of different cultural backgrounds (Hofstede, & Hofstede, 2010). Adapting to this reality of interconnectedness, international higher education programmes aim to prepare their students for a professional career beyond the boundaries of their own culture, country and language (Freeman et al., 2009). To this end, study programmes have created both physical and online international classrooms, where local students of diverse cultural backgrounds learn alongside international students (Van der Wende, 2001). Thanks to its cultural diversity, the international classroom has a great potential for educating interculturally competent professionals of tomorrow. However, this

potential can remain untapped if there is little meaningful interaction and collaboration among the students of the ‘international classroom’. International education may realise its potential for intercultural development by designing and supporting collaborative learning in their curriculum.

In this section, we will provide a brief overview of relevant research regarding collaborative learning in higher education, followed by a succinct description of intercultural competence development. Thereafter, we will attend to the challenges higher education institutes face in fostering the development of intercultural competence of students in international classrooms. Subsequently, we will describe our hypothesis regarding the development of intercultural competence through collaborative learning and formulate our research questions.

1.1 Collaborative learning

Collaborative learning is defined by Janssen (2014) as a joint intellectual pursuit of a common goal. According to Johnson & Johnson (2009) in collaborative learning the most important focus is the realisation of positive social interdependence: learning outcomes of individuals are affected by their own and others’ actions whereby all of the actions individuals undertake, promote the achievement of the common goal.

Collaborative learning or Group Learning Activities (GLAs) are an important and widely used form of instruction in higher education due to their multiple learning outcomes. Participation in GLAs can lead to (shared) knowledge acquisition, higher student motivation as well as the development of higher-order thinking skills, meta-cognitive skills and social/collaborative skills (De Hei, Strijbos, Sjoer, & Admiraal, 2016). Several authors (i.e. Janssen, 2014; Strijbos, Martens, & Jochems, 2004) emphasise that to attain these learning outcomes, GLAs need to be designed and implemented with a focus on interaction among students. In this literature, it is advised that the focus of GLAs should not merely be on the product(s) but in particular on the process of collaborative learning, namely on how students work together during the project. In their review of theoretical and pedagogical perspectives on collaborative learning and orchestrating creativity, Härmäläinen, and Vähäsantanen (2011) state that guiding the collaborative process among students is a key role for teachers. Wilson, Ludwig-Hardman, Thornam, and Dunlap (2004) also emphasise the teacher role; teachers should help students manage their group work by making sure students are engaged in meaningful interaction and by creating a safe and inclusive learning environment. Gregersen-Hermans (2016) and Irish and Scrubb (2012) suggest that teachers should model culturally-inclusive and interculturally

competent behaviour. Especially in the international classroom, where more salient cultural differences among students can add a layer of complexity to their interaction and collaboration, this modelling is important.

1.2 Intercultural competence

An important aim of international education is the acquisition of intercultural competence. For our research we have adopted Deardorff's widely used definition of intercultural competence as "the ability to communicate effectively and appropriately in intercultural situations" (Deardorff, 2004, p. 194). To develop and attain a high level of intercultural competence, Deardorff (2006) proposes a comprehensive model of composite attitudes, knowledge and skills. In this model, attitudes such as curiosity, openness and respect form a condition for acquiring cultural self-awareness, socio-linguistic awareness and knowledge of other peoples' cultural viewpoints. Deardorff (2006) maintains that these positive attitudes can also stimulate the development of skills such as listening, interpreting, analysing and relating. This composition of attitudes, knowledge and skills will impact positively on the internal cognitive and affective outcomes such as empathy, flexibility in choosing and using appropriate communication style, ethno-relativity and tolerance for ambiguity. Deardorff's process model finally leads to successful intercultural behaviour and communication which is deemed appropriate from the interlocutor's viewpoint. This model presupposes a process of continual learning which can result in an increased intercultural competence.

With its wide applicability, this process model can be used to provide direction for developing and assessing intercultural competence in an educational context. It's a useful model because it identifies a clear set of attitudes and skills that can be observed and measured as well as internal and external outcomes which reflect personal development and performance (Gregersen-Hermans, 2016). However, this model does not reflect the ever-increasing phenomenon of globalisation where cultural identity is multi-layered and cannot be easily categorized (Deardorff, 2009). Another limitation relevant to the educational context, is that it does not specify clear criteria or stages of intercultural competence development (Gregersen-Hermans, 2016).

1.3 Challenges for international higher education

In this paragraph, we will attend to the challenges higher education institutes face in fostering the development of intercultural competence of students in international classrooms.

International study programmes in Europe often use English as a medium of instruction (Haines, & Dijk, 2016). In non-English-speaking European countries, most students in the international classroom are non-native speakers of English with varying degrees of proficiency. A lower level of English proficiency can be an obstacle to collaborative learning in the international classroom (Byram, 1997; Wang, & Byram 2011; Foster, & Stapleton 2012; Mukminin & McMahon, 2013).

Besides language proficiency, there are several barriers to fostering intercultural competence in the international classroom. As mentioned before, teachers are essential in facilitating interaction among culturally diverse students within a safe and inclusive learning environment (Treleaven, 2010; Wilson, Ludwig-Hardman, Thornam, & Dunlap (2004). In the international classroom, teachers may need to help students with social and psychological adjustment issues (Jackson, 2013), as well as academic cultural differences (Safipour, Wenneberg, & Hadziabdic, 2017). Yet, some teachers feel underequipped or may be reluctant to fulfil this role (Sanderson, 2008). This role can be perceived as time-consuming in view of the teachers' commitments to their academic discipline (Hawanini, 2011). In addition, teachers may face negative reactions if they ask students to leave their comfort zone and face the uncertainty of intercultural encounters (Leask, & Carroll 2011). Also, students prefer to collaborate with peers of a similar cultural background rather than engaging with those they perceive as different (Cotton, George, & Joyner, 2013; Volet and Ang, 2012). Both international and local students believe that working in culturally homogeneous groups will progress more smoothly, with fewer conflicts and misunderstandings. What's more, local students tend to believe that international exchange students are not interested in interacting with them and vice versa. This impression persists even after having experienced a successful intercultural encounter (Volet and Ang, 2012).

Finally, the assessment of intercultural competence can be complex (Griffith, Wolfeld, Armon, Rios, & Liu, 2016). Intercultural competence should be assessed using a mixed-method approach through direct evidence, namely critical reflection and performance, as well as indirect evidence using self-report measures such as surveys or inventories (Deardorff, 2011).

1.4 Developing intercultural competence through collaborative learning

In curricula of higher education programmes, supporting students in developing intercultural competence is required (Freeman, et al., 2009). However, given the challenges in fostering intercultural competence faced by teaching staff and students in higher education, mere participation in an international classroom will not automatically lead to more intercultural competence (Leask and Carroll, 2011).

International studies may provide students with many opportunities for intercultural social interaction during collaborative learning (Hofstede, & Hofstede, 2010). Johnson and Johnson (2009) emphasize that to stimulate social interaction through the design of the collaborative learning environment, the GLA could comprise tasks that provoke positive interdependence between students, regular group evaluations of the collaborative process, and social activities related to the assignment. Stimulating social interaction in GLAs could, among other learning outcomes, also contribute to the development of intercultural competence.

Engaging students in good quality collaboration may contribute to several learning outcomes, but only when designed and implemented with a focus on the interaction, the collaborative process and the intended learning outcomes (Strijbos, Martens, & Jochems, 2004). The “process of collaborative learning” refers to the changing nature of how students work together on a common/given task. This is influenced by how they relate to one another during the project (and this can change during the period they work together), how autonomous they feel in performing the task, how interested they are in the task and how competent they feel about completing it (Boekaerts & Minneart, 2006). Finally, students should be asked to reflect on their behaviour and communication style when taking part in collaborative projects (Gregersen-Hermans, 2016).

Summarising, we hypothesise that when students in an international classroom, where they have several intercultural encounters during GLAs, experience the collaborative process as positive, they will engage in good quality collaboration, and that this leads to enhanced development of intercultural competence. Accordingly, we formulated the following research questions:

- (1) To what extent does the process of collaborative learning relate to the quality of the collaboration?
- (2) To what extent does the quality of the collaboration relate to the development of intercultural competence?

2. Method

We researched the process of collaboration, the quality of the collaboration and the development of intercultural competence of students, using a concurrent mixed methods design (Koskey & Stewart, 2013; Castro et al. 2010) in an existing GLA. This GLA, called the Integrated Project Semester 1 (IP1), was part of the curriculum of an International Business and Management study programme (IBMS) in a University of Applied Sciences in the Netherlands. In this programme, English is the medium of instruction.

2.1 Participants

In this study 252 first-year students participated. The non-local students arrived in the Netherlands at the start of the academic year. The ages of the students, 43.7% female, in the full cohort ranged from 16 to 27 years ($M = 19.1$, $SD = 2.3$). The home students ($N=147$), 60.5% female, were Dutch with ages between 16 to 27 years ($M = 19.1$, $SD = 2.5$). The 73 international students, 47.9% female and aged from 16 to 27 years ($M = 19.3$, $SD = 1.9$), had a variety of nationalities: 14 had the Chinese nationality, 8 Bulgarian, 7 Romanian, 7 Dutch Antillean, and 4 German. The nationalities of the other students (less than 4 per nationality) were Bangladeshi, Belarussian, Bermudan, Eritrean, Finnish, Ghanaian, Greek, Haitian, Hungarian, Indonesian, Iraqi, Irish, Italian, Kazakhstani, Lithuanian, Moldovan, Moroccan, Nepalese, New Zealander, Pakistani, Peruvian, Filipino, Polish, Russian, Spanish, Swedish, Sierra Leonean, Slovakian, Turkish, Ugandan, Ukrainian, Vietnamese and Zimbabwean. The nationality of 32 students is unknown. All international students were fully enrolled students in the first-year bachelor programme of IBMS, aiming at obtaining a full bachelor degree in the Netherlands.

Most students had prior international experience; 73.1% of the students had lived abroad for more than one year prior to this study. The self-reported number of languages students deemed themselves proficient in varied from 1 to 5 ($M = 3.4$, $SD = 1.0$).

2.2 Learning environment: GLA

Throughout the first semester of the academic year 2016-2017, the students were required to take part in a GLA, IP1. Each first-year IBMS group of roughly 25 students were assigned to work into teams of five students each. These teams were created by their teacher to be as culturally diverse as possible, each team including at least one non-local student.

In IP1 students were required to integrate and apply the knowledge gained in two courses, Marketing and Introduction to Market Research. Besides completing these courses students were required to attend weekly group-work sessions scheduled in their timetables; these sessions were not teacher-guided. The total amount of self-study expected from students was approximately six hours a week. For IP1, students had to choose a foreign product that they would like to introduce into a Dutch supermarket and do research about its potential by investigating the Dutch market, potential competitors, consumer behaviour, and so on. Based on the research findings students developed a marketing strategy and fitting marketing mix, which then culminated in a final marketing plan.

In order to focus more on the interaction and the collaborative process, five lecturers gathered in two consecutive focus group sessions to redesign the course as used in the previous year using the GLAID-framework (De Hei, Strijbos, Sjoer, & Admiraal, 2016). This framework to design group learning activities consists of eight design components: 1) interaction, 2) learning objectives and outcomes, 3) assessment, 4) task characteristics, 5) structuring the collaboration, 6) guidance, 7) group constellation, and 8) facilities. The design of each of these components needs to be aligned with the other components to optimise the group learning activity. The course was adjusted in several ways.

Previously, students' interaction meant coordinating and planning the project, exchanging and discussing ideas, and agreeing on an approach to work on the assignment, the marketing plan. In the focus group discussion, the IP1 teachers stated they would like the students also to interact in the following manner: to demonstrate their knowledge about marketing by explaining this knowledge to group members, and to persuasively argue their point of view to group members. Furthermore, the interaction among group members should also entail receiving and giving peer feedback on the quality and quantity of their contributions. This adjustment was aligned with five other course design components. In the design component "learning objectives", collaborative skills were made explicit in the course description for the students. The component "assessment" required students to write a reflection on their own and their group members' contribution to the group process, and the weight of this individual reflection in relation to the marketing plan was adjusted from 25% to 40%. In the component "task characteristics", evaluating the group process was added to the tasks of the group work meetings and had to be reported in the meeting minutes. In the component "guidance" was described that the guiding teacher pays attention to having students evaluate the group process during group work meetings and that a training regarding the coaching of groups had to be organised for the teachers. In the component "facilities" two aspects of the course were

adjusted: 1) a new format was provided to students for minute-taking, in which one of the requirements was to evaluate the meeting, and 2) a digital space was created to facilitate giving and receiving peer feedback on the documents the students submitted.

2.3 Measurements

This section describes the data collection tools used in this study.

2.3.1 Measuring the development of intercultural competence

To assess the development of intercultural competence, the Intercultural Readiness Check (IRC) was used. The IRC consists of the dimensions: intercultural sensitivity, intercultural communication, building commitment, and managing uncertainty. These dimensions of the IRC are comprehended in the Deardorff model.

2.3.2 Measuring the process of collaborative learning

The Quality of Working in Groups Instrument (QWIGI) designed and validated by Boekaerts and Minneart (2006) consists of four scales: relatedness, autonomy, competence and interest. This instrument was used to monitor the process of the collaboration.

2.3.3 Measuring the quality of the collaboration

A survey including translated scales from a survey of a study of De Hei, Admiraal, Sjoer and Strijbos (2017) was used to measure the perception of the quality of the collaboration in the groups after completion of the project. It describes the scales ‘contribution to the collaboration’ and ‘verbal interaction’. The translated instrument was not piloted separately. However, reliabilities from the original (Cronbach’s Alpha Contribution = 0.78 and Cronbach’s Alpha Verbal Interaction = 0.75) and translated version (Cronbach’s Alpha Contribution = 0.69 and Cronbach’s Alpha Verbal Interaction = 0.62) are both sufficient reliable.

Two additional scales of the IRC, not specified in the IRC as specific dimensions of intercultural competence, were also used to quantify the perceived quality of the collaboration: ‘enthusiasm for diversity’ and ‘enthusiasm for teamwork’. The IRC is validated by Brinkmann and Weerdenburg (2014).

2.3.4 Focus group interviews

Three focus group interviews were used to gather detailed information about the collaborative process, the factors that affected the quality of collaboration among students in a group and the development of intercultural competence. The interviews were conducted with six, five and respectively four students from three different classes and different teams; in two focus

groups, it occurred that two members of the same team were present. The students volunteered to take part in the interview after the class mentor invited all students of that class.

2.3.5 Placement of measurements in time

All IRC dimensions as well as the QWIGI were completed at the start of the project and after the completion of the project. The additional scale of the IRC “enthusiasm for teamwork” was used at two points in time to obtain growth via difference scores.

The interviews were scheduled a couple of weeks after students’ deadline for completing the first part of the group assignment.

Figure 1 presents graphical representation of the timeline and placement of measurements just discussed.

***** *insert figure 1 about here* *****

Printed versions of the surveys were distributed to students during mentor classes. Students filled in the surveys individually in silence during class. After completion the surveys were anonymously returned to the researchers.

2.4 Analyses

Multiple regression analyses with a correction for multilevel classroom structure were performed to assess the assumed linear dependency of the perceived quality of the collaboration at the end of the project on growth of the (perceived) collaborative process within the student teams. The latter growth was defined as the difference between pre- and post-measures. All models were corrected for covariates age, gender and nationality, as well as for multiple testing. No interactions were modelled as no moderation was hypothesized. A second set of multiple regression analyses, again with a correction for multilevel structure, was performed to quantify the dependency of perceived quality of the collaboration at the end of the project on the growth of the self-reported intercultural competence (again, the difference between pre- and post-measures). All models were corrected for age, gender and nationality, as well as for multiple testing.

Figure 2a and 2b illustrate the analyses, respectively matching research question 1 and research question 2, using the blocks from Figure 1.

*****insert Figure 2a about here*****

***** insert Figure 2b about here*****

Sensitivity analyses were performed including the pre-measures as a covariate, yielding equivalent results, thus supporting stability of the conclusions.

Furthermore, as the intra-class-correlations ranged between 0.01 and 0.12, explorative analyses (multilevel ANOVA) were performed to assess the differences between classes in the dependent variables, using group composition, regarding cultural background and gender, and group size as covariates.

Table 1 shows the descriptives of the variables of this study. Table 2 shows the correlation between the variables.

*****insert table 1 about here*****

*****insert table 2 about here*****

The focus group interviews were transcribed manually. First, two of the researchers coded the interviews individually. The codes were derived from the scales of the quantitative part of the study. To guard against pre-set interpretations, both the authors checked each other's codings and all results were discussed until agreement (cf. Marble, 1997).

3. Results

The research questions are addressed by analyses on data from both surveys as well as focus group interviews. Subsequently, the findings of the explorative multilevel analyses focussing on differences between classes will be reported. Difference scores (for growth) were computed. None of the resulting differences showed a problematically skewed distribution (standardized skewness > 3.72), except for Competence ($z_{\text{skew}} = 6.48$). This score was log-transformed with base 10 before being entered into the analysis.

*****insert table 3 about here*****

3.1 The process of collaborative learning related to the perceived quality of the collaboration

3.1.1 Surveys

The process of collaboration was measured using the QWIGI. All effect estimates are mutually corrected. When accounting for class differences, age, gender and nationality, growth in two of the scales, autonomy and competence, did not relate to the perceived quality of the collaboration. Growth in Interest in the GLA and growth in sense of relatedness between the team members partly contributed to the perceived quality of the collaboration:

- Growth of interest in the GLA contributes to better perceived quality of the collaboration regarding the interaction ($b = 0.07$, $t(148)=2.49$, $p < .05$). The above association did not differ per class/group ($\Delta\log\text{Likelihood}_{(\text{fixed},\text{random})} = 0.3$ with $df = 14$, $p > 0.05$).
- Growth of relatedness contributes to a higher perceived quality of the collaboration regarding equal contribution ($b = 0.233$, $t(148)=3.39$, $p < .05$). The above association did not differ per class/group ($\Delta\log\text{Likelihood}_{(\text{fixed},\text{random})} = 2.6$ with $df = 14$, $p > 0.05$).

None of the scales about the collaborative process related to enthusiasm for teamwork.

3.1.2 Focus group interviews

Congruent with the analyses of the quantitative data, the results of the focus group interviews regarding the process of the collaboration are described using the scales of the QWIGI, namely, interest, relatedness, competence and autonomy.

Interest

The factors students reported that contributed to an increasing interest in the GLA were the approaching deadlines, the feeling that one is making progress and gaining knowledge, teacher focus on guiding the group process and the content area of marketing. An important factor that negatively influenced their interest was the confusion students felt about the assignment, the assessment criteria or lack of guidance from the teacher. Finally, the grade students received after the first six weeks of the semester was indicated to influence interest in a positive or negative way. For instance, some participants felt that a high grade motivated them to work even harder, while others felt that a high grade made them passive and less

inclined to fully commit. Similarly, a low grade made some participants felt discouraged; for others, a low grade was a wake-up call to put in more effort.

Relatedness

Most students attributed conflicts or puzzling behaviour to character or personality rather than differences in cultural background. For some respondents these perceived differences considerably hindered building a good relationship. Some interviewees confessed not being interested in meeting team members that lacked friendship potential outside of class. Some students claimed that, when discussing conflicts in their team, they were able to separate the issue from the person; they believed that their feedback was not personal, it was about the work their team members delivered. However, they experienced that this feedback was often perceived as criticism and taken personally by the other team members.

By far the most frequently mentioned negative influence on the process of collaboration, was the frustration experienced with team members contributing less or submitting lower-quality work. Some students stated that the relationship with other team members was heavily influenced, in a negative manner, by unequal contribution from team mates and hence unequal workload, a phenomenon that all participants but one raised in the focus groups. Some participants said that they got along well in the beginning but as pressure increased, relationships grew sour. This was due mostly to time pressure as well as differing standards of quality within the team. Finally, several participants felt that sitting together with your team mates in class or meeting informally outside class can improve the relationship.

Competence and autonomy

The focus group interviews revealed that the GLA was experienced by most of the participants as challenging and stressful. Time-management and planning was a frequently named problem. As far as interaction was concerned, many students admitted that they spent the group work sessions dividing tasks to be completed at home and then went on to socialize instead of using the group-work sessions more efficiently, for example, by helping each other with the assignment and discussing each other's individual work. Faced with time pressure, one or two students in some teams took a leadership role to coordinate the work and finalise the project within the given deadline. The role of leadership related to efficient group work was frequently mentioned in all three interviews.

In working on the assignment, students experienced some form of autonomy since they could choose their own product and choose how to work on the tasks; this feeling of autonomy diminished however, due to unclear assessment criteria. Finally, students felt competent when

they understood the assignment and how to work on it and if they had prior experience with group work.

3.2 The quality of the collaboration related to the perceived development of intercultural competence

3.2.1 Surveys

All effect estimates are mutually corrected. When accounting for class differences, age, gender and nationality, both equal contribution and interaction contributed to part of the perceived growth of the perceived intercultural competence:

- Perceived equal contribution contributes to reported growth in intercultural communication ($b = 0.09$, $t(148)=3.29$, $p < .01$). The above association did not differ per class/group ($\Delta\log\text{Likelihood}_{(\text{fixed},\text{random})} = 0.02$ with $df = 5$, $p > 0.05$).
Perceived quality of interaction contributes to reported growth of building commitment ($b = 0.01$, $t(148)=3.00$, $p < .01$). The above association did not differ per class/group ($\Delta\log\text{Likelihood}_{(\text{fixed},\text{random})} = 0.18$ with $df = 5$, $p > 0.05$).
- Perceived quality of interaction contributes to reported growth in enthusiasm for diversity
($b = 0.28$, $t(148)=2.36$, $p < .05$). The above association did not differ per class/group ($\Delta\log\text{Likelihood}_{(\text{fixed},\text{random})} = 0.37$ with $df = 5$, $p > 0.05$).

Sensitivity analyses in which baseline group differences in intercultural competence were accounted for, showed equivalent results as reported above.

The growth of the perceived intercultural sensitivity and managing uncertainty were not related to the quality of the collaboration.

3.2.2 Focus group interviews

The quality of the collaboration itself, and related to the development of intercultural competence, is described congruent with the scales of the questionnaire students completed on this topic: 'contribution' and 'interaction'. Overall, the focus group interviews revealed that the major part of the discussion on intercultural competence focused on intercultural communication.

Contribution

Many students named the different levels of English proficiency in their team. The students stated that a lower level of English can hinder communication and therefore, lower contribution to the group discussion. In addition, some students mentioned the indirect communication style of some, especially Asian, group members. One student mentioned that his Chinese team member got more confident and outspoken when another Chinese student joined their team and therefore, contributed more. Another student mentioned that the team coaching they received from their mentor, helped them create psychological safety by giving their Chinese team member more opportunities to give input. Finally, a Chinese student claimed to have, in contrast to her fellow Chinese students, a direct, atypical communication style, contributing to the group work. Besides differing levels of English proficiency and communication styles, some non-Dutch speaking students experienced team members speaking Dutch, instead of English, as disrespectful.

Interaction

When discussing a sensitive issue, some students claimed that it is best to address the issue by asking directly; another student mentioned the need to adapt one's communication style to the needs of the other team member(s). Furthermore, a student confessed her reluctance to confront two domineering group members in the interest of group harmony.

When asked about what they have learned from the GLA that they can use in other collaborative assignments, many students' answers related to effective interaction. By interacting effectively in their future collaboration, some students feel they can positively influence their team members' work. These elements of effective interaction include addressing problems earlier when the collaboration does not go well, persistently reminding other team members of agreed standards, insisting on politeness, adapting one's communication style to the other person's needs, and investing in the relationship by talking more with team members.

3.3 Explorative multilevel analyses

As the intra class correlation was different from zero, thereby indicating differential group properties, we explored which demographic characteristics might constitute these differences individually. We explore possible effects of grades, languages, gender, age, nationality, years abroad, equal contribution and interaction. Classes only differed significantly on grades ($F(13) = 10,08$, $p < 0.001$), as a single influential covariate. The absence of further individual effects does not imply absence of a complex total (combined) effect of all aforementioned

variates. It seems reasonable that, on top of grade differences, groups differ only on a combination of demographic properties.

4. Conclusion and discussion

We hypothesized that when students in an international classroom, in which they have several intercultural encounters during GLAs, experience the collaborative process as positive, they will engage in good quality collaboration, and that this in turn leads to enhanced development of intercultural competence. This hypothesis was partly supported in our current work.

The process of collaborative learning related to the quality of the collaboration.

We found that growth of interest in the group work with culturally dissimilar group members relates to a higher perceived quality of the collaboration regarding the interaction. We also found that when students grow to feel more related to one another, they perceive the contribution to be more equal among group members. The question is whether the latter is actually the case. Leniency may also explain a more equal contribution of the group members. When student relations improve, they have learned to appreciate one another, and therefore they tend to show more understanding and leniency towards fellow students, for instance when a group member could not meet the agreed deadlines because of personal reasons. Similarly, research on peer assessment also indicates that leniency may lead to bias in giving peer assessment (Smith, 2010).

If we regard high(er) quality of collaboration as an outcome of a GLA, and interest as a form of motivation, this finding is congruent with the results of a study of Figueira and Duarte (2011) who performed an intervention to motivate students. Their implemented intervention led to higher motivation of students and a higher quality of learning outcomes. Therefore, we conclude that interest in the group work with culturally different others contributes the attainment of learning outcomes regarding the development of intercultural competence. Regarding perceived autonomy and competence, we did not find any evidence that these relate to the quality of the collaboration. The explanation for this local lack of association could be that individuals (within a group) vary much more than groups do between themselves. This might be due to strong group dynamics, which can have different effects on each individual, thereby causing 'large' differences between individuals in a group, but all differences within a group, although large, cancel out to the same level for all groups. An alternative and simpler explanation could be that the constructs of autonomy and competence are more ill-defined and cause a more imprecise measurement.

The quality of the collaboration related to the development of intercultural competence.

As far as the development of intercultural competence is concerned, our study indicates that the more equal contribution is perceived within a group, the higher the reported acquisition of intercultural communication. Additionally, we found that a better perceived quality of interaction correlates with a greater effort to build commitment, and a higher enthusiasm for diversity.

The focus group interviews supported the survey results. Students stated that effective interaction refers to proactiveness, politeness, flexibility in communication style and investment in the relationship. In order to increase student interest in the group work, students need to feel that they develop themselves by working on the assignment, that there is a sense of urgency to work on the assignment, that the content area aligns with their study choice, and that the teacher guides the group process. According to students, an essential part of effective group work is one or two students taking a leadership role. Furthermore, students regard English proficiency as another major success factor for effective international group work. Some of the student teams mentioned low English proficiency for some team members. This is congruent with the findings of other researchers, that a lower level of English proficiency may hinder the collaboration in an international classroom (Byram, 1997; Wang & Byram 2011; Foster & Stapleton 2012; Mukminin & McMahon, 2013). Finally, assessment and grading are very important to students. When the focus of the assessment is on the product, students will experience more stress and more problems in the intercultural communication, because what they talk about matters. A group grade can be perceived as unfair when the focus is on the assessment (Kagan, 1995). Language problems and problems in understanding each other's cultural behaviour may lead to this stress, because students want to pass the course. (Cotton, George, & Joyner, 2013).

5. Implications for international higher education regarding development of intercultural competence of their students

Implementing GLAs in international higher education supports the development of intercultural competence. However, the GLA as a learning environment needs to be designed with an intentional focus on the development of intercultural competence. This development can be triggered by including in the assessment a critical reflection by students on their intercultural experiences and behaviour, and a self-report questionnaire about their developing intercultural competence (Deardorff, 2011).

Teachers need to provide clear instructions on how students are expected to work in groups, with an emphasis on the urgency to focus on interaction within the group. In their instruction they are advised to put emphasis on the learning goals regarding the development of intercultural competence (Leask, & Carroll, 2011). Students indicated that specific instructions on the learning goals and clear assessment criteria would support them in their perception of autonomy and competence and thus contribute to a smoother collaboration process.

In the implementation of the GLA, guidance of the teacher should focus on the group process, rather than only on the product. The guiding teacher's role is supporting and encouraging the use of social and intercultural skills and creating a learning environment where all team members get sufficient opportunities to contribute to the group work. The guiding teacher plays an important role in supporting and modelling interculturally competent behaviour (Jackson, 2013; Safipour, Wenneberg, & Hadziabdic, 2017). Therefore, the teacher needs to be able to identify opportunities for intercultural learning in the GLA and use those opportunities to stimulate awareness of intercultural issues amongst students, thus providing support for the development of intercultural competence. This role proves to be a difficult one (Leask, & Carroll, 2011; Sanderson, 2008). To prepare teachers for this role, we advise additional training for teachers and/or peer-to-peer coaching.

Role distribution and students taking leadership may contribute to a good collaborative process. When there is no leader in a group, the guiding teacher could suggest someone to fulfil this role. The guiding teacher could address the issue of leadership in the group and encourage students to assign someone who fits the profile.

6. Limitations

The first limitation is that this study was performed at a specific university in the Netherlands residing in a very international city, with a very culturally diverse student population.

Furthermore, most of the students participating in this study had the experience of living abroad, both local and international students. Therefore, the results of this study merely relate to this specific academic environment. In future research this study could be repeated with a different population, such as in a university programme with fewer local students or in other countries. This may lead to more valid research conclusions regarding the development of intercultural competence through collaborative learning.

A second limitation is that the participants of the focus groups may have harboured some bias, as they volunteered to participate in the interview.

A third limitation is that interest in group work could not be disentangled from interest in (working) with culturally different others. Interest in group work specifically might be a moderator. In other words, this interest may be a vehicle for ‘interest in working with culturally different others’. However, formal testing requires both a very specific quantification and an interaction term in the analyses, which were beyond the scope of our study.

A fourth limitation regards the use of self-reports. We used self-reports to study the process and quality of the collaboration and the intercultural competence of students. Self-reports may cause bias because students may be willing to provide useful answers for their teachers (Schwarz, 1999). However self-reports also provide useful information regarding student satisfaction about their learning gains (Bowman, 2010).

7. Further research

We used self-reports to study the process and quality of the collaboration and the intercultural competence of students. In future studies the use of observations, interviews with teachers and student feedback and reflections on their role in group sessions may provide additional more insight in the student collaboration and the development of intercultural competence. As Deardorff (2011) emphasizes, to assess intercultural competence a mixed method approach is important, using self-report measures as well as direct evidence, such as observations of performance and critical reflection of students.

Another suggestion for further research concerns the distinction between collaborative skills and intercultural competence. Students in our study stated that effective group work interaction consists of proactively dealing with problems, being polite, adapting one’s communication style to group member’s needs and investing in the relationship. These elements resemble the use of appropriate social skills. In their research about essential elements of cooperation, Johnson & Johnson (2009) define social skills as follows: get to know and trust each other, communicate accurately and unambiguously, accept and support each other, and resolve conflicts constructively. Notably, Brinkmann and Weerdenburg (2014) provide the following examples of social behaviour as part of intercultural communication: observe what others say and do before reacting to them, listen carefully, do not interrupt others. A future study may investigate the question: “What specific skills distinguish intercultural competence from collaborative skills and how can we guide students in the development of these specific skills?”.

A final suggestion for further research: as introduced in Section 5, interest in culturally different others, teased apart from interest in group work, should be targeted explicitly in order to formally test its role as a covariate or even a moderator of other associations.

Summarizing, we conclude that using GLAs in international higher education may contribute to the development of intercultural communication, building commitment and enthusiasm for diversity, when the perceived quality of the collaboration is high. The design and implementation of the GLA needs to intentionally focus on ICC development as a learning goal. The higher education institute needs to pay attention to the competence of teachers to create intercultural learning from intercultural experiences. These insights contribute to an advanced understanding of the design of curricula that aim to support student's development of intercultural competence.

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