



# Academic and socio-cultural adjustment among Asian international students in the Flemish community of Belgium: A photovoice project

Qingchun Wang<sup>1</sup>, Karin Hannes<sup>\*,1</sup>

Methodology of Educational Sciences Research Group, Faculty of Psychology and Educational Sciences, KU Leuven, Andreas Vesaliusstraat 2 – box 3762, 3000 Leuven, Belgium

## ARTICLE INFO

### Article history:

Received 7 February 2013

Received in revised form

11 September 2013

Accepted 29 September 2013

### Keywords:

Asia

International mobility

Adjustment

Photovoice

Qualitative research

## ABSTRACT

An increasing number of students from Asia participate in the global educational market. However, due to the large cultural disparity between Western and Asian countries, their adjustment is particularly challenging. As there is a lack of research exploring Asian international students' adjustment processes in Europe, we used the Flemish community of Belgium as an illustrating case to study the experiences of Asian international students in a non-Anglophone study environment, with a focus on their academic and socio-cultural adjustment. The method of photovoice was applied. This research technique enables research participants to visually represent themselves or share lived experiences with an audience by photographing the world as they see it. Five Asian international students from KU Leuven were recruited as research participants. They participated in an information session, two rounds of photo taking and two focus group discussions. The participants experienced academic adjustment challenges in four domains: (1) academic activities, (2) academic resources, (3) languages and (4) time management. Participants' socio-cultural adjustment was summarized into two broad themes: (1) cultural differences and (2) socio-cultural adjustment strategies. The findings suggest that for aspects of the host culture that are relatively easy to adapt to, participants generally tend to adopt an integration or assimilation acculturation strategy, while for primary cultural values and ideologies, students are more likely to adopt a separation strategy. Potential strategies for faculty and policy makers to respond to these challenges are discussed.

© 2013 Elsevier Ltd. All rights reserved.

## 1. Background

Studying abroad has been described as an enriching experience for students leaving their home country (Yang, Webster, & Prosser, 2011). Nowadays, an increasing number of students from Asia participate in the global educational market. Figures show that Asian students occupy 52% of the international student population worldwide (Organisation for Economic Co-operation and Development, 2011), and China and India are the top two exporters of foreign students across the globe (Altbach, 2009). Most international students pursue their further studies in Western countries such as the United States, the United Kingdom, Germany, Australia and France (OECD, 2011). Asian international students may experience a great deal of unfamiliarity in almost every aspect of their life in Western countries because of the differences in language, culture and

\* Corresponding author. Tel.: +32 16 3 26220; fax: +32 16 3 26200.

E-mail address: [karin.hannes@ppw.kuleuven.be](mailto:karin.hannes@ppw.kuleuven.be) (K. Hannes).

<sup>1</sup> Both authors contributed equally to this study.

educational systems. The adjustment processes of Asian international students in foreign countries have therefore received a great deal of attention during the last couple of decades.

Adjustment is interpreted by [Anderson \(1994\)](#) as “working toward a fit to the person and the new environment”, which further refers to people trying to adapt to a change of situations (p. 299). How people perceive and evaluate the challenges and obstacles arising from change can determine how they adjust to new situations ([Ramsay, Barker, & Jones, 1999](#), p. 130). The adjustment of international students is particularly challenging, as they will have to cope with a dual challenge. Like every freshman entering university they need to adapt to the academic life. In addition, they have to deal with the acculturation stress encountered by every sojourner ([Church, 1982](#), p. 544; [Li & Gasser, 2005](#); [Toyokawa & Toyokawa, 2002](#), p. 363–364; [Wang & Mallinckrodt, 2006](#), p. 422). A number of theoretical frameworks on adjustment processes have been developed, including the one from [Anderson \(1994\)](#), who developed a cross-cultural adaptation model that outlines four major stages: “cultural encounter”, experiencing “obstacles”, “response generation” and the “overcoming” phase. The model focuses primarily on the effects of obstacles and negative experiences on sojourners ([Ramsay et al., 1999](#), p. 130). However, positive experiences can also influence the adjustment process for people residing temporarily in foreign countries ([Langston, 1994](#)). In this study Berry’s bi-dimensional acculturation model (1980) will be used as a guiding framework to discuss and link the findings on adjustment processes with the theoretical concept of acculturation. Acculturation is the degree and amount to which an immigrant individual can adapt to the cultural norms, values, behaviors etc. of the host society ([Ward, 1996](#), as cited in [Wang & Mallinckrodt, 2006](#), p. 422–3). It mainly refers to an individual’s attachment to his or her own ethnic identity and openness toward new identity development ([Brisset, Safdarb, Lewisb, & Sabatiera, 2010](#), p. 416; [Wang & Mallinckrodt, 2006](#), p. 431). An individual’s attitude toward cultural change and cultural continuity can potentially result in four orientations. Integration refers to individuals retaining many personal and cultural values, but adapting to the dominant culture by learning necessary skills and values. Assimilation is a strategy used by individuals seeking to become part of the dominant society to the exclusion of their own cultural group. Separation is applicable to those who retain their culture of origin and do not adapt to the culture of the host society. And finally, marginalization refers to individuals who perceive their own culture as negative and detach from it, but are unable to adapt to the majority culture. ([Berry, 1980](#), as cited in [Berry, 1997, 1999](#)).

It is demonstrated in past studies that the greater the culture of the host society differs from that of the sojourners’ home culture, the slower sojourners will adapt, and more effort is expected to be devoted to adjusting to the new environment ([Kagan & Cohen, 1990](#), p. 133; [Swami, Arteche, Chamorro-Premuzic, & Furnham, 2010](#)). Value conflicts between the two cultures have been reported as having a negative effect on the acculturation of individuals. These value conflicts refer, for example, to differences in world views and religious beliefs ([Constantine, Anderson, Berkel, Caldwell, & Utsey, 2005](#), p. 58). A study conducted by [Rienties, Beausaert, Grohnert, Niemantsverdriet, and Kommers \(2012\)](#) showed that non-western international students faced significantly more social, personal and emotional integration problems compared to native Dutch students, Western and mixed Western international students. As is commonly recognized in the literature, adjustment of international students is a multi-dimensional field which often encompasses three major domains: academic adjustment, socio-cultural adjustment and personal psychological adjustment ([Brisset et al., 2010](#); [Ramsay et al., 1999](#); [Ward & Kennedy, 1993](#); [Zhang & Goodson, 2011](#)). In what follows we will present an overview of the findings from studies describing experiences of students studying in foreign countries, with a focus on the adjustment processes of Asian international students. A short summary is provided in [Table 1](#).

### 1.1. Academic adjustment

Academic adjustment can be referred to as the degree to which students cope with the various demands in an educational context, including for example their motivation and academic performance ([Rienties et al., 2012](#), p. 687). Students who succeed in academic adjustment tend to show better study results ([Rienties et al., 2012](#), p. 696). [Ramsay et al. \(1999\)](#) investigated the positive and negative experiences impacting on the academic adjustment of both international and local Australian students. They found that a Learning Assistance Center was reported most often by international students as being beneficial for their studies, while peer support in study groups, tutors and tutorials were more often mentioned by local students. Negative experiences were often related to lectures or lecturers. The authors identified difficulties in understanding the lectures, which may be a result of either lecturers’ poor communication skills or international students’ lack of English language skills.

### 1.2. Socio-cultural adjustment

Socio-cultural adjustment is conceptualized by [Searle and Ward \(1990, p. 450\)](#) as the “ability to fit in and to negotiate interactive aspects of the new culture”. Several authors have reported on factors that facilitate socio-cultural adjustment of international students. These include close contact with host nationals, social support, involvement in extracurricular activities, good language skills, less perceived discrimination and longer periods of stay ([Constantine et al., 2005](#); [Swami, 2009](#), p. 58; [Toyokawa & Toyokawa, 2002](#); [Wang & Mallinckrodt, 2006](#), p. 431).

Friendships with host nationals tend to increase life satisfaction, and decrease feelings of homesickness and loneliness of international students ([Church, 1982](#), p. 552). Through contact with local communities, international students gain new knowledge and understanding of the lifestyle, values and customs of the host society. Many phenomena which seem strange

**Table 1**  
Review of the literature on integration processes of Asian students.

| Paper                        | Location  | Sample   | Design                                   | Data collection technique                                | Core concepts <sup>a</sup>  |
|------------------------------|-----------|--|--|--|---|
| Toyokawa and Toyokawa (2002) | U.S.      | 85 Japanese students studying in a 10-month program  | Quantitative – correlation               | Questionnaire  | A: academic adjustment P: psychological adjustment SC: social support, extracurricular activities   |
| Yang et al. (2011)           | Hong Kong | 214 undergraduates who engaged in overseas studies/internships/volunteer work in a university in Hong Kong | Quantitative Qualitative                 | Online Survey (with open-ended questions)<br>Focus group | SC: intercultural learning O: goals, host country experiences and learning outcomes   |
| Hung and Hyun (2010)         | U.S.      | 7 East Asian international students  | Qualitative – phenomenology              | Structured interviews                                    | A: internationalization, cross-cultural meta-cognition, epistemological experiences, EFL international student positionality  |
| Swami et al. (2010)          | U.K.      | 110 Malay and 139 Chinese international students   | Quantitative – correlation               | Self-report questionnaire                                | SC + P: relationship between family income, language proficiency, perceived discrimination (P), health status and sociocultural adjustment (SC)                                 |
| Brunette et al. (2011)       | Canada    | 14 Chinese international students from a mid-size university   | Qualitative – interpretive phenomenology | Bracketing interview (semi-structured)                   | SC: physical activity and acculturation   |
| Li and Gasser (2005)         | U.S.      | 117 Asian international students   | Quantitative – correlation               | Questionnaires   | SC: relationship between ethnic identity, cross-cultural self-efficacy, contact with the hosts and sociocultural adjustment   |
| Brisset et al. (2010)        | France    | 112 Vietnamese international students and 101 French students  | Quantitative – correlation               | Questionnaires   | SC + P: Sociocultural adaptation (SC), social support (SC), cultural identification (SC); trait-anxiety (P), adult attachment (P), psychological distress (P), satisfaction (P) |
| Iwamoto and Liu (2010)       | U.S.      | 402 Asian American and Asian international college and graduate students                                   | Quantitative – correlation               | Survey   | SC + P: the effects of racial identity (SC), race-related stress (P), ethnic identity (SC), Asian cultural values (SC) on psychological well-being (P)                          |
| Wang and Mallinckrodt (2006) | U.S.      | 104 Chinese and Taiwanese international students from two public universities                              | Quantitative – correlation               | Survey   | P: relationship between acculturative stress, psychosocial adjustment, adult attachment   |
| Ye (2005)                    | U.S.      | 115 East Asian international students in a Southeastern university   | Quantitative – correlation               | Survey   | P: relationship between acculturative stress and Internet uses (including Internet types and Internet motives)  |
| Wei et al. (2007)            | U.S.      | 189 Chinese and Taiwanese international students from a Midwestern university                              | Quantitative – correlation               | Online survey  | P: relationship between acculturative stress, maladaptive perfectionism and depression  |

<sup>a</sup> A, academic adjustment; SC, socio-cultural adjustment; P, psychological adjustment; O, other.

to international students at first may be understood and even appreciated later on (Hendrickson, Rosen, & Aune, 2011, p. 283). Moreover, interactions with host nationals also provide opportunities for international students to practice their communication and language skills (Brunette, Lariviere, Schinke, Xing, & Pickard, 2011; Hendrickson et al., 2011). However, building up friendships with local students is a difficult process. Hendrickson et al. (2011, p. 283) identified three main factors which may affect this process: (1) the poor language skills of international students; (2) perceived discrimination; (3) the fact that local students may be less open to form new friendships with international students, as they may have already established their own social networks.

### 1.3. Psychological adjustment

Psychological adjustment is related to psychological “feelings of well-being and satisfaction” (Searle & Ward, 1990, p. 450). The interplay between acculturation stress and several other variables has been the focus of a number of studies on psychological adjustment of Asian international students. Wei and colleagues (2007) reported that depression was positively associated with acculturation stress and maladaptive perfectionism. For students who were in the US for a shorter period of time, both high and low maladaptive perfectionism exacerbated the effect of acculturation stress on depression, while for those who stayed in the US longer, a low level of maladaptive perfectionism served as a buffer against the negative impact of acculturation stress on depression. Ye (2005) studied the relation between acculturation stress and the use of Internet, and found that Asian students used Internet as a way to cope with negative feelings related to their acculturation process. Ye further found that perceived discrimination, for example, was significantly correlated with social utility and entertainment motivations.

Several researchers have examined the effect of co-national cultural identification, adult attachment on socio-cultural, psychological adjustment. One particular study reported that identification with Asian cultural values was negatively linked with the psychological well-being of Asian Americans and Asian international students (Iwamoto & Liu, 2010). Other authors, however, reported a positive association between these two factors (Playford & Safdar, 2007, as cited in Brisset et al., 2010; Ward & Kennedy, 1994). Moreover, identification with own culture group could lead to more engagement in local society (Brisset et al., 2010). Brisset and colleagues (2010) further studied attachment intimacy in Vietnamese international students and linked it to higher psychological distress but better socio-cultural adaptation. Wang and Mallinckrodt (2006) found that attachment anxiety and avoidance were negatively associated with acculturation of Chinese international students.

There is conflicting evidence on the relationship between academic, socio-cultural and psychological adjustment and it should be further researched. For example, building up social networks and receiving social support has been reported as being beneficial for the academic performance of international students by some (Heikinheimo & Shute, 1986; Lin, Hsu, & Lai, 2011, p. 794), and as having a negative academic impact by others (Rienties et al., 2012). This overview of the literature draws attention to three core aspects: First, the adjustment processes of international students encompass a wide variety of different aspects. Psychological adjustment of Asian international students has been the dominant focus in previously conducted studies. Therefore, in this study the focus will be on academic and socio-cultural adjustment of Asian international students. Second, scientific studies using an in-depth explorative study design are scarce, which is why we opt for a qualitative, exploratory research project. Third, the study of the literature shows that there is a lack of research exploring the adjustment processes of Asian international students in Europe (Rienties et al., 2012; Swami et al., 2010). The findings on Asian international students' overseas experiences have been almost exclusively generated within English-speaking nations such as the United States (Wang & Mallinckrodt, 2006; Wei et al., 2007), Canada (Brunette et al., 2011), the United Kingdom (Swami et al., 2010) and Australia (Guillen & Ji, 2011). In this study, we will target Asian students trying to acclimate in a non-Anglophone study environment.

### 1.4. The Belgian case

Currently, a considerable amount of international students is pursuing their higher education in Belgium. As is shown in the latest OECD report (2011), international students constitute 9% of the total enrollments in Belgian tertiary education. Following Australia (21.5%), the United Kingdom (15.3%), Austria (15.1%), Switzerland (14.9%) and New Zealand (14.6%), Belgium ranks sixth in the percentage of international students in tertiary enrollments among the 22 countries investigated, and is therefore an interesting case to increase our understanding of the adjustment experiences of international students in a non-Anglophone country. The educational system in Belgium is distinct from that of many other countries. The responsibility to organize education is decentralized to the three language-communities: the Flemish-speaking community, the French-speaking community and the German-speaking community. Each community runs its education independently; therefore, there may be significant differences in the educational systems between these communities (Geyer, 2009). The study focused on the Flemish-speaking community of Belgium (Flanders), and the student city of Leuven served as the main setting for the research project.

### 1.5. Objectives and research questions

The main objective of this study is to gain an understanding of the academic and socio-cultural adjustment processes of Asian international students, building on their lived experience. A visual research methodology was used and a critical social

**Table 2**  
Participant demographics.

|   | Sex    | Country | Age | Program             | Department  |
|---|--------|---------|-----|---------------------|---|
| 1 | Male   | Taiwan  | 24  | Master, full-time   | Department of Social Sciences                     |
| 2 | Male   | China   | 25  | Master, full-time   | Department of Bioscience Engineering              |
| 3 | Female | Japan   | 23  | Exchange, full-time | Department of Arts                                |
| 4 | Female | China   | 24  | Master, full-time   | Department of Social Sciences                     |
| 5 | Female | Vietnam | 27  | Master, full-time   | Department of Psychology and Educational Sciences |

science paradigm was adopted to conduct the study. It was our intention, not only to reveal the experiences of Asian students, but also to increase the participants' consciousness of the challenges and opportunities of studying abroad, through involving them in the data collection phase of the project (Neuman, 2010). This provided the researchers with an opportunity to look at the challenges of adjustment processes 'through the eyes' of the participants. The insights generated from the study were then used to suggest potential strategies to improve their situation, both for university faculty and policy makers, particularly those from the international offices. The specific questions which guide us through the research project are: How do Asian international students experience student life in Flanders? What aspects do they consider challenging, both from a positive and a negative point of view, in trying to academically and socio-culturally acclimate in a foreign environment?

## 2. Method

We opted for a photovoice research project. We invited international students to capture the challenges associated with their adjustment processes in images, and discussed the meaning of the pictures with them. The photos from each individual student served as a tool to portray the participants' experiences and bring out narratives and their lived stories (Bach, 2007). Afterwards, participants were given a 'voice' through focus group discussions that were meant to stimulate participants to interpret the photos and give meaning to them (Wang, 1999, p. 186). The combination of photos and voice was expected to reveal a more authentic picture of life experiences and conditions, and show more vividly how these students attempt to adjust in the Belgian, academic and socio-cultural context.

The photovoice method was originally developed by Wang and Burris (1994) to be used in a research project in Yunnan Province, China, with the aim of empowering the rural women, communicating their health needs to policy makers and influencing people's understandings and actions. The women were given opportunities to document their life using photos, and reflect their situations and needs to the public, including scientists and policy makers. The research emphasized the lived experiences of grass root communities, and was intended to generate a potential effect on the policy level. Therefore, photovoice is considered to be an innovative response to more conventional types of participatory action research, using images to convey meaning. At its best, photovoice empowers participants, fosters research involvement, and impacts on policy decisions (Hannay, Dudley, Milan, & Leibovitz, 2013). Less powerful or vulnerable groups gain a better understanding of their personal life situation. This may then lead to initiatives to try and positively change their circumstances, where possible in direct communication with policy makers (Wang & Burris, 1997; Wang, Yi, Tao, & Carovano, 1998, p. 82–83). Other advantages of the photovoice method include the cultural sensitivity of the approach, the promotion of trust and the creation of a sense of ownership in participants (Castleden, Garvin, & First Nation, 2008).

Photovoice has successfully been applied in a growing number of studies (Nykiforuk, Vallianatos, & Nieuwendyk, 2011), with the overall aim to 'give voice' to vulnerable or less powerful population, such as women (Valera, Gallin, Schuk, & Davis, 2009; Bukowski & Buetow, 2010), children with learning problems (Carnahan, 2006), Latina teens (Hannay et al., 2013), indigenous people (Castleden et al., 2008) and African American groups of patients (Lopez, Eng, Randall-David, & Robinson, 2005). Photovoice is known for its ability to open up the black box of 'what we cannot or dare not speak about'. Compared with traditional data collection techniques such as observation and interviews, photovoice may help reveal the deeper and hidden emotions and feelings which are difficult to be captured by words only. And it may also facilitate the expression of thoughts and feelings of some participants who may have difficulties or feel reluctant expressing their points of view verbally. The downside of the method is that it is often time-consuming and costly, and it inevitably entails ethical challenges when taking photos. Furthermore, because of the small sample size, the results generated by photovoice are only representative of the sample, and cannot be generated to the population (Nykiforuk et al., 2011).

### 2.1. Sampling

Originally, seven Asian, international students were selected from the existing social networks from the authors, using convenience sampling. Participation was based on a voluntary basis. After being explained the basic information on the project, all seven students agreed to take part. Participants were expected to use their own camera devices to take photos. Five out of seven participants sent photos, attended the information session and the focus group sessions. Two participants, one from China and one from the Philippines only took pictures but did not attend any of the meetings. The photos from these participants were not considered valid and were omitted from the analysis. All five participants (see Table 2) were full-time students studying at KU Leuven. Two of them were from mainland China, one from Taiwan, one from Vietnam and another one from Japan. Four participants were master students, and one student was engaged in an exchange program in the



context of Bachelor studies conducted abroad. They were enrolled in various programs in different departments (2011–2012 Academic Year), with an intention to stay in Belgium for at least a year. For all the participants, it was their first overseas study experience. There were three female students and two male students, aged between 23 and 27. To fully protect the privacy of the participants, numbers are used to refer to them in the results section.

## 2.2. Researchers' portraits

The lead researcher was a female Chinese, international student, completing a master in educational studies in the Department of Psychology and Educational Sciences at KU Leuven. The second researcher was a female assistant professor supervising the student, teaching and conducting research on qualitative methods within the field of adult education and social-cultural pedagogics, both to native and international students. The interest for the research topic arose from the many conversations with foreign students on topics not related to the course structure or content, but rather on particular challenges they encountered while studying at the university.

## 2.3. Setting

The research was carried out in the city of Leuven, Belgium, which is only 25 km away from the capital city Brussels. KU Leuven is one of the oldest European universities, established in 1425. This research-oriented university had more than 40,000 student enrolled in the academic year 2011–2012 ([Inschrijvingsaantallen, n.d.](#)). Over 6000 were international students, accounting for 17% of the total number, with Asian international students taking up almost 20% of the total international student population ([Inschrijvingsaantallen, n.d.](#)). KU Leuven currently is the largest university in Belgium. The main language of instruction is Dutch. However, there are several English taught programs offered to international students.

## 2.4. Information session

At the start of the research project, an information session was conducted to familiarize the participants with the details of the project. We explained the objectives and basic demands of the project, and introduced the photovoice method. We also provided extensive information on the ethical issues related to this project. The ethical part of the session addressed two aspects: the informed consent form and the potential ethical pitfalls of being involved in a visual research project, including ways of avoiding them.

The content of the consent forms was based on the information sheets developed by [Mitchell \(2011\)](#) and [Thompson \(2009\)](#). The participants signed a consent form to participate in the study and to allow the researchers to use their photographs in publications and conferences. In addition, we developed a consent form for the subjects being photographed, following the argument that it is always considered good practice to gain the consent before taking people's photos, even though signing a consent form before a picture is taken may influence the spontaneity of the moment intended to be captured by the participants ([Development & Photography Ethics, n.d.](#); [Wang & Redwood-Jones, 2001](#), p. 565). Our research participants did not always succeed in gaining consent from the subjects, for a variety of reasons that are currently explored as a follow up to this research project. In these particular cases, we only used pictures from people whose identity could not be revealed, such as photos showing the back of a person or body parts only. We are fully aware of the fact that even though the subjects in a picture agree to have the picture taken, they might be unaware of the consequences of the usage of the photos ([Wiles et al., 2008](#), p. 19, as cited in [Rose, 2007](#)). This may bring potential harm to the subjects after the photos are disseminated. In the information session, we particularly stressed the importance of explaining carefully to the subjects the purposes of our research and usage of the photos when asking for their consents.

The problematic situations discussed with the participants included: taking pictures of identifiable persons without getting consent, photographing places or environments that might reveal a person's identity, and shooting sensitive or private issues that may cause shame or embarrassment. In an attempt to control the potential harmful effects, several suggestions were put forward: including the 'no faces unless you have a consent' rule of thumb, 'anonymizing' places, avoiding taking photos of private and sensitive issues, using parts of bodies and backs, shooting in the distance as an alternative to photographing faces and, adopting symbols or metaphors to express ideas. Furthermore, information booklets containing information on the goal and process of the study, the benefits and potential risks of joining the project, the rights of participants, aspect of privacy and confidentiality, ownership of the photos and voluntary participation, were handed out, along with the consent forms for the research participants.

## 2.5. Data collection

The phase of data collection consisted of two rounds of photo taking and two focus group meetings in which the photos were discussed. The reason for conducting focus group meetings instead of individual interviews was that it provided participants with an opportunity to share their experiences with their peers. It was expected that this would further boost their ideas. The focus group sessions were also expected to reveal important themes resulting from discussing photos that displayed similar events. In this regard, focus group meetings may provide relevant leads for data analysis from a bottom-up research perspective.

In the first round, each participant was asked to select around 10–15 photos on an initial theme defined as academic adjustment, and send them to the researchers within a two weeks' period. All photos were interpreted by the lead researcher as an exercise in self-reflection and in order to structure the focus group conversation. Based on the initial screening of the photographs submitted, we made six piles of photos visually addressing similar themes: classrooms, buildings, different learning settings, books and learning materials, websites and others. During the focus group session, the lead researcher was involved as the facilitator of the discussion, and sustained an open and non-judgmental attitude throughout the discussion. Participants were encouraged to talk about their feelings and thoughts behind the photos. The lead questions were: "Why did you take this photo?", "What is the message you want to convey with this photo?" and "How does this photo related to other photos?" Based on participants' understanding of the pictures and content analysis of the transcript, we reclustered the photos in order to better align with the ideas put forward by the participants during the focus group discussion.

In the second round, photos on the core concept of socio-cultural adjustment were taken. The procedure of the second round resembled the first. A period of roughly three weeks was set for participants' taking, selecting and sending the photos. Due to variety of different events depicted in the images we were unable to cluster them based on similarity. Therefore, in the second focus group discussion, participants were explicitly invited to draw links between the photos. Permission was granted to audio record both meetings by all participants, and all participants agreed that they would keep the content of the conversation within the focus group meetings private. The photos and audio recordings served as data for the analysis phase. It was agreed that the full ownership of the images remained with the participants. In order to allow for an assessment of the credibility of the research and to facilitate the analysis of the data, the discussions were verbally transcribed.

## 2.6. Data analysis

The transcripts were analyzed using a descriptive thematic analysis approach, as previously applied by other photovoice researchers (Bukowski & Buetow, 2010; Johansen & Le, 2012). Following the basic procedure introduced by Howitt (2010) and Miles and Huberman (1994), the transcripts were first closely examined several times, and then a paragraph by paragraph coding was performed. We used an inductive research logic as described by Braun & Clark (2006). Based on the initial coding, conceptual subthemes that emerged from the data were created. The subthemes were re-examined for similarity in content on the level of open codes assigned to each subtheme, using a constant comparative analysis technique. A selective coding process resulted in six broad themes that formed the building bricks for the insights generated. All photos that we discussed were linked to a particular subtheme identified, and the most representative photos were selected to illustrate the findings.

## 3. Findings

### 3.1. Academic adjustment

Participants' academic adjustment experience can be summarized into four broad themes: academic activities, academic resources, language barriers and time management. Within each theme, a series of ideas expressed by participants are presented. An overview can be found in Table 3. In what follows, we will elaborate on each theme.

#### 3.1.1. Academic activities

We identified three subthemes in relation to academic activities: curricular-related activities, scientific research and extra-curricular academic activities. The biggest challenge in undergoing curricular-related activities was that participants were required to read extensively for their courses, and this was visually illustrated by three participants who took photos of heavy reading materials. Moreover, the fact that the reading materials were in English added to the challenge. Participant 4 explained "the books are way a lot for me actually, because all of them are in English. I need to read two or three times to catch the meaning. I didn't finish. But I think I will do better in this semester" (Participant 4). One participant from the Department of Arts used two photos to show her confusion in academics at the beginning of the first semester. They depicted leaflets with information on study program and a timetable full of courses. "I am so confused, because we don't have people in our department [taking charge]. I am also confused because the information is too much for me" (Participant 3). This feeling was confirmed by another participant from the Department of Psychology and Educational Sciences. One participant from the Department of Bioscience Engineering mentioned that the most difficult part of his academic adjustment was attending an oral exam, as he sometimes misunderstood the professor.

Some of the story lines linked to the aspect of conducting scientific research. A participant from Vietnam showed us pictures of search results of the online library of the university (Fig. 1), and the comments on her thesis that was revised by her promoter. The online library revealed thousands of hits for every key word she searched for her writing assignments. This participant found it difficult to select the most suitable resources. She was also discouraged when getting her assignments back from the promoter because "the comments may be longer than the content, which makes me really disappointed at my study" (Participant 5).

In terms of extracurricular academic activities, participants all agreed that these were beneficial for their studies. However, some framed it as providing opportunities for learning and connecting, while others mentioned that there were too many options to choose from. A female participant from the Department of Social Sciences showed us a picture on Stephen Hawkins's public lecture in Leuven, and on a seminar relevant to her program. Having all these options and the opportunity

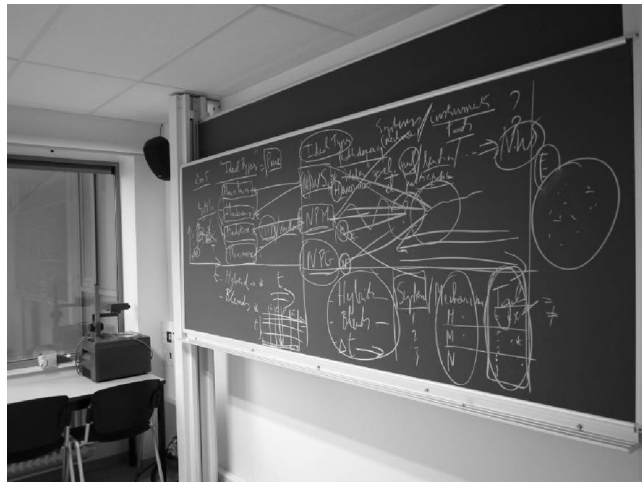
**Table 3**  
Summary of findings.

| Category                  | Broad themes                         | Sub-themes                                | Core messages   |
|---------------------------|--------------------------------------|---|---|
| Academic adjustment       | Academic activities                  | Curricular-related activities             | <i>Challenges:</i> Reading extensively in English; confusions in reading information sheets and choosing courses; difficulty in attending an oral exam  |
|                           |                                      | Scientific research                       | <i>Challenges:</i> Confusions in choosing suitable resources in online library; receiving too many comments from promoters  |
|                           |                                      | Extracurricular academic activities       | <i>Challenge and opportunity:</i> Too many options to choose from   |
|                           | Academic resources                   | Libraries                                 | <i>Opportunities:</i> Immersion in the classic structures of the library buildings; the rich collection of books; the abundant space preserved for self-study; different types of library.<br><i>Challenge:</i> Limited opening hours of libraries  |
|                           |                                      | Other hardware and software resources     | <i>Opportunities:</i> The cozy lounges, computers and multi-media classrooms, e-books and online learning platforms.<br><i>Challenges:</i> Difficulties in operating lockers in a library and computers in a multi-media classroom; difficulties in finding campus buildings  |
|                           | Language barriers                    | Academic English                          | <i>Challenges:</i> Difficulties in understanding professional English terms and following lectures in English   |
| Socio-cultural adjustment |                                      | Host country's native language            | <i>Challenges:</i> Difficulties in understanding Dutch books in the library, signpost, web pages, and newspapers; Dutch language courses taking too much time.<br><i>Opportunities:</i> Taking language courses and joining language exchange programs  |
|                           |                                      | Time management                           | <i>Challenges:</i> Balancing life and study, time consuming nature of household chores; permanent need to search the Internet; having spent too much time in studying   |
|                           | Cultural differences                 |   | <i>Opportunities:</i> Different habits, unfamiliar phenomena, some of them provoking critical thoughts about own cultural values  |
|                           | Socio-cultural adjustment strategies | Forming and keeping social networks       | <i>Opportunities:</i> Cooking and eating with friends; keeping in touch with social networks in home countries through post and Internet.<br><i>Challenges:</i> Limited, organized occasions to meet people or make friends; lack of active international student organizations; difficulties with building up relationships with local students and integrating into local community |
|                           |                                      | Engagement in activities in public places | <i>Opportunities:</i> Traveling, taking part in cultural events, volunteering, doing social work, going to places where local people gather and getting immersed in the local culture   |
|                           |                                      |   |   |

**Fig. 1.** Thousands of search results.

Source: photograph of Participant 5.





**Fig. 2.** Linger in the classroom.

Source: photograph of Participant 1.

to choose induced a positive experience for her. A male participant from the same department expressed his feelings of confusion when he talked about his extracurricular activities:

At the beginning of the semester, I felt a little bit anxious, confused, . . . because in addition to the courses, we still have a lot of seminars, workshops and information sessions. I think it is really good, really useful for the students; . . . but sometimes just the information overload. It is a good thing, but just too much. You really have to organize yourself, otherwise you would think should I study, or should I go to the seminar, or what should I do. (Participant 1)

Though confused, this participant took the opportunity to get the most out of his stay. He talked about his participation in seminars of the European Parliament in Brussels that added value to his professional development. He further used two pictures to show a development of his feelings in the first semester. The first picture was taken by him in a church at the opening ceremony when the new semester started. This event left him a first impression of the university and represented an exciting start for him, as having an opening ceremony in a church was no common experience for him as a Taiwanese student. The second picture (Fig. 2) was shot at the end of the semester when his last class ended, and he lingered in the empty classroom to reflect on what he described as a “thought-provoking yet intensive course” (Participant 1).

### 3.1.2. Academic resources

Another important element of academic adjustment identified by the participants has to do with academic resources, which can be further divided into two sub-themes: libraries and other hardware and software resources. Interestingly, every participant took pictures of library, indicating that it probably played an important role in their academic life. In general, the classic structure of the library buildings, the rich collection of books, and the abundant space preserved for self-study were things appreciated by the participants. Besides, one participant noticed that different departments at KU Leuven had different libraries with distinct features, which she found to be interesting as her home university in China only had one library. One of the critics related to the libraries was that the opening hours were perceived by some participants as too limited.

In addition to libraries, computers, multi-media classrooms and cozy lounges for student activities were also considered to facilitate participants' academic adjustment, as they brought much convenience to the students. Furthermore, the software resources such as e-books were suggested by some participants as being useful for their studies. The obstacles experienced are mainly attributed to lack of experience in using the resources. One Japanese participant mentioned her difficulties in operating lockers in a library and computers in multi-media classrooms. She also found it difficult to find her way around in the buildings of some departments. The fact that departments were scattered all over the city was particularly challenging.

### 3.1.3. Language barriers

Most participants expressed that they had encountered language barriers. One participant from the Department of Bio-science Engineering mentioned that reading English materials was a challenge for him: “all the professional English terms, oh my god, I already studied them in Chinese when I was a bachelor student, but to look at them in English, it is really difficult. But I think it is an advantage to study here” (Participant 2). He further explained that he had to check all the professional English words and translate them into Chinese while reading the material. He also talked about the fact that following lectures in English was challenging, partly because of the accent of some professors.

Some participants pointed out that the Dutch language of the host country was a barrier for them, although it was not the language of instruction for their courses. This was visible in many story lines. One participant took a picture



**Fig. 3.** Men taking care of their babies.

Source: photograph of Participant 2.

of a book printed in Dutch in the library, stating that half of the books in the library were in Dutch. He experienced it as very confusing, because he was not able to read Dutch when searching for a book. Another participant shot a Dutch sign indicating locations of the campus buildings that made it “even more difficult to find the place” (Participant 3). She also showed a picture of university website in Dutch, complaining that it did not have a corresponding English version. Other participants mentioned that university newspapers printed in Dutch were “very good for cleaning windows” (Participant 4). However, it hindered them in trying to be knowledgeable about the university. “I understand that we should integrate more into the Belgian culture, but I also feel that we just come here to study something in English” (Participant 3).

Participants have developed several active coping strategies to deal with language barriers, for instance one participant (Participant 3) attended Dutch language courses, and another participant (Participant 4) joined a language exchange program. Even though difficult, the courses provided them useful and interesting information on Belgian culture and society. However, taking language courses did take up a lot of time. Participant 3 found it particularly challenging to achieve a balance between learning a language and studying her own major.

#### 3.1.4. Time management

Another big issue raised by some participants was on time management, in other words, the balance between life and study. There were differences between participants in what they emphasized as more important. One participant from the Department of Psychology and Educational Sciences took several photos on sources of distraction for her study, such as basic household chores and going to the supermarket, shops and post office. She also felt that she had spent a lot of time searching on websites such as Facebook and YouTube, compared to what she invested in her study. However, another male participant from the Department of Social Sciences mentioned that because of his heavy workload, he had spent too much time studying and barely took time off. He photographed different study settings, for example cafeteria, bars, library, and even a laundry shop where he was waiting for his clothes to be washed.

### 3.2. Socio-cultural adjustment

As for participants’ socio-cultural adjustment, two broad themes were identified, which were cultural differences and socio-cultural adjustment strategies. A summary of the content for each of these themes is again outlined in [Table 3](#).

#### 3.2.1. Cultural differences

Participants have noticed many new cultural phenomena and cultural differences between Belgium and their home countries. They felt that local people had different drinking and eating habits, celebrated different festivals and engaged in different leisure activities. For instance, one participant noticed that local people preferred getting tanned, while Asian girls tried to avoid the sunshine as much as possible. Some phenomena such as open train stations with nobody checking the tickets and closed shops with lights on during the night were also photographed. These phenomena were quite unfamiliar to some participants but did not induce any discomfort. One of the biggest cultural shocks for a male Chinese participant was that many local men took care of their babies ([Fig. 3](#)), which led him into stating “luckily I am not a Belgian, but it is a good thing, and we need to share something with girls” (Participant 2).

#### 3.2.2. Socio-cultural adjustment strategies

There are two subthemes that have been identified within the broad category of socio-cultural adjustment strategies: forming and keeping social networks and engagement in activities in public spaces.



**Fig. 4.** Sending Chinese New Year wish card to family. "This one is a card I wrote to my family during the Chinese New Year period to express my appreciation to my family, especially because I am in such a distance away from my hometown." – Participant 1.  
Source: photograph of Participant 1.

**3.2.2.1. Forming and keeping social networks.** Cooking and eating with friends were regarded as important ways to form and keep relationships by many participants. Pictures were taken about events where participants invited friends to their home, or were invited by local friends for dinner. One participant from Vietnam took several pictures of the places where she met with friends and learned about local culture, including student cafeteria, the living room and the communal kitchen in her residence. She also photographed a coffee cup with the logo of the organization for international students at KU Leuven and explained:

I get to know a lot when I spend time in the common place in my building. I communicate with Belgian students; I ask them about how they do things; I also get to know how they communicate and how they behave toward each other. . . . Actually, although I really don't like Belgian food, sometimes I still try to go to the student cafeteria to learn more about the Belgian culture, the way they use knives and forks, the way they eat. I mean I can understand part of their culture if I eat the food, if I follow the way they behave during the meals. (Participant 5)

Some participants talked about how they maintained intense contacts with social networks back home during their exchange period in Belgium. They sent gifts and Chinese New Year wish cards to family and friends (Fig. 4), and kept themselves updated with the news in their home countries through Internet.

During the discussion, one participant mentioned that KU Leuven did not seem to have many active organizations or clubs for international students, and it was difficult for him to find students who shared the same interests. By comparison, Asian universities may have more flourishing student activities. It is worth noting that although the participants in this study were actively involved in building up relationships with local people, they felt that they could hardly really integrate into the local communities. Some participants expressed that it was difficult to develop a close friendship with Belgian students. One of them reported:

I think especially in Belgium, people are more difficult to get along. At first, they are very close-minded. They don't want to open their minds and express their feelings. Only after a while, you can become closer friends . . . I feel the difference about communities. They want to be independent. They don't want to do things together. Normally if you have a common preference, okay, you just go for it, but it is not like a community or a group thing. They usually want to be free. (Participant 3)

One example may further illustrate this point. In order to better integrate into the local community, one male participant joined the basketball team in his department. However, to his disappointment, he found out that "before the match we are strangers. After the match we are strangers. Only during the match, we are teammates" (Participant 2). This participant also reported that his class was usually divided into two parts, with one part being international students, and the other part being the Belgian students. When he tried to move closer to his Belgian classmates, they often moved away.

**3.2.2.2. Engagement in activities in public places.** From the photographs it shows that participants were engaged in various kinds of activities in public places, including traveling, parties, cultural events, volunteering and social work. As many as four participants took photos on the traveling theme, which in a way indicated that it was considered an important part of their socio-cultural life in Flanders. One participant from Vietnam shot several photos of the activities she attended, including joining parties, going to markets (Fig. 5) and shopping. She described that going to public places gave her more opportunities to get to know the local culture by observing the way local people lived and the way society functioned as a whole.



**Fig. 5.** Visiting local markets. “Even though I don’t buy anything, I just go there to observe the way people buying and selling.” – Participant 5.  
Source: photograph of Participant 5.

## 4. Discussion

### 4.1. Acculturation and adjustment strategies of Asian international students

Our findings suggest that the Asian international students participating in this study adopt an integration or assimilation acculturation strategy in some aspects of their academic and socio-cultural adjustment, and a separation strategy in some other aspects. One example of adopting an integration strategy is the fact that some of the students started Dutch lessons after having experienced language barriers to actively deal with the challenge. Another clear example of an assimilation strategy is the effort made to dine in student restaurants and adopt the Western way of eating, even though the food was not favored by the students. However, there were moments when participants showed a more separated orientation, for example in stating that in their home countries, student organizations and communities took a very active role in establishing a closer alignment and a better sense of belonging among group members, and this was somehow expected from the guest university as well. Some of the difference in acculturation orientations can potentially be explained by the level of effort it takes to adapt to or adopt elements from the foreign culture. It may be relatively easy to change an eating habit or to learn a new language. However, it may be very difficult to change the deeply held beliefs and cultural values, such as the collectivistic worldview shared by most Asian students as opposed to a more individualist value which emphasizes independence and personal space held by many European students (Cross, 1995).

Because of the inadequate “Western schemata knowledge” (e.g. the knowledge about Western educational system, Western culture and beliefs, academic language, etc.), Asian international students may encounter obstacles when trying to make sense of new knowledge or trying to acquire additional skills, which may bring them a sense of “study shock” (Hung & Hyun, 2010, p. 342). Participants in this study experienced various kinds of academic difficulties, including challenges in reading course materials, conducting scientific research, utilizing university facilities, time management, etc. Among these academic difficulties, language has been identified by many researchers as a major barrier to academic success (Janjua, Malik, & Rahman, 2011; Sherry, Thomas, & Chui, 2010, p. 34; Yeh & Inose, 2003). Hung and Hyun (2010) have stated that it remains a challenge for most non-native English speakers to construct discipline knowledge in English. Participants in this study expressed their difficulties in reading professional articles and following lectures in English. What was interesting about this study was that except for English, the local communicative language Dutch also seemed to challenge them on the more pragmatic level. Participants’ inadequate command of the host country’s language is obviously the core reason. In addition, they may be mentally not prepared for these difficulties, as they may have expected English to be the major challenge. In their daily life, things like signposts, webpage, books in library and messages in Dutch were perceived as somehow inappropriate, and some made it very clear their main goal was to study in English. This again is an indication of adopting a separation strategy, linked to the implicit expectation that host universities should do more efforts to support international students.

Interacting with host nationals constitutes an important part of international students’ socio-cultural adjustment (Toyokawa & Toyokawa, 2002, p. 374). In line with previously conducted studies (Hendrickson et al., 2011), this study found that making contacts with host nationals was an important strategy for participants to learn local cultures and become adjusted. Heggins and Jackson (2003) previously stressed the fact that Asian international students felt a need to stay tuned to their social networks back home when they were abroad. We found that the channels of keeping a tie with old social networks in home countries were mainly through post (e.g. sending gifts) as well as Internet (e.g. keeping updated with the news in home country). A previously conducted study included in our literature review reported a positive relationship



between international students' engagement in extra-curricular activities and their adjustment, including their life satisfaction and academic involvement (Toyokawa & Toyokawa, 2002). This finding was only partly confirmed in our study. By involving in activities in public places, Asian international students created chances to observe the local society, and develop deeper understandings of the cultural differences between Western and their home countries. However, it was also stressed that getting close to host students or integrating into local community proved to be difficult. This finding was consistent with that of several other studies (Hendrickson et al., 2011; Smart, Volet, & Ang, 2000, p. 9).

#### 4.2. Suggestions to facilitate adjustment processes of Asian international students

To enhance the adjustment processes of international students, there are some recommendations that can be drawn from the findings in this study, both for university faculty and staff and for international students. First, a mutual accommodation between dominant and non-dominant groups is needed in order for integration to be achieved. Therefore, the host society is suggested to adopt changes in its educational institutions to better meet the needs of all groups (Berry, 1999, p. 14). In our study, students highlighted some aspects that could be improved, such as a more profound focus on an international public in signposting locations or more efforts to organize events to create network opportunities for students. Based on the findings, some specific suggestions on the level of universities include, but are not limited to, the introduction of specific and detailed orientation programs containing instructions on choosing courses, utilizing university facilities and organizing student life. Instructors could be made aware of the language barriers that Asian international students might face, especially in academic English. Probably some academic English courses pertaining to different programs could be introduced if necessary. Although these suggestions are worthwhile, they would most likely become subject to contentious discussions on how far we need to go in trying to adapt to the fast moving internationalization worldwide, and whether small actions such as translating signposts and websites is the core element in creating an excellent atmosphere for exchange. Some of the suggestions are very practical, pragmatically inspired solutions, but would most likely not enhance the student's socio-cultural experience. Networking opportunities created by specialized organizations, for example, will mainly be used by international students and may have an adverse effect on their acculturation process. It could be worthwhile though to try and maximize intercultural cooperation among students from multiple cultures, including local and international students, to cultivate their multicultural competence. For example, organizing in-class group work in which students from different cultural backgrounds work closely together may be beneficial (Zhao & Wildemeersch, 2008). Kelchtermans (2009) put forward the idea of "discomforting dialogues", meaning that the process of being confronted with ideas or beliefs that are largely different from or even in conflict with our own is discomforting. However, this experience invites us to reflect, negotiate and re-conceptualize our own mental schema. Intercultural cooperation may be experienced as inconvenient, particularly by students from the host country, and may bring many "discomforting dialogues". It nevertheless represents moments when learning may happen. Working in a culturally diverse environment will allow students to confront otherness, develop understandings toward different cultures, break stereotypes, build up tolerance and acceptance for multiple perspectives, and improve their intercultural competence (Zhao & Wildemeersch, 2008).

Much of the literature stresses the importance of understanding and addressing international students' needs (Sherry et al., 2010; Toyokawa & Toyokawa, 2002). We believe that international students are also expected to make an effort to change. Ramaekers (2008) argues that people may develop understandings toward cultures that are alien to their own, but they may not necessarily have the openness to other cultures. He further stresses that "our relation to our inheritance is not a closed or determined one" (Ramaekers, 2008, p. 90). We can change our own perspectives, learn from other cultures and return to a better self. It is neither giving up our own cultures (assimilation), nor separating ourselves with the other cultures (separation), but trying to incorporate the valuable parts in different cultures into our own value systems (integration). Ramaekers' ideas are strongly aligned with Erickson's (2002, p. 304) view that each individual is a "multicultural repertoire", meaning that the communities we belong to and how we engage within them through "prentice-like learning of certain patterns of conducting everyday life" will shape our personal culture. In our study, we found evidence that particular aspects of a foreign culture induced such a reflection exercise in some participants. For instance, the culture shock described by one participant when discussing a picture of a local man taking care of his baby (Fig. 3) illustrates that international exchange is about more than an adjustment process. It has the power to critique particular cultural values, and lead to a change in attitudes. It also suggests that Asian international students can take a proactive step to learn about the host culture, transform through combining their own cultural values with those of the host country, and actively work toward a successful acculturation.

This particular example of change in the views of students also implies that our study helped participants to become more aware of their own stances and feelings toward intercultural exchange. Challenges such as language barriers were turned into advantages by some and not by others, suggesting that a successful integration also depends on the personal characteristics and the coping mechanisms developed by individuals. Some would work harder and do better in the future, while others would expect the host country to change. The response to the invitation to comment on the research process suggested that at least for part of the group we succeeded in increasing their consciousness on the challenges and opportunities of studying abroad: "Thank you [the researchers] for giving us such great experience to share (Participant 3)"; "That's why we are here, to learn. (Participant 1)" The photovoice project provided an opportunity for people to share their feelings and concerns, learn collectively and gain a sense of control over the challenges inherent in international mobility.



#### 4.3. Limitations of this study

There are several limitations to this study. First, participatory action research requires extensive involvement of the research participants in each of the research phase (Baum, MacDougall, & Smith, 2006). Due to time restrictions related to the situated context (research conducted as a master thesis project), we could only involve the participants in the data collection phase and in the interpretation of the images. For future photovoice projects, we would recommend involving stakeholders in the process of developing the research questions, the validation of findings and strategy development (Baum et al., 2006, p. 854). Furthermore, we did not engage policymakers when conducting the research. However, we are currently working on a report for the International Office of KU Leuven, in order to positively influence their decision making processes on international students.

Second, the lead researcher was an Asian international student studying in Flanders. This may have facilitated the understanding of the participants' feelings and the analysis of the data. However, this may also have brought some potential bias in the interpretation of the data, mainly because personal challenges in adjusting to the Flemish academic and socio-cultural environment may have prevented the researcher from being completely open to the experiences of fellow students. A 'bracketing' exercise on the meaning of the photos for the authors before the focus groups took place served as a means to prevent from personal bias infiltrating the research process. This exercise proved to be valuable during the focus group discussions. For example, what was originally interpreted from the picture of the university's online library (Fig. 1) was that it contained rich resources that were helpful for students. However, after extensive discussions, we learned that what the participant really wanted to convey as a message was a confusion in selecting the appropriate resources.

Another limitation is related to the strict inclusion criteria of our sample, also for pragmatic reasons and to limit the cost of the study. One of the criteria for recruiting participants was that they should possess a camera or mobile device including a camera. Unfortunately, this criterion restricted the access of certain students to this study. It is suggested that for future photovoice studies, researchers need to consider providing or sponsoring photographing devices. In addition to an ethics session, an instruction on how to technically shoot high quality pictures would be recommendable.

Lastly, we used English as the standard language for communication in the focus group sessions, though occasionally some participants talked in their mother tongue when they could not find the words in English. Although the English language facilitated the understanding between researchers and participants and between students speaking a variety of languages, it still caused some barriers for participants in fully expressing themselves. This is why individual interviews, conducted by interviewers who master the participant's mother tongue should be considered for projects in which people from different parts of the world or different ethnical groups are recruited. This would allow each participant to talk in a way that s/he is most comfortable with, and help researchers to really "see and hear things through the eyes and mouths of others". This may also introduce a higher level of cultural sensitivity to the research project, which might be beneficial when studying adjustment processes.

#### 4.4. Implications for future research

This study was explorative in nature, and its focus was on academic and socio-cultural adjustment only, mainly because psychological issues had extensively been addressed in previous studies. Nevertheless, students mentioned a lot of issues that could be classified under psychological adjustment, which confirms the fact that these three domains are interrelated. It might be worthwhile to extend the findings of this study with aspects of psychological adjustment, to reveal a more holistic picture of Asian international students' overseas life experiences in non-Anglophone European countries. This would facilitate the process of developing connections between the different areas of adjustment processes and develop theoretical models that would assist policy makers and stakeholders involved in adjustment processes in prioritizing decisions that target the holistic picture of adjustment. Studies identifying the determinants that lead international students into adopting certain acculturation strategies, and on how to trigger a deeper level of acculturation of international students are also needed to further extend our knowledge base.

Several research participants are currently involved in a follow-up research project, investigating what they have gained from the project and how they have applied the ethical principles outlined in the information session in practice. This is an attempt to illuminate their voice on the specific challenges related to the use of the photovoice methodology.

### 5. Conclusion

In summary, the findings from this study indicate that for cultural or other habits that do not require a lot of individual effort to change, most participating Asian students tend to adopt an integration or assimilation acculturation strategy, while for primary cultural values and ideologies which are part of a broader cultural heritage, they are more likely to adopt a separation strategy. This hypothesis should further be tested. The study findings also suggest that discussing elements of cultural discomfort captured in images can lead to a more critical attitude toward the student's own cultural norms and values.

## Acknowledgements

We are sincerely grateful to the students who participated in this study. We would like to acknowledge the helpful comments from Professor Joke Vandenabeele on earlier drafts of the manuscript. We also thank the anonymous reviewers for providing very insightful feedback on this manuscript.

## References

- Altbach, P. G. (2009). One-third of the globe: The future of higher education in China and India. *Prospects*, 39(1), 11–31. <http://dx.doi.org/10.1007/s11125-009-9106-1>
- Anderson, L. E. (1994). A new look at an old construct: Cross-cultural adaptation. *International Journal of Intercultural Relations*, 18(3), 293–328. [http://dx.doi.org/10.1016/0147-1767\(94\)90035-3](http://dx.doi.org/10.1016/0147-1767(94)90035-3)
- Bach, H. (2007). Composing a visual narrative inquiry. In D. J. Clandinin (Ed.), *Handbook of narrative inquiry: Mapping a methodology* (pp. 280–307). London: Sage.
- Baum, F., MacDougall, C., & Smith, D. (2006). Participatory action research. *Journal of Epidemiology and Community Health*, 60(10), 854–857. <http://dx.doi.org/10.1136/jech.2004.028662>
- Berry, J. W. (1980). Acculturation as varieties of adaptation. In A. M. Padilla (Ed.), *Acculturation: Theory, models, and some new findings* (pp. 9–25). Boulder, CO: Westview.
- Berry, J. W. (1997). Immigration, acculturation, and adaptation. *Applied Psychology*, 46(1), 5–34. <http://dx.doi.org/10.1111/j.1464-0597.1997.tb01087.x>
- Berry, J. W. (1999). Intercultural relations in plural societies. *Canadian Psychology*, 40(1), 12–21. <http://dx.doi.org/10.1037/h0086823>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <http://dx.doi.org/10.1191/1478088706qp063oa>
- Brisset, C., Safdar, S., Lewis, J. R., & Sabatiera, C. (2010). Psychological and sociocultural adaptation of university students in France: The case of Vietnamese international students. *International Journal of Intercultural Relations*, 34(4), 413–426. <http://dx.doi.org/10.1016/j.ijintrel.2010.02.009>
- Brunette, M. K., Larivière, M., Schinke, R. J., Xing, X., & Pickard, P. (2011). Fit to belong: Activity and acculturation of Chinese students. *Journal of Sport Behavior*, 34(3), 207–227.
- Bukowski, K., & Buetow, S. (2010). Making the invisible visible: A Photovoice exploration of homeless women's health and lives in central Auckland. *Social Science & Medicine*, 72(5), 739–746. <http://dx.doi.org/10.1016/j.socscimed.2010.11.029>
- Carnahan, C. R. (2006). Photovoice: Engaging children with autism and their teachers. *Teaching Exceptional Children*, 39(2), 44–50.
- Castleden, H., Garvin, T., & First Nation, H. (2008). Modifying photovoice for community-based participatory Indigenous research. *Social Science & Medicine*, 66(6), 1393–1405. <http://dx.doi.org/10.1016/j.socscimed.2007.11.031>
- Church, A. T. (1982). Sojourner adjustment. *Psychological Bulletin*, 91(3), 540–572.
- Constantine, M. G., Anderson, G. M., Berkel, L. A., Caldwell, L. D., & Utsey, S. O. (2005). Examining the cultural adjustment experiences of African international college students. *Journal of Counseling Psychology*, 52(1), 57–66. <http://dx.doi.org/10.1037/0022-0167.52.1.57>
- Cross, S. E. (1995). Self-construals, coping, and stress in cross-cultural adaptation. *Journal of Cross-Cultural Psychology*, 26(6), 673–697. <http://dx.doi.org/10.1177/0022022219502600610>
- (2013). *Development & Photography Ethics*. (n.d.). Retrieved 19.05.13. <http://www.photoshare.org/resources/development-photography-ethics>
- Erickson, F. (2002). Culture and human development. *Human Development*, 45(4), 299–306. <http://dx.doi.org/10.1159/000064993>
- Geyer, F. (2009). *The educational system in Belgium*. CEPS special report. Retrieved from CEPS website: <http://www.ceps.eu>
- Guillen, P., & Ji, D. (2011). Trust, discrimination and acculturation: Experimental evidence on Asian international and Australian domestic university students. *Journal of Socio-Economics*, 40(5), 594–608. <http://dx.doi.org/10.1016/j.socsc.2011.04.016>
- Hannay, J., Dudley, R., Milan, S., & Leibovitz, P. (2013). Combining photovoice and focus groups: Engaging Latina girls in community assessment. *American Journal of Preventive Medicine*, 44(3), 215–224. <http://dx.doi.org/10.1016/j.amepre.2012.11.011>
- Heggins, W. J., & Jackson, J. F. L. (2003). Understanding the collegiate experience for Asian students at a mid-western research university. *College Student Journal*, 37(3), 379–392.
- Heikinheimo, P. S., & Shute, J. C. M. (1986). The adaptation of foreign students: Students' views and institutional implications. *Journal of College Student Personnel*, 27(5), 399–406.
- Hendrickson, B., Rosen, D., & Aune, R. K. (2011). An analysis of friendship networks, social connectedness, homesickness, and satisfaction levels of international students. *International Journal of Intercultural Relations*, 35(3), 281–295. <http://dx.doi.org/10.1016/j.ijintrel.2010.08.001>
- Howitt, D. (2010). *Introduction to qualitative methods in psychology*. Harlow: Pearson Education.
- Hung, H. L., & Hyun, E. (2010). East Asian international graduate students' epistemological experiences in an American University. *International Journal of Intercultural Relations*, 34(4), 340–353. <http://dx.doi.org/10.1016/j.ijintrel.2009.12.001>
- (2013). *Inschrijvingsaantallen*. (n.d.). Retrieved 01.07.2012 from KU Leuven website: <http://www.kuleuven.be/prodstudinfo/KULeuven.html>
- Iwamoto, D. K., & Liu, W. M. (2010). The impact of racial identity, ethnic identity, Asian values, and race-related stress on Asian Americans and Asian international college students' psychological well-being. *Journal of Counseling Psychology*, 57(1), 79–91. <http://dx.doi.org/10.1037/a0017393>
- Janjua, F., Malik, S., & Rahman, F. (2011). Learning experiences and academic adjustment of international students: A case study from Pakistan. *Journal of Language Teaching and Research*, 2(6), 1359–1365. <http://dx.doi.org/10.4304/jltr.2.6.1359-1365>
- Johansen, S., & Le, T. N. (2012). Youth perspective on multiculturalism using photovoice methodology. *Youth & Society*, <http://dx.doi.org/10.1177/0044118X12443841>
- Kagan, H., & Cohen, J. (1990). Cultural adjustment of international students. *Psychological Science*, 1(2), 133–137.
- Kelchtermans, G. (2009). Who I am in how I teach is the message: Self-understanding, vulnerability and reflection. *Teachers and Teaching: Theory and Practice*, 15(2), 257–272. <http://dx.doi.org/10.1080/13540600902875332>
- Langston, C. A. (1994). Capitalizing on and coping with daily-life events: Expressive responses to positive events. *Journal of Personality and Social Psychology*, 67(6), 1112–1125. <http://dx.doi.org/10.1037/0022-3514.67.6.1112>
- Li, A., & Gasser, M. B. (2005). Predicting Asian international students' sociocultural adjustment: A test of two mediation models. *International Journal of Intercultural Relations*, 29(5), 561–576. <http://dx.doi.org/10.1016/j.ijintrel.2005.06.003>
- Lin, Y., Hsu, A., & Lai, P. (2011). Life experiences of overseas Chinese university students in Taiwan. *College Student Journal*, 45(4), 793(13).
- Lopez, E., Eng, E., Randall-David, E., & Robinson, N. (2005). Quality-of-life concerns of African American breast cancer survivor within rural North Carolina: Blending the techniques of photovoice and grounded theory. *Qualitative Health Research*, 15(1), 99–115. <http://dx.doi.org/10.1177/1049732304270766>
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook*. Thousand Oaks: Sage.
- Mitchell, C. (2011). *Doing visual research*. London: Sage.
- Neuman, W. L. (2010). *Social research methods: Qualitative and quantitative approaches*. USA: Pearson Higher Ed.
- Nykiforuk, C. I. J., Vallianatos, H., & Nieuwendyk, L. M. (2011). Photovoice as a method for revealing community perceptions of the built and social environment. *International Journal Of Qualitative Methods*, 10(2), 103–124. Retrieved from <http://wigan-ojs.library.ualberta.ca/index.php/IJQM/article/view/7152>
- Organisation for Economic Co-operation and Development. (2011). *Access to education, participation and progression. Indicator C3 – Who studies abroad and where? In Education at a glance 2011: OECD Indicators*. Retrieved from <http://www.oecd.org/education/preschoolandschool/educationataglance2011oecdindicators.htm>

- Playford, K., & Safdar, S. (2007). Various conceptualization of acculturation and the prediction of international students adaptations. In A. Chybicka, & M. Kazmierczak (Eds.), *Appreciating diversity: Cultural and gender issues* (pp. 37–66). Cracow, Poland: Impuls.
- Ramaekers, S. (2008). Multicultural education: The problems of irreconcilable differences and change. In C. Thompson, & G. Weiss (Eds.), *Bildende widerstände-widerständige. bildung: Blickwechsel zwischen pädagogik und philosophie* (pp. 79–97). Bielefeld: Transcript.
- Ramsay, S., Barker, M., & Jones, E. (1999). Academic adjustment and learning processes: A comparison of international and local students in first-year university. *Higher Education Research & Development*, 18(1), 129–144. <http://dx.doi.org/10.1080/0729436990180110>
- Rienties, B., Beausaert, S., Grohnert, T., Niemantsverdriet, S., & Kommers, P. (2012). Understanding academic performance of international students: The role of ethnicity, academic and social integration. *Higher Education*, 63(6), 685–700. <http://dx.doi.org/10.1007/s10734-011-9468-1>
- Rose, G. (2007). *Visual methodologies: An introduction to the interpretation of visual materials* (2nd ed.). London: Sage.
- Searle, W., & Ward, C. (1990). The prediction of psychological and sociocultural adjustment during cross-cultural transitions. *International Journal of Intercultural Relations*, 14(4), 449–464. [http://dx.doi.org/10.1016/0147-1767\(90\)90030-Z](http://dx.doi.org/10.1016/0147-1767(90)90030-Z)
- Sherry, M., Thomas, P., & Chui, W. H. (2010). International students: A vulnerable student population. *Higher Education*, 60(1), 33–46. <http://dx.doi.org/10.1007/s10734-009-9284-z>
- Smart, D., Volet, S. E., & Ang, G. (2000). *Fostering social cohesion in universities: Bridging the cultural divide*. Canberra: Australian Education International.
- Swami, V. (2009). Predictors of sociocultural adjustment among sojourning Malaysian students in Britain. *International Journal of Psychology*, 44(4), 266–273. <http://dx.doi.org/10.1080/00207590801888745>
- Swami, V., Arteche, A., Chamorro-Premuzic, T., & Furnham, A. (2010). Sociocultural adjustment among sojourning Malaysian students in Britain: A replication and path analytic extension. *Social Psychiatry and Psychiatric Epidemiology*, 45(1), 57–65. <http://dx.doi.org/10.1007/s00127-009-0042-4>
- Thompson, J. (2009). I am a Farmer: Young women address conservation using photovoice around Tiwai Island, Sierra Leone. *Agenda*, 23(79), 65–69. <http://dx.doi.org/10.1080/10130950.2009.9676224>
- Toyokawa, T., & Toyokawa, N. (2002). Extracurricular activities and the adjustment of Asian international students: A study of Japanese students. *International Journal of Intercultural Relations*, 26(4), 363–379. [http://dx.doi.org/10.1016/S0147-1767\(02\)00010-X](http://dx.doi.org/10.1016/S0147-1767(02)00010-X)
- Valera, P., Gallin, J., Schuk, D., & Davis, N. (2009). Trying to eat healthy: A photovoice study about women's access to healthy food in New York City. *Affilia: Journal of Women and Social Work*, 24(3), 300–314. <http://dx.doi.org/10.1177/0886109909337378>
- Wang, C. C. (1999). Photovoice: A participatory action research strategy applied to women's health. *Journal of Women's Health*, 8(2), 185–192. <http://dx.doi.org/10.1089/jwh.1999.8.185>
- Wang, C., & Burris, M. (1994). Empowerment through photo novella: Portraits of participation. *Health Education & Behavior*, 21(2), 171–186. <http://dx.doi.org/10.1177/109019819402100204>
- Wang, C., & Burris, M. (1997). Photovoice: Concept, methodology, and use for participatory needs assessment. *Health Education & Behavior*, 24(3), 369–387. <http://dx.doi.org/10.1177/109019819702400309>
- Wang, C. C., & Redwood-Jones, Y. A. (2001). Photovoice ethics: Perspectives from Flint Photovoice. *Health Education & Behavior*, 28(5), 560–572. <http://dx.doi.org/10.1177/109019810102800504>
- Wang, C. C., Yi, W. K., Tao, Z. W., & Carovano, K. (1998). Photovoice as a participatory health promotion strategy. *Health Promotion International*, 13(1), 75–86.
- Wang, C. C. D. C., & Mallinckrodt, B. (2006). Acculturation, attachment, and psychosocial adjustment of Chinese/Taiwanese international students. *Journal of Counseling Psychology*, 53(4), 422–433. <http://dx.doi.org/10.1037/0022-0167.53.4.422>
- Ward, C. (1996). Acculturation. In D. Landis, & R. Bhagat (Eds.), *Handbook of intercultural training* (pp. 124–147). Thousand Oaks, CA: Sage.
- Ward, C., & Kennedy, A. (1993). Where's the culture in cross-cultural transition? Comparative studies of sojourner adjustment. *Journal of Cross-Cultural Psychology*, 24(2), 221–249. <http://dx.doi.org/10.1177/0022022193242006>
- Ward, C., & Kennedy, A. (1994). Acculturation strategies, psychological adjustment, and sociocultural competence during cross-cultural transitions. *International Journal of Intercultural Relations*, 18(3), 329–343. [http://dx.doi.org/10.1016/0147-1767\(94\)90036-1](http://dx.doi.org/10.1016/0147-1767(94)90036-1)
- Wei, M. F., Heppner, P. P., Mallen, M. J., Ku, T. Y., Liao, K. Y. H., & Wu, T. F. (2007). Acculturative stress, perfectionism, years in the United States, and depression among Chinese international students. *Journal of Counseling Psychology*, 54(4), 385–394. <http://dx.doi.org/10.1037/0022-0167.54.4.385>
- Wiles, R., Prosser, J., Bagnoli, A., Clark, A., Davies, K., Holland, S., et al. (2008). *Visual ethics: Ethical issues in visual research*. NCRM Methodological Review Paper.
- Yang, M., Webster, B., & Prosser, M. (2011). Travelling a thousand miles: Hong Kong Chinese students' study abroad experience. *International Journal of Intercultural Relations*, 35(1), 69–78. <http://dx.doi.org/10.1016/j.ijintrel.2010.09.010>
- Ye, J. L. (2005). Acculturative stress and use of the Internet among East Asian international students in the United States. *Cyberpsychology & Behavior*, 8(2), 154–161.
- Yeh, C. J., & Inose, M. (2003). International students' reported English fluency, social support satisfaction, and social connectedness as predictors of acculturative stress. *Counselling Psychology Quarterly*, 16(1), 15–28. <http://dx.doi.org/10.1080/0951507031000114058>
- Zhang, J., & Goodson, P. (2011). Predictors of international students' psychosocial adjustment to life in the United States: A systematic review. *International Journal of Intercultural Relations*, 35(2), 139–162. <http://dx.doi.org/10.1016/j.ijintrel.2010.11.011>
- Zhao, M., & Wildemeersch, D. (2008). Hosting foreign students in European universities: International and intercultural perspectives. *European Education*, 40(1), 51–62. <http://dx.doi.org/10.2753/EUE1056-49344>