

Evaluation of an Intercultural Peer Training for Incoming Undergraduate Students at an International University in Germany

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Abstract

University education is increasingly becoming international. Therefore, it is important that universities prepare their new students for the challenges of an intercultural academic environment. The aim of the current study was to quantitatively evaluate the effectiveness of an intercultural peer-to-peer training offered to all new incoming students at Jacobs University Bremen, Germany. The training aims to facilitate the social and academic integration of students at this international university. A total of 117 first-year undergraduate students completed a pen-and-paper questionnaire with 47 items one semester (6 months) after attending the intercultural training. The results suggest that participants liked the structure of the training and the use of senior students as peer trainers. It appears that the training improved the awareness of the effects of culture (own and other) on the social life of students. However, the training was less adequate at preparing the participants for the student-centered academic culture at this university. In light of its cost-effectiveness, the intercultural training could be easily adopted for use at other universities as part of the campus-wide orientation activities. However, regardless of their culture, all new university students require more assistance to academically adapt to and succeed in multicultural classrooms.

Keywords

cross-cultural training, cultural diversity, intercultural competence, higher education

Introduction

Globalization and Higher Education

Tertiary education is increasingly becoming international as a result of globalization.

In this new global environment, one of the basic and fundamental functions of a university should then be the fostering of a global consciousness among students, to make them understand the relation of interdependence between peoples and societies, to develop in students an understanding of their own and other cultures and respect for pluralism. (Gacel-Ávila, 2005, p. 123)

Although highly valuable, cross-cultural contacts can also be associated with problems on various dimensions in academia. Socially, the intercultural contact can “reinforce stereotypes and prejudice if the experiences of critical incidents in intercultural contexts are not evaluated on cognitive, affective, and behavioural levels” (Otten, 2003, p. 15). Although learning is a universal process, learning styles vary across cultures (Van Egmond, Kühnen, & Li, 2013). In Western, mind-oriented cultures, it is expected from “the

learner to question the known and to explore and discover the new” (Li, 2005, p. 191). In contrast, in non-Western, virtue-oriented cultures, the learner needs to “develop the virtues of resolve, diligence, endurance of hardship, perseverance, and concentration” (Li, 2005, p. 191). Therefore, in the current times of increased student mobility and increased dependence on tuition revenues, it is essential for universities to actively assist new international students in terms of their social and academic integration that are necessary for a successful completion of studies (Fan & Lai, 2014).

One way of addressing these challenges in higher education is to develop and implement internationalization plans of research, curricula, and pedagogy (Alfred & Guo, 2012). Outside of the academic contexts, the cross-cultural or

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intercultural training and coaching programs have gained popularity, particularly in the expatriate contexts (Littrell, Salas, Hess, Paley, & Riedel, 2006) and in the medical profession (Beach et al., 2005). The general outcome of such programs is to adequately prepare the staff to facilitate a successful completion of expatriate assignments (Littrell et al., 2006) and to improve the cross-cultural health care provision (Beach et al., 2005). For similar reasons, such programs are also needed in higher education because, similar to the expatriates, international students need to be prepared to complete their “assignments” (study programs), and the providers of higher education, such as health professionals, need to be aware of issues affecting their students to successfully assist them with their studies.

Many factors that positively or negatively predict the psychosocial adjustment in university students have already been described. These factors include stress, social support, language proficiency, country of origin, length of stay, acculturation, social contact with members of the host country, self-efficacy, gender, and personality (Zhang & Goodson, 2011). Regardless of the knowledge of these factors, various obstacles continue to limit the integration of international students at foreign universities. Especially some groups of international students (such as those from non-Western countries) experience difficulties with academic adjustment into the Western educational systems (Rienties & Tempelaar, 2013). One reason for this finding might be that if intercultural training is offered at all then it is often targeting the international students alone with little involvement of the university-wide community. However, such an approach is insufficient for successful integration of international students into new cultures and improving their social contact with members of the host culture. Instead, belongingness (necessary for successful integration) can be best achieved during campus-wide activities designed to promote intercultural communication and integration of all members of a community (Glass & Westmont, 2014).

Overview of the Current Study

The current study focuses on the evaluation of one such campus-wide activity, the intercultural peer-to-peer training, offered annually to all incoming students since 2005 at a small (total undergraduate enrollment of 738 students in 2013-2014 academic year), international, private university in Northern Germany (Jacobs University Bremen). The main aim of the training is to facilitate the social and the academic integration of new students to the intercultural environment of this campus-based university that hosts students from some 110 nations (including only about 25% German students) and utilizes English as the language of instruction (for more information, see <http://www.jacobs-university.de>). Rather than focusing on international students alone, the training targets *all* incoming students and is not culture-specific due to the unique multicultural diversity of students,

staff, and faculty at Jacobs University. The reason for targeting all students is also to depart from the traditional distinction between “domestic” and “international” students. This is because, due to complex international migration patterns becoming prevalent in the current globalized world, progressively more students can be classified as “third culture kids” (Pollock & Van Reken, 2009). Such young people often grow up in one or more cultures outside their country of birth but may return to their passport country to study. Due to their multicultural experience, such students do not easily fit into the domestic/international classification.

A detailed description of the training has been outlined elsewhere (Binder, Schreier, Kühnen, & Kedzior, 2013). Briefly, for all incoming students, the training consists of a mandatory, full-day (8 hr) workshop conducted in small groups of 10 to 15 students by a pair of senior peers (usually second- and third-year students) and is offered annually at the end of the orientation period (late August) before the beginning of the academic semester. The trainers are prepared for conducting the training during a 2-day intensive workshop that equips them with necessary teaching skills (didactic and experiential methods) and topics to be addressed during the training. Such topics include the focus on the university’s learning model and issues related to studying, living, and socializing with students from diverse cultural and linguistic backgrounds (Binder et al., 2013). The trainers usually use a mixture of activities during the training ranging from lecture-style presentations to active discussions. Participants in the training are given frequent examples of intercultural issues that are likely to occur on campus and are asked to consider and discuss with others how they would respond to and react to such issues.

Although the intercultural training has been offered for the last 10 years at Jacobs University, it is unclear yet whether it actually works. Systematic reviews of studies between 1970s and 2000 have shown that, in general, intercultural training seems to be positively associated with skill development, adjustment, and performance (Littrell et al., 2006; Mendenhall et al., 2004). However, a unified theoretical framework to explain how and why any intercultural training should be effective is lacking (Black & Mendenhall, 1990). Although a review of such theoretical frameworks is beyond the scope of the current study, it is worthwhile to note that a multitude of theories have been proposed to explain how intercultural training might work. These frameworks include the social learning theory, the U curve of adjustment, the culture shock theory, and the sequential model of adjustment (Littrell et al., 2006). For the purposes of the current study, we focus on the social learning theory, which defines the necessary aspects of intercultural competence that could be empirically tested in an academic environment (Black & Mendenhall, 1990). Briefly, according to this theory, the intercultural training could be effective due to enhancing attention (to intercultural needs), retention (of the modeled behavior as a memory), reproduction (translating the

memory into actions), and incentives (to successfully utilize the acquired knowledge; Black & Mendenhall, 1990).

Based on the pilot evaluation of the intercultural training at Jacobs University, it can be indeed argued that the training was related to enhanced attention, retention, and reproduction, although the incentives of the training could be further improved. The pilot evaluation was conducted using qualitative, semi-structured, in-depth interviews with a purposive sample of eight first-year undergraduate students (Binder et al., 2013). Although, in general, the students liked the overall training format and the peer-trainer scheme, satisfaction with the training was highest only among students with *some* intercultural experience in contrast to students with *extensive* or *little* intercultural experience (Binder et al., 2013). The training appeared effective at adequately addressing the issues related to living and socializing on the multicultural campus (Binder et al., 2013). Respondents suggested, however, that more focus should be placed on the academic needs and expectations at Jacobs University (Binder et al., 2013).

Purpose of the Current Study

The current study was designed based on the qualitative findings from a small sample of students in Binder and colleagues (2013). The specific aim of the current study was to evaluate the intercultural peer-training quantitatively (using a pen-and-paper questionnaire) in a representative sample of students at Jacobs University. This evaluation was performed twofold. The first aim was to univariately inspect how all students evaluate various aspects of the training and how satisfied they are with their academic and social life regardless of their demographic characteristics. It was expected that higher satisfaction would be indicated by more positive ratings of training, academic, and social life. The second aim was to multivariately inspect if the rating of training is related to the rating of the academic and the social life controlling for various demographic characteristics of students (gender, age, study major, prior international experience, and nationality).

Study major was included in the analysis as a measure of academic/vocational interests because at the time of data collection, the university was organized around two academic schools: humanities/social science and engineering/natural science. According to anecdotal evidence from our interactions with students and vocational interest models (Tracey & Rounds, 1993), we assumed that students at our university could be divided into social/artistic versus realistic/investigative. Due to this division of interests, we hypothesized that the training could also be perceived differently depending on the study major in either of the two academic schools.

Prior international experience was included in the analysis because although the students at Jacobs University come from a wide range of cultural backgrounds (about

110 nations), some have more intercultural experience than others. Based on results of Binder and colleagues (2013), it was expected that students with moderate intercultural experience would rate the training more positively compared with those with little or extensive intercultural experience. Finally, because the university is located in Germany, it was of interest to compare how the training was perceived by students of German versus non-German origins.

It was expected that if the training is effective at integrating new students into tertiary education, then, regardless of demographic characteristics, a more positive overall rating of the training would be associated with higher satisfaction with academic and social life at Jacobs University. Furthermore, it was also expected that study major (either in humanities/social science or engineering/natural science) might moderate these relationships based on academic/vocational differences between students enrolled in these majors. However, the exploratory nature of this prediction was not based on any specific hypotheses.

Method

Participants and Procedure

Following a written informed consent, a total of 136 undergraduate, first-year students in the beginning of their second semester of studies took part in the current study. The study was conducted in early February 2013, one semester (6 months) after the participants attended the full day of the intercultural peer training (in late August 2012). The students were recruited from four large undergraduate courses in different disciplines (two in the social science and two in the natural science) and completed the questionnaire during class time. Participants in two of the four courses received course credits for participation in this study.

Students in their second semester were selected for this study because it was expected that one semester after the training they would still remember its content. Thus, such participants should be able to reflect on the training based on their experiences (academic and social) during the first semester of studies and living on the multicultural campus.

Questionnaire

A pen-and-paper questionnaire (see Supplementary Material S1) with 47 items in English (including 2 qualitative questions, 33 Likert-type scale questions on a 5-point scale, and 12 demographic questions) was developed based on the interview guide and findings of Binder and colleagues (2013). The questions regarding social and academic satisfaction (Q27-Q35) were adopted from Kühnen and colleagues (2012). All items were divided into three sections as follows:

Table 1. Participant Characteristics ($N = 117$ Undergraduate Students).

Characteristic (coding)	n (%)
Gender	
Male (0)	52 (44)
Female (1)	65 (56)
Study major	
Humanities/social science (0)	67 (57)
Engineering/natural science (1)	50 (43)
Nationality	
Other (non-German) (0)	74 (63)
German (1)	43 (37)
High school attended	
Local school (0)	81 (69)
International school (1)	36 (31)
Study-abroad experience	
No (0)	68 (58)
Yes (1)	49 (42)
Age in years ($M \pm SD$; range)	19 ± 1 (17-23)

1. Evaluation of training: training format (Q3-Q26), effects of training (Q11-Q22), performance of peer trainers (Q23-Q26);
2. Evaluation of the academic performance and the quality of social life at Jacobs University (Q27-Q35); and
3. Demographic characteristics (Q36-Q47), including student gender, age, nationality, languages spoken, study semester, study major, countries of residence before attending Jacobs University, high school type (local or international), language of instruction at school, past study-abroad experience, and the current (first semester) grade point average (GPA).

Responses to Question 1 (requiring a qualitative definition of what intercultural competence means to the participants) were content analyzed for the purposes of another study (Odag, Wallin, & Kedzior, 2015). Responses to Question 2 were used to confirm that all participants attended the full training session (8 hr). The 5-point Likert-type scale options (Q3-Q35) ranged from *very poor/strongly disagree* to *very good/strongly agree*. Question 7 was a reversely coded control question. The nominal demographic questions were dummy-coded (Table 1). Although a pilot study (using three students not included in the final sample) showed that the questionnaire was understandable to students, the responses to Question 46 were not analyzed because some participants reported the length of time away from their country of origin rather than the length of study-abroad experience. Similarly, the responses to Question 47 (first semester GPA) were not analyzed because first semester examination results were not available for some students at the time of data collection ($n = 23$).

Statistical Analysis

The evaluation of the intercultural training was done in IBM SPSS-21 using univariate descriptive statistics of responses to questions related to the training (Q3-Q26) and the academic performance/social well-being at Jacobs University (Q27-Q35).

An explanatory model of direct and indirect relationships among the overall rating of the training (Q4) and rating of the academic (Q28) and the social life (Q27) at Jacobs University, controlling for demographic characteristics of participants (gender, age, study major, prior international experience, and nationality), was computed using structural equation modeling in IBM AMOS-21. One respondent whose age was not provided was excluded from the final analysis.

“Study major” (humanities/social science or engineering/natural science) was a binomial variable. Participants who failed to report their study major ($n = 3$) or reported a major in both academic schools ($n = 16$) were excluded from the current analysis.

“Prior international experience” was measured using two binomial variables: prior study-abroad experience (yes vs. no; Q45) and high school type (local vs. international; Q43). The responses to Question 44 (the main language of instruction at high school: German vs. other) were excluded from the analysis because attending an international school was associated with a main language of instruction other than German (indicating singularity between Q43 and Q44).

“Nationality” (German vs. non-German) was a binomial variable coded based on responses to three open-ended demographic questions: nationality (Q38), native language (Q39), and country of residence 2 years before enrolling at Jacobs University (Q42). All participants with a German nationality (Q38) also reported German as their native language (Q39), and most reported having lived in Germany prior to enrolling at Jacobs University (Q42). Of the two participants who failed to report their nationality, one was classified as “non-German” based on the answer to Question 39 (native language English), while the other one was excluded from the analysis due to lack of response to Question 39.

Results

Participant Characteristics

A total of 277 first-year students were enrolled at Jacobs University in February 2013 (information from the Registrar’s office). Following exclusion of cases with incomplete data (19/136), the final sample included in the current analysis ($N = 117$) represents 42% of all first-year students at Jacobs University. All participants were young (17-23 years old), and mostly female, non-German, studying for majors in the humanities and social science, prior attendees of local (non-international) schools, and without prior study-abroad experience (Table 1).

Evaluation of the Intercultural Training (Univariate Approach)

The evaluation of the intercultural peer training was addressed in Q3 to Q26 of the questionnaire used in this study. Descriptive statistics of responses to Q3 to Q10, assessing the training format, are displayed in the Supplementary Table S1. Most participants found the training “good” in general (Q4), agreed that the training was about right in terms of duration (Q5), interesting in content (Q6), well-structured (Q8), and liked the teaching methods used (lectures, Q9, and experiential parts, Q10). Although most participants reported only a medium motivation to participate (Q3), they also disagreed that they would have preferred to spend time on something else (Q7).

Descriptive statistics of responses to Q11 to Q22, assessing the effects of training, are displayed in the Supplementary Table S2. Most participants agreed that the training made them think about their own culture (Q18), cultural differences in general (Q19), and understand the importance of cultural differences on campus (Q21). The majority of participants also agreed that the training prepared them for studying (Q11), living (Q12), and communicating with students from other cultures on campus (Q13). In contrast, on average, the students felt less prepared (chose only a “neutral” answer) to communicate with faculty (Q14) and staff (Q15) from other cultures at the university. Although the majority of students agreed that the training made them enjoy the cultural diversity on campus (Q20), they also experienced intercultural problems similar to examples mentioned during the training (Q16). However, in such cases, the majority referred back to advice from training (Q17) and agreed that the training prepared them to cope with such problems (Q22).

Descriptive statistics of responses to Q23 to Q26, assessing performance of the peer trainers, are displayed in the Supplementary Table S3. Most participants rated the general performance of the peer trainers highly positively (Q23), agreed that the trainers were well-prepared (Q24), liked the scheme of involving senior students as peer trainers (Q25), and agreed that they would like to become peer trainers themselves (Q26).

Descriptive statistics of responses to Q27 to Q35, assessing the general academic performance and social satisfaction at Jacobs University, are displayed in the Supplementary Table S4. Most participants reported being satisfied with the social (Q27) and the academic (Q28) life at Jacobs University. Most participants also found it easy to engage in active participation in classes (Q29), question and challenge ideas presented in readings (Q30), and formulate own ideas (Q31). Although most students thought that professors are explicit about assessment criteria (Q33), pedagogy of their teaching methods (Q34), and professor expectations (Q35), most students did not find it easy (chose only a “neutral” answer) to challenge professors in classes (Q32) at Jacobs University.

Evaluation of the Intercultural Training (Multivariate Approach)

The effectiveness of the intercultural training was tested using a fully saturated model utilizing the maximum likelihood estimation. Because the model was not confirmatory, the goodness-of-fit tests were not relevant in the current analysis. The model consisted of three main items that were used as proxies for the rating of satisfaction with the training (Q4), the academic (Q28), and the social life (Q27), five demographic characteristics (gender, age, nationality, study-abroad experience, high school type), and one moderator (study major). Figure 1 shows a simplified version of this model including the only demographic variable (gender) that had any statistically significant relationships with any of the three rating items. There were no differences in results between the simplified model and the model with the additional four demographic variables (age, nationality, study-abroad experience, high school type; results not shown). The standardized regression coefficients, β , and their statistical significance are shown in Table 2.

A more positive rating of training was associated with a higher satisfaction with the social life and the academic life in all participants (Figure 1, Table 2). However, the regression coefficients were only small and non-statistically significant in participants majoring in humanities/social science (Figure 1A, Table 2) compared with moderate and significant regression coefficients in participants majoring in engineering/natural science (Figure 1B, Table 2). The model also showed that of the students enrolled in the humanities/social science majors, females rated the training moderately more positively than males (β of .30; Figure 1A, Table 2). Furthermore, of the students enrolled in the humanities/social science majors, females were marginally less satisfied with their academic life than males (β of $-.25$; Figure 1A, Table 2).

Discussion

Univariate Evaluation

The quantitative results of the current study support and extend the qualitative findings of Binder and colleagues (2013) regarding the effectiveness of the intercultural peer-to-peer training offered at Jacobs University, in a representative sample of undergraduate students who participated in the training. In general, the current results suggest that the training indeed successfully addressed three of the four central elements of the social learning theory: attention, retention, and reproduction (Black & Mendenhall, 1990). According to the univariate evaluation, most student participants liked the training in terms of becoming more aware of the role and importance of culture (own and that of others) in living on a multicultural university campus. This finding is interesting considering that 42% of the

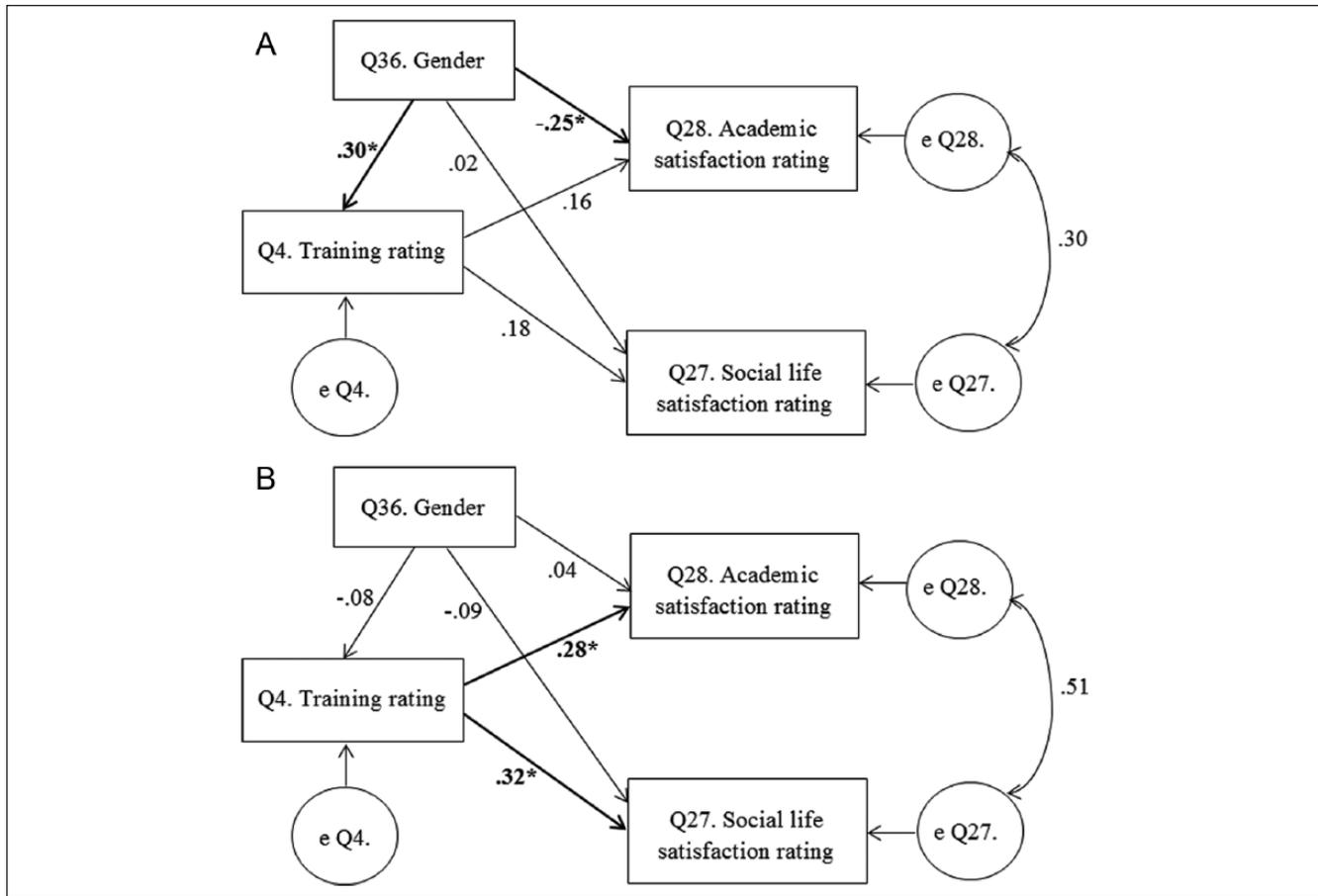


Figure 1. Standardized structural equation models of the relationships among the rating of intercultural training, academic life, social life, and gender depending on study major. (A) Study major in humanities/social science. (B) Study major in engineering/natural science. Note. The model is based on responses from 117 undergraduate students. e = error; Q = question. * $p < .05$.

Table 2. Unstandardized and Standardized Regression Coefficients in the Saturated Model Testing the Relationships Among the Rating of Training, Academic Life, and Social Life Controlling for Gender and Using Study Major as Moderator ($N = 117$ Undergraduate Students).

Items	Study major								
	Humanities/social science			Engineering/natural science			Social vs. natural sciences		
	<i>B</i> (<i>SEM</i>)	β	$p_{\text{two-tailed}}$	<i>B</i> (<i>SEM</i>)	β	$p_{\text{two-tailed}}$	χ^2 (<i>df</i> 1)	$p_{\text{two-tailed}}$	
Q4 training → Q28 academic	.18 (.14)	.16	.210	.32 (.16)	.28	.039*	.47	.493	
Q4 training → Q27 social	.21 (.14)	.18	.147	.35 (.15)	.32	.017*	.45	.503	
Gender → Q4 training	.53 (.21)	.30	.010*	-.14 (.22)	-.08	.550	4.62	.032	
Gender → Q28 academic	-.51 (.25)	-.25	.042*	.07 (.25)	.04	.790	2.62	.106	

Note. *B* = unstandardized regression coefficient; β = standardized regression coefficient; *df* = degrees of freedom; Q = question; *SEM* = standard error of the mean.

* $p < .05$.

sample already had some study-abroad experience prior to enrolling at Jacobs University and, thus, were expected to have at least a practical appreciation of other cultures. Regardless of this prior international experience, it seems

that the intercultural training stimulated the participants to actively reflect on how culture affects their daily lives. Specifically, most participants reported that the training made them appreciate the cultural diversity on the

multicultural campus. However, living on such a culturally diverse campus was not always smooth because many participants also reported having experienced culture-related issues and problems throughout their first semester of studies similar to those presented during training. Importantly, in cases of problems, participants reported having referred back to advice from the training and felt that the training prepared them to cope with such problems. These responses suggest that the training might have longer lasting effects than simply awaking an interest in culture in the short term (during training) only. Although such a long-term evaluation was beyond the scope of the current study, it would be interesting to find out if the training has effects lasting beyond one semester of studies.

Based on the findings by Binder and colleagues (2013), it can only be speculated that those participants with only some international experience had the highest motivation to participate in the training. However, it is likely that the current sample consisted mainly of those with little or extensive prior international experience. According to Binder et al., such two groups of students were only partially motivated to attend the intercultural training, similar to the majority opinion of our sample with only medium motivation to attend the training. Thus, the training should be appropriately advertised to improve both the motivation to attend it and the satisfaction with the training. Specifically, the advertisement should place a strong focus on the fact that culture could affect both the academic and the social integration of young students into tertiary education. Therefore, the training is necessary to discuss the role of culture with all students for the highest benefit for the whole community rather than only a small group of individuals.

The participants in our study also positively commented on the appropriate format and structure of the intercultural training (length, content, and teaching methods used). Similar to training at Jacobs University, lectures and discussions were the most frequently applied methods in other cross-cultural training programs (Mendenhall et al., 2004). The participants also positively rated the performance of peer trainers: They liked the general scheme of using senior students as trainers and some also expressed an interest in becoming trainers themselves in the future. Although reduced respect could result from a small age difference between trainees and trainers, there are a number of advantages of using peer students in delivering the intercultural training. For example, the trainers have the firsthand experience of the issues addressed throughout the training because they have already lived and studied on the same campus as the participants (new students). The peer trainers can also become unofficial mentors and contact partners for the participants who are likely to meet them again on campus, live in the same residential college, or even take part in the same study courses. The use of the in-house trainers is also an effective way of saving costs while delivering

content directly relevant to the audience. However, young peer trainers in their second or third year of undergraduate studies have inadequate professional experience and knowledge to assist the incoming students beyond the *practical* everyday knowledge on how to live and study on the multicultural campus. Instead, extensive professional experience and cultural development and maturation are required to enhance the deeper understanding of cultural competence beyond its practical components (Deardorff, 2006). We can only assume that young undergraduate students starting their undergraduate studies do indeed require what our training appears to deliver: the practical knowledge of how intercultural competence could enhance their satisfaction with social life on multicultural campus. Those interested in the topic can gain further and deeper understanding of the effects of culture on learning and behavior in various study courses offered at Jacobs University.

Although the majority of participants reported being, in general, satisfied with their academic life at Jacobs University, it seems that the training was less effective at addressing some academic needs required on this multicultural campus. Therefore, the fourth key element of the social learning theory (incentives; Black & Mendenhall, 1990) was inadequately addressed by our training. It seems that the link between intercultural competence and academic skills and performance could be made more explicit, perhaps by involving faculty in the future training. Although the majority of participants reported that the training prepared them well for communicating with fellow students, they reported being inadequately prepared for communicating with faculty and staff. Perhaps for this reason, most participants reported that they found it difficult to challenge professors in classes although many courses at Jacobs University are designed as small group, interactive seminars, during which students are required to express their own opinion and debate various issues. These results are surprising because, on the contrary, the majority of students reported that it was easy for them to engage in active participation in classes. Therefore, the training might have been effective at highlighting the importance of active participation in classes (which is required and often graded) unless our sample was biased toward students from Western (mind-oriented) cultures who were already accustomed to such a teaching style (Li, 2005). Although such a sampling bias cannot be ruled out, it is unlikely because the sample of 130 students (from the 136 participants in the current study) who answered the qualitative Question 1 (Odag et al., 2015) consisted of 52% of students from individualistic (mind-oriented) cultures according to Hofstede's individualism/collectivism index (Hofstede & Hofstede, 2005). Therefore, it appears that the training should focus on addressing the communication of students with faculty and staff to further improve their satisfaction with the academic life on this multicultural campus.

Multivariate Evaluation

The results of our multivariate analysis revealed that the associations between the rating of training and the academic or the social life were indeed moderated by the study major. Specifically, a more positive rating of training was associated with a more positive rating of both the academic and the social life but only in students with study majors in engineering and natural science. Based on the choice of academic major, it can only be speculated that some students with majors in humanities and social science were already interested in the concept of culture prior to enrolling at the university and, thus, did not link the rating of the training with the rating of their social/academic life. This is in contrast to students majoring in natural science who might have considered the effects of culture on their academic and social life only as a result of the training.

Furthermore, two gender and major-related effects emerged. First, it appears that among study majors in humanities and social science, the female students rated the satisfaction with training more positively than male students. However, regardless of being more satisfied with the training, the female students in humanities and social science majors also reported being less satisfied with their academic life than male students. Therefore, it appears that the training did not adequately address the issues of academic preparation and adjustment necessary for later successful academic performance in all students. It is possible that the apparent gender effect is, in fact, secondary to a culture effect. Specifically, satisfaction with academic performance is related to satisfaction with and understanding of teaching methods utilized at the host university (Rienties & Tempelaar, 2013). It has been shown that students from more masculine-oriented and strong uncertainty-avoidance countries, such as Germany, prefer teacher-centered teaching methods (Hofstede, 1986). Thus, if the female students in the humanities and social science majors in our sample were predominantly from masculine and strong uncertainty-avoidance countries, then they may have been less satisfied with their academic performance due to the student-centered teaching approach often utilized at Jacobs University. Furthermore, students from the German-speaking countries experience significant personal-emotional adjustment problems and a lower satisfaction with their social life when studying in the neighboring Netherlands (Rienties & Tempelaar, 2013). Such students may also experience similar adjustment problems on this multicultural campus, which could have contributed to lower satisfaction with academic life, particularly in predominantly German female students enrolled in humanities and social science majors.

Study Limitations

There were a number of limitations in the current study similar to limitations observed in other studies evaluating

the effectiveness of intercultural training programs (Littrell et al., 2006; Mendenhall et al., 2004). First, it is not entirely clear how effectiveness of intercultural training can be validly and reliably assessed and evaluated. We interpret the current quantitative results in terms of causal relationships. Specifically, we assume that training caused a change in rating of the academic and social life due to a clear temporal order (training occurred first before the academic and social life was experienced on campus) and a logical association between the events (training addressed the influence of culture on the academic and the social life). However, our causal explanation does not include the influence of other factors on the satisfaction with the social and the academic life except for gender and study major. Indeed, the magnitudes of the relationships between training rating and social or academic satisfaction were only small in the current study. Therefore, other factors (such as new friendships and individual, culture-independent attitude to learning) might, in fact, predict the satisfaction with the social and academic life better than the training rating alone. Future evaluation studies should use longitudinal designs with mixed methods to supplement quantitative ratings with contextual qualitative data. Especially the qualitative data could be used to better understand whether individuals directly link the effectiveness of training to their social and academic satisfaction or to other outcomes (such as making effective use of examples from the training to correctly interpret and act on situations in daily life that could in turn improve the satisfaction with social life and learning on the multicultural campus). Longitudinal designs would also allow measuring a degree of change in intercultural competence and cultural development before training compared with various points in time after training (immediately after training and also at the end of undergraduate studies). Second, the relatively long time lapse between the training and the study (approximately 6 months) might have contributed to inaccurate ratings of the training (due to poor memory of a distant event, which took place among many other orientation-week activities). Third, the study did not have a control group and has not used a random assignment of participants because the training is mandatory for all new students at Jacobs University. Thus, it cannot be ruled out that the rating of satisfaction with the training is affected by the Hawthorne effect because the participants knew that they were in the experimental group. Finally, we have not investigated how personality characteristics of the participants could have affected the results of the current study. Some personality characteristics, such as high perceived social self-efficacy and positive self-image, extroversion, open-mindedness, and cognitive flexibility have already been shown to predict a better cross-cultural adjustment (Fan & Lai, 2014; Littrell et al., 2006). Therefore, some students might be more satisfied with training and their academic and social

life depending on their personality traits rather than the training alone.

Conclusion

The results of the current study suggest that the intercultural peer-to-peer training might adequately address the importance of culture (own and other) in terms of the social interactions among students at Jacobs University Bremen. The training was acceptable based on its structure and assistance with the practical issues of living on a multicultural campus. Due to its cost-effectiveness, it could be easily adopted for use at other universities as part of the campus-wide orientation activities for all new students. However, the training should be more effective at addressing and preparing the students for the student-centered academic culture at Jacobs University. It could be speculated that involving the faculty in the training could improve its effectiveness in academic terms. Such an involvement would allow the faculty and students to informally exchange their needs and expectations and focus on the concrete measures (such as active participation in class) necessary for successful academic integration in the multicultural classrooms. Furthermore, a degree of change in intercultural maturation and the long-term effectiveness of the training should be evaluated using mixed methods to supplement the quantitative ratings with qualitative data.

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