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Success factors for international postgraduate students’ adjustment:

Exploring the roles of intercultural competence, language proficiency, social contact and social support

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Abstract

The growth in the number of ‘international’ students in higher education is a phenomenon of increasing importance to educators, researchers and policy makers worldwide. This multimethodological study explored factors associated with their adjustment, successful or otherwise. It integrated associations between a broad range of outcome indices – academic grades (for both taught and research assignments), psychological wellbeing, and satisfaction with life in the new environment – and, as contributory factors, participants’ intercultural competence, language proficiency, and the degree, quality and patterns of social contact during their sojourn. Participants were 108 non-UK postgraduate students from a wide range of countries undertaking MA programmes at a British university. Of these, 102 completed a questionnaire with both quantitative and qualitative responses, and a further 6 took part in semi-structured interviews over their programme of study. Findings indicated strong associations between participants’ academic achievement, satisfaction with life in the new environment and psychological wellbeing, and aspects of their intercultural competence, contact with non-conationals, including hosts, and with their language proficiency. Implications of these findings, and a future research agenda, are discussed.

**Keywords:** international students; sojourners; adjustment; contributory factors; outcomes
Introduction

This study addressed a growing, international, intercultural, educational phenomenon. In 2009 almost 3.7 million ‘international’ students (ISs) were enrolled in higher education (HE) institutions outside their country of origin, an increase of 77% since 2000. Although numbers are increasing sharply across Europe, the United Kingdom (UK) remains the main European destination, and the second most important globally after the United States (US): in 2010/11, 17% of its total student body were non-UK citizens, some 428,225 students, and 70% of all full-time taught postgraduates were international (OECD 2011; UKCISA 2012). Although UK government policy is seeking to limit the rise in future, ISs in UK and European HE will nevertheless remain a major part of the student body for the foreseeable future, and they will continue to make a very substantial contribution to the finances and diversity of the institutions in which they study (e.g. Coughlan 2011).

Recent research has consistently found that the challenges facing international students are greater than for their local counterparts, even when they are of a similar nature – loneliness and social acceptance and adjustment to the specific demands of university study, for example (Andrade 2006). Challenges more particularly salient to international students include issues of language and intercultural adjustment (Furnham and Bochner 1986; Sercombe 2011). International students have also been found to experience more stress and anxiety, both academically (Ramsay, Jones and Barker 2007) and socially (Hechanova-Alampay et al. 2002; Rajapaksa and Dundes 2002; Fritz, Chin and DeMarinis 2008), as a result of social isolation and a lack of appropriate social support in the new environment.

This study aimed to identify factors associated with the successful adjustment to UK higher education of a multinational sample of ISs undertaking postgraduate degrees in the humanities or social sciences at a single university. Adjustment here refers to the fit between students and their academic and social environment (Anderson 1994), and ‘international’
students are those choosing to study outside their country of upbringing for a degree (e.g. Ramsay, Jones and Barker 2007). Our specific research interest was the interrelationship between an unusually broad number of outcomes of adaptation – degree of success in assessed academic work, psychological wellbeing, and satisfaction with life (Diener et al. 1985) in the new environment – and contributory factors, suggested in the literature, such as intercultural competence, social contact, social support and language ability. We were also interested in how students themselves felt they were adjusting over the course of their programme of study, with their views explored in a series of individual, confidential interviews.

The burgeoning research literature exploring the adjustment of international students has tended to distinguish between psychosocial, intercultural and educational adjustment, with studies in these three areas pursued separately (Zhou and Todman 2009). A conceptual aim of this study was therefore to integrate a broad range of contributory and outcome factors from across these three domains of enquiry. Our analytical framework is detailed in Figure 1, below. It expands that of Leong (2007) in aiming to gauge a range of outcome indices beyond the purely psychosocial, and integrates aspects from stress and coping approaches, highlighting emotional elements of sojourner adjustment such as psychological wellbeing and satisfaction with life (e.g. Searle and Ward 1990; Ward and Searle 1991; Ward and Kennedy 1999; Ward, Leong and Low 2004). Unusually, it includes measures of different aspects of academic performance (i.e. taught and research-based achievement, detailed below) as indices for the degree of success in academic adjustment (e.g. Van Oudenhoven and Van der Zee 2002), and integrates aspects of the social skills approach (e.g. Furnham and Bochner 1982, 1986), emphasising the importance of interpersonal contacts and social support.
Contributory factors to international student adjustment

Intercultural competence

Intercultural competence (IC) is variously defined and approached, but here refers to abilities and predispositions contributing to an individual’s psychosocial and academic adjustment to a new cultural environment (Van der Zee and Van Oudenhoven 2000). The instrument used in this study to measure IC was the Multicultural Personality Questionnaire (MPQ, Van der Zee and Van Oudenhoven 2000, 2001). Unusually, the MPQ has demonstrated construct and predictive validities over a range of outcome indices in different sample groups, including ISs (Leong 2007). Five distinct dimensions of IC have consistently emerged from factor analyses in studies employing the MPQ (e.g. Van Oudenhoven, Mol and Van der Zee 2003; Leone et al. 2005; Leong 2007; Author and Author 2009):

1. Cultural Empathy (CE), which reflects the ability to successfully appreciate the thoughts and feelings of people from different cultural backgrounds.

2. Openmindedness (OM), defined as an unprejudiced, non-judgmental attitude toward people with different social norms, values and expectations.

3. Social Initiative (SI), which shows the use of proactive strategies in relationships with others.

4. Emotional Stability (ES), which reflects the ability to successfully handle stressful situations and to regulate emotional reactions under stress.

5. Flexibility (FL), defined as the capacity to tolerate uncertainties, interlinked with the ability to learn from experiences and to adjust behaviour.
Example items and measures of internal consistency for each IC subscale from data in this study are given below in Table 3.

Language proficiency

The relationship between academic performance of international students and their language proficiency has received more research attention than any other area (Andrade 2006). This research has consistently (and perhaps unsurprisingly) shown that proficiency in the local language, or in a lingua franca such as English if this is the main language of instruction and assessment, is centrally important to academic success (e.g. Robertson et al. 2000; Ramburuth 2001; Mendelsohn 2002; Woodrow 2006; Duru and Poyrazli 2007; Ramsay, Jones and Barker 2007; Gu, Schweisfurth and Day 2010). There are also some strong indications in the literature that language proficiency can influence other outcomes of adjustment beyond the purely academic (Senyshyn, Warford and Zhang 2000).

Social contact and social support

Relative to language proficiency, the nature and roles of social contact and social support in the adjustment of international students have been under-researched (Andrade 2006). A number of recent studies have indicated that contact between international students and members of the host community plays an important role, but have also found that such contact is usually largely instrumental rather than emotionally supportive (Rohrlich and Martin 1991; Al-Sharideh and Goe 1998; Chapdelaine and Alexitch 2004; Parks and Raymond 2004; Zhao et al. 2005; Burke, Watkins and Guzman 2009). Overall, and in contrast to earlier research (e.g. Bochner, McLeod and Lin 1977), recent literature shows that contact with hosts (relative to co-nationals), is generally low. It has also revealed patterns of isolation from host communities in general, and host students in particular across a range of
host locations (Trice 2003) amongst international students. It appears that as proportions of international students relative to hosts have grown, contact between them may have reduced.

Jacob and Greggo (2001), Hechanova-Alampay et al. (2002), and Parks and Raymond (2004) all found that motivation among international students to interact with host students was high, but that relationships were difficult to instigate and to sustain because of a lack of reciprocal interest from host students. Evidence for the importance of having ties with both co-nationals and with hosts for international students’ successful adjustment has previously been obtained (Al-Sharideh and Goe 1998). From a theoretical perspective, Bochner, McLeod and Lin’s (1977) Functional Model of Friendship Networks depicts co-national ties as the strongest network, followed by ties with host nationals. However, recent empirical research has found evidence of highly supportive and closely knit international ties (i.e. friendships between international students of different nationalities) (e.g. Brown and Holloway 2008; Montgomery 2010). For example, Kashima and Loh (2006) found indications that the more international ties Asian students in Australia had, the better adjusted they were psychologically. More research is needed to further explore the patterns and dynamics of these international ties among different student samples.

The Study

Research questions

In response to the review of literature above, three main research questions concerning the adjustment of international postgraduate students were formulated in order to explore the associations between the factors identified as potential contributors and a range of outcome indices:
1. How do intercultural competence, English language proficiency, social contact and social support relate to different aspects of academic achievement measured over the whole programme?

2. How do these contributory factors relate to psychological wellbeing, experienced during the programme of study?

3. How do they relate to satisfaction with life in the new environment during the programme of study?

**Participants**

Participants (N = 102, 76 females and 26 males) completed a survey, as detailed below. All were international students undertaking a one-year postgraduate taught MA programme at the same UK university. 43 were studying TESOL and Applied Linguistics, 40 Cross-Cultural Communication (CCC), and 19 were studying for other degrees in the humanities or social sciences (HASS - Media Studies, Education and Public Relations). They ranged in age between 21 and 43 (mean 25.26). 38 participants were from the People’s Republic of China (PRC), 28 from other east Asian states (Taiwan, Thailand, Japan and South Korea), 17 from the Middle East (Saudi Arabia, Oman, Libya and Syria), and 19 from Europe (Germany, Italy, Poland, Austria, Turkey, Greece, France, Lichtenstein and Lithuania). All questionnaire participants were not first language English speakers, but had scored the minimum English language entrance requirement for entrance to their programmes of IELTS (International English Language Testing System) 6.5, or a TOEFL (Test of English as a Foreign Language) equivalent prior to their programme of study. All had the equivalent of an upper second class undergraduate degree from a UK university. Their MA programmes ran September to September.

(Please Insert Table 1 here)
Additionally, individual, confidential semi-structured interviews were held with a further six non-UK students from the same cohort, at three points over the taught part of the same academic year (in October, February and June). Interviewees were self-selected, and so were probably more confident and linguistically able relative to questionnaire participants. One was a first language English speaker the others were not first language English speakers, but had achieved at least IELTS 6.5 or an equivalent prior to commencing their studies. Ages ranged between 23 and 28; five were female (two Chinese, one from Lichtenstein, one held both French and Canadian citizenship, one from the USA) and one male (German). Table 2 gives details of each participant. The aim of these interviews was to achieve triangulation through complementarities of methods with the survey, giving us a more fine-grained picture of emergent concerns particularly salient to participants.

(Please Insert Table 2 here)

**Instruments**

A questionnaire was completed in December of their year of study, i.e. late in semester 1, at a point when they had almost completed half of the taught element of their programmes, but before they had had any grades for assignments. Our aim in this part of the study was to get a snapshot of students’ adjustment three months after entering the new environment, but before they had had detailed input from assessors (cf. Lee and Wesche 2000; Senyshyn, Warford and Zhang 2000; Schutz and Richards 2003). The survey investigated the contributory and outcome variables in Figure 1, above. Table 3, below, shows example items and the internal consistencies of the contributory and outcome subscales. These were high in all cases.

(Please Insert Table 3 here)

Additionally, three single items in the questionnaire gauged the degree of recent contact with British people, co-nationals and people of other nationalities, respectively. Another
single item also asked ‘How much are you able to communicate, to your own satisfaction, in the English language?’ The responses to this item were used as a measure of questionnaire participants’ English language proficiency. Initial analysis had shown very little variation in questionnaire participants’ tested pre-programme English language level. We therefore felt that a self-report, relating ability to self-concept and the experience of living and studying in the new environment would be a better measure of applied language ability than a pre-programme English language test (Bachman and Palmer 1989). The final item in the survey was an open question: ‘Are there any other comments you would like to make about yourself and your adjustment to life in the UK?’ This aimed to derive qualitative data salient to the adjustment of participants which was not necessarily captured in the rest of the survey, or which might add more fine-grained detail relative to the quantitative findings.

The semi-structured interviews, each of about an hour, used open questions to explore how well students felt they were adjusting to life and study in the UK at different points. Questions included ‘How have you been feeling recently?’ and ‘How have things been going for you?’ Social contact and social support became an emergent focus from analysis of student responses (detailed below).

**Outcome measures**

Students’ grades were used as measures of academic achievement: an overall grade point average (GPA - for the taught and research elements of the degree combined), and separate measures for the taught element of their programme (worth 66.6% of the whole) and for the research element of their degree (their dissertation project, 33.3%). Separating the research and taught grades allowed for a more detailed analysis of aspects of academic achievement, with the measure of achievement on the taught element representing the more structured and guided element, and the measure of achievement in the research element reflecting
achievement in more independent study. As a measure of satisfaction with life in the new environment we used Diener et al.’s (1985) Satisfaction with Life Scale. To assess the students’ psychological wellbeing, we adapted scales from the RAND Mental Health Inventory (RAND 2012). To assess students’ quality of social support we used an adapted version of Ong and Ward’s (2005) Index of Sojourner Support.

Analysis
Quantitative survey data was analysed both for descriptive information (percentages of responses and measures of central tendency) and for the relationships between contributory factors and each outcome (Figure 1). Thematic content analysis (TCA, Denzin & Lincoln 1994) was employed on both the interview transcripts, and on responses to the final open survey question. The thematic focus in the analysis of both sets of qualitative data was students’ comments on their own broadly successful and unsuccessful adjustment to the social and academic demands of their sojourn. Sub-themes emerged from analysis relating to each of these broad areas, and are detailed below.

Findings

Questionnaire: Descriptive analysis

Language proficiency
On a scale of 1 to 5, with 1 being not able to communicate at all to their own satisfaction, and 5 being a great deal, 53% of participants rated themselves positively (i.e. above the mid-point 3). The remainder (i.e. 46%) self-rated at the midpoint or below (i.e. 3-1). The overall mean response was 3.1 and the standard deviation (SD) was low at 0.8.
**Intercultural competence (IC)**

As a measure of IC, the five MPQ subscales were calculated as a mean response of all items on the subscale. Overall, participants scored above the midpoint of the 5-point scale on CE and OM (means 3.6), and nearer to that midpoint on other measures of IC (OM mean 3.2, ES and FL 3.1); SD varied between 0.4 and 0.5.

**Social contact**

Students reported most contact with people of their own nationality (mean 3.8, almost 72% recorded ‘often’ or ‘very often’), followed by contact with non-conational students (3.5, 57%), and with UK people (2.6, 24%). Forty-seven percent of students had had contact with UK people ‘very occasionally’ or ‘never or almost never’.

**Social support**

The overall mean was 2.9, just below the midpoint of the scale. Eighty percent of participants reported low or medium levels of social support. In contrast, only 3% reported social support ‘very often’.

**Academic achievement**

We turn now to descriptive statistics from analysis of responses to items and subscales relating to the outcome indices, beginning with measures of academic achievement. Students’ overall grades ranged between 49% and 74% with a mean of 61.9% and an SD of 4.7. The contribution of the research element of their degree programme to the overall grade ranged from 14.6% to 26.6%, with a mean research grade of 20.5% and an SD of 2.1. The taught component ranged between 34.2% and 48.7% with a mean of 40.3 and a SD of 3.06.
**Psychological wellbeing**

A large majority of mean responses were either at or slightly above the midpoint of the psychological wellbeing subscale, with an overall mean of 3.4 with an SD of 0.7.

**Satisfaction with life in the UK**

A majority of responses (55%) corresponded to 3, the midpoint on the satisfaction with life in the new environment subscale measure, and 27% were at 4, corresponding to agreement with positive statements about their life in the UK. The mean subscale score was 3.2 with an SD of 0.7.

(Insert Table 4 here)

**Questionnaire: Relationships/associations**

**Language proficiency**

All outcome indices were significantly associated with language proficiency, except satisfaction with life in the new environment. Self-rated language proficiency was significantly associated with academic success on all three measures, in line with expectations (see Table 5).

(Please Insert Table 5 here)

Language proficiency was also significantly associated with psychological wellbeing; R=0.26, p>0.007. However, there was no significant association with satisfaction with life in the new environment.

**Intercultural competence**

Using the enter method; statistically significant models emerged for variance in academic achievement in relation to IC. The models contributed to between 14% and 26% of variance
in the data. Coefficient results showed that the main predictors of academic success were Cultural Empathy, associated significantly with all academic outcome indices, and Openmindedness. Social Initiative was marginally significantly associated with academic achievement (Table 6, below).

Multiple linear regression analysis using the enter method was applied to explore the association between the IC variables and the psychological wellbeing of the participants. The results revealed a highly significant model which accounts for more than 50% of variance in the data; $F(5,69) = 17.16$, $P < .000$; $R^2 = 0.55$; adjusted $R^2 = .52$. Emotional Stability was the main predictor of psychological wellbeing, with Openmindedness as a marginally significant predictive factor (Table 6).

Multiple linear regression analysis using the enter method was also applied to explore associations between the IC subscales and satisfaction with life in the new environment. Another highly significant model was found; $F(5,69) = 5.626$, $P < .000$; $R^2 = 0.29$; adjusted $R^2 = .23$, with Emotional Stability as a significant predictor of satisfaction with life in the new environment (Table 6).

(Please Insert Table 6 here)

Social contact

Linear regression analysis, with the social contact factors as independent and the academic achievement as dependent variables, revealed that degree of contact with non-cononational international students was the main predictor of academic achievement success for overall grade point average and for the teaching and research sub-measures. Contact with British people was also significantly associated with results on the taught element of the programme.
To explore the association between social contacts and the psychological wellbeing of international students, a regression analysis was conducted. The model was highly significant and contributed to 10% of variance in the data; $F(3, 95) = 3.71, P < .01; R^2 = .10$; adjusted $R^2 = .07$. Analysis of coefficients (Table 6, above) showed that degree of contact with British people was the main predictor of psychological wellbeing. Regression analysis for association between social contacts and satisfaction with life resulted in a model significant at the 90% level. Degree of contact with UK people was the main predictor of satisfaction with life in the new environment, $F(3, 95) = 3.42, P < .02; R^2 = .09$; adjusted $R^2 = .06$ (Table 7).

(Please Insert Table 7 here)

**Social support**

Analysis of possible associations between the social support and psychological wellbeing subscales showed a positive significant correlation; $r = .2, p = 0.02$, indicating that those who reported more frequent social support scored more highly on the psychological wellbeing measure. The relationship between degree of social support and academic achievement, and satisfaction with life, provided no significant associations in an Analysis of Variance.

**Summary of survey quantitative findings**

Figure 2, below, details significant associations between contributory factors and outcome indices from analysis of the questionnaire data.

(Please Insert Figure 2 here)
Questionnaire: Responses to the open question

Thirty-one of the participants provided answers to the final, open, question in the survey, asking for ‘any other comments about yourself and your adjustment to life in the UK’. Dimensions of successful or unsuccessful adjustment emerging from TCA related equally to experiences beyond and within university. Nearly all referred to aspects of social contact and social support. Their comments considered the type and quality of interpersonal relationships, and ways in which they related to different people and to aspects of local systems, both within and outside the university such as banks or government offices. Impressions of such systems were related to participants’ impressions of other aspects of their lives in the UK, and of the overall quality of their own experiences of adjustment. Comments on university facilities and to adjustment in psychosocial terms also featured strongly in this category. Emergent sub-themes included liking the unfamiliar and/or people from other nations (with two instances of positive reference to the effects of ‘culture shock’). The benefits of new types of social contact were frequently remarked upon: one respondent wrote that ‘I find studies and mixing with different people and university life very interesting and enjoyable. It is exactly the kind of new experience that I expected and wanted to go through’ (Polish female, 23). The vast majority of these comments related to contact with non-conational international students. The few positive comments about ‘England’, ‘Britain’ and the ‘U.K.’ related to the university library, to its health centre and, in one instance, to a social network outside the university (‘Church has created a sense of belonging’ Chinese female, 22). In terms of academic adjustment, the vast majority of responses were positive and described views and experiences relating to impressions of learning and personal growth.

A smaller number of responses related to unsuccessful or negative aspects of adjustment. The difficulty of interacting and/or communicating with ‘other(s)’, in both the social and the academic environments, especially with British people, was a main concern:
‘Communication with the English is only ever superficial’ (Taiwanese female, 22), ‘English are unfriendly’ (Chinese female, 22); ‘English people are hard to get to know’ (German female, 24). Understanding the speech of locals was a frequently remarked difficulty. One respondent (Omani female, 24) reported it was ‘hard to communicate with Europeans’, while a German respondent wrote that it was ‘difficult to get on with non-Europeans’. Another, Libyan, respondent wrote that ‘national groups stick together too much’.

Academic problems related to reading load and academic writing (3 instances each). Two respondents said they were too busy for non-academic activities. One noted a problem with ‘understanding criticality’ (Chinese male, 23). Two respondents complained that it was difficult to work alone (Turkish female, 22; and Chinese female, 23).

**Interviews: Summary of findings**

Over the three stages of the interview process through the year, all interviewees reported a sense of generally successful accommodation to their new sociocultural and academic environment, even though there are some areas in which adjustment was seen as challenging or unsuccessful. Again, social contact and social networks were the main focus for comment. Relationships with other students, particularly those they were living with, were reported as being a defining aspect of the overall quality of their experience. All interviewees were living in university-owned accommodation, sharing with other postgraduate students. They reported being satisfied with their living arrangements, gaining considerable social and academic support from the people they live with, together adjusting to their new life circumstances. In all cases, and across the three interviews, ‘home’ and ‘home sharers’ (house mates &/or flatmates), seemed to influence deeply participants’ impressions of their experience in the new environment. A typical and representative view was that ‘We live like a family’ (P2, int. 2)
Another feature mentioned by most interviewees at all three stages were the benefits of meeting and developing friendships with fellow students on the programme: All were aware that most students on the programmes were ‘international’, facing similar challenges in adjusting to new systems and a previously unfamiliar environment. Micro-communities seemed to evolve fairly quickly, with a common sense of purpose. P3 had a group of co-national friends – ‘I think I have a lot of friends here, both - how do you say - from the same country … And also some friends from other countries, yes and we had wonderful time together’ (interview 3). P3 also commented, ‘the (?) way that people get along with each other maybe, and also the relationship between students and tutors and — really makes me feel that’s so good’ (int 1). ‘I’m very satisfied with the staff too. All the people are lovely’ (int. 2)

P5 describes a positive relationship with staff: ‘Yes, it’s very nice actually … everybody’s really welcoming and they really want to help you.’ She also reported adequate support: ‘I think that if I just ask a question I get it answered right away’ (int. 3)

Interviewees reported contact with a multiplicity of nationalities in the case of the European and North American interviewees, but contact was largely confined to co-nationals for the two Chinese interviewees. All interviewees reported making considerable use of Skype and other communications applications to maintain strong and supportive social contacts with friends and family at home.

Most interviewees reported a lack of contact with British people, and regret about this. All interviewees commented frequently on the friendliness of locals, on the infrequent occasions when they had been encountered, but these contacts were largely confined to people outside the university or to administrative staff within the university. ‘The one thing I wasn’t prepared for was really how people on the street, not only in shops where I wanted to
buy something, like strangers and with no need to talk to me or no need to engage in conversation with me, responded to me. Yes this was - yes I guess it was a really, really nice experience” (P1., int. 1). … a lot friendlier than you expect them to be compared to nation N in a sense’ (int. 2). At the same time, associations and friendships with local people were generally viewed as limited, even by the point of the third interview: ‘It’s mainly students, like mainly from CCC [Cross Cultural Communication] and then some from another class I’ve had’ (P5). The Chinese interviewees ascribed their lack of contact to their own difficulties with English, specifically understanding what locals were saying, although all reported a sense that this became better over time. One exception to the pattern of isolation from locals was the interviewee who found considerable satisfaction through her passion for drama, an important dimension of this being the amount of contact that ensued with home students.
Discussion

Our overall findings indicate that academic success for international students in the humanities or social sciences in the UK is strongly associated with language proficiency in English, as well as high Cultural Empathy, Open Mindedness, Social Initiative and high levels of contact with non-conational international students. International students exhibiting high levels of psychological wellbeing at a mid-point in their studies are also likely to be language proficient and open-minded, as well as being emotionally stable, to have high levels of social contact with members of the host society, and good general social support. International students’ overall satisfaction with life at a mid-point in their sojourn was, we found, associated with language proficiency, emotional stability and degree of contact with host nationals.

Our finding that language proficiency was associated with all but one of the outcomes, confirms and extends in scope the findings of the body of previous research, detailed above. Given the central importance of academic success as an aim for international students, three of five aspects of intercultural competence – Cultural Empathy, Open Mindedness and (related to the assessed work resulting from the taught element of their programmes) Social Initiative – were also significant in predicting aspects of a successful adjustment. Intercultural pre-training is a strong feature of the preparation of other groups of sojourners, most especially business people (e.g. Bennett, Aston and Colquhoun 2000), but remains a neglected element in the preparation of international students (Gu, Schweisfurth and Day 2010). This still tends to be largely confined to ‘purely’ linguistic preparation, specifically for examinations such as IELTS and TOEFL (e.g. Copland and Garton 2011), despite the conceptual and practical complementarities of language and of culture-learning suggested in much of the relevant language pedagogical literature (e.g. Young, Sachdev and Seedhouse 2009). There is further corroborative evidence here (see also Young and Sachdev 2009) for
the need to incorporate intercultural learning into language learning as pre-sojourn training for international students, particularly if this aims to develop empathy and a positive attitude across groups (Byram and Feng 2004). Reflective in-sessional training aiming to develop IC may also show benefit, and might be incorporated into the support host HE institutions currently offer, and could usefully be extended to both host and international students, to facilitate intercultural contact.

Our qualitative findings, especially, provided strong confirmation of the importance, to our participants’ own sense of adjustment, of contact with others, and of the social support they derived, both from peers also experiencing the sojourn, and distantly, from home. The association between the degree of contact with non-conational international students and academic achievement indicates the importance of links among international students while they study. This can be fostered by institutions both by encouraging social bonds between people outside of the specifically academic aspects of the experience – through social activities and sharing of interests in clubs and societies, for example – and by the use of group activities for study, both within and outside of class. The considerable research literature exploring multicultural teamworking (see Schneider and Barsoux 2003 for a summary), currently largely focused on interactions in business settings, could be very usefully applied to learning in HE to facilitate this. Findings from this literature stress the value and importance of multiple perspectives on tasks and problems, and have shown how perceived cultural difference can be approached as an asset and resource rather than a constraint. Multicultural teamworking is likely to be a considerable transferable skill for graduates, contributing, on the evidence of this study, to their academic success. It is also highly likely to be applicable to people’s future professional lives in a globalising world where international and intercultural contacts are of increasing salience.
Emphasising the benefit of intercultural interaction may also encourage host students to be more interested in interacting with international students, a situation which, on our evidence, is to be highly desired. Our findings, from the survey and the interviews, confirm those of previous studies which suggested the isolation of international students from host students, to the great regret and perceived detriment of the former at least (Rohrlich and Martin 1991; Al-Sharideh and Goe 1998; Chapdelaine and Alexitch 2004; Parks and Raymond 2004; Zhao et al. 2005; Burke, Watkins and Guzman 2009). We also found indications that links with non-co-nationals can and do compensate for this. Our findings also indicated a significant association between the degree of such contacts and psychological wellbeing and general satisfaction with the new environment, further emphasising the importance of such contacts to the totality of the experience of international students.

Our participants’ psychological wellbeing and their satisfaction with life in the new environment were related to degree of Emotional Stability. This aspect of IC has received less attention than most, but indications here are that it is vital and should be supported by host institutions. This can be done by making support services (libraries, accommodation services and health centres, for example) as user-friendly as possible to non-nationals, reducing student stress, especially in international students, who are unused to host systems and procedures. Access to and the responsiveness of tutors is also significant. The quality of such support services was vitally important to our participants on the evidence of all parts of this study. In extremis, students should also have access to sympathetic and culturally-aware counselling services (Pedersen 1991; Shigaki and Smith 1997; Jacob and Greggo 2001; Lacina 2002; Arthur 2004).

Our findings highlight a number of interesting possible directions for future research. Our participants’ patterns of social contact varied very considerably by individual, and more in-depth investigation of patterns of social contact, perhaps centred on individual case
studies, would be very useful. We found evidence that contact with home via electronic media seemed strongly related to the quality of people’s experience. Future study could very usefully explore the extent, nature and effects of this ‘virtual’ support, perhaps seen from the perspective of both sojourners and those at home. Inter-correlations between contributory factors or between outcomes were beyond the scope of this study. Future research could investigate inter-relationships between, for example, aspects of intercultural competence, quality of social support, networks of social contact, and academic success. Longitudinal measures of psychological wellbeing and satisfaction with life in the new environment could also very usefully be taken at different points in international students’ sojourns, to track patterns of change in these outcome indices over time, or the effects of specific interventions made by host institutions on these indices of international students’ adjustment.

We also call for more investigations into the experiences of different student sojourner groups as the nature of the academic sojourn might well impact upon contributory factors such as intercultural competence and wellbeing indicators. The present study focused on a very specific segment of the international student body, postgraduate students of the humanities or social sciences on intensive one-year taught programmes. All students in our sample had previously obtained at least an undergraduate degree and many had previous work experience. They were therefore likely to be older, potentially more independent in their decision to study abroad than international undergraduate students, and perhaps more strategic in their decision to study a specific degree. Future research could for example compare the adjustment of international postgraduate students and undergraduate students on exchange programmes (i.e. students returning to their home universities to complete their degree). This type of comparison would be worthwhile as the ‘international student experience’ of an exchange student is likely to be profoundly different in scope and outcome from those students studying abroad for a degree. It might also be fruitful to explore if the
adjustment of international students in other subject areas – the natural sciences, for example – conforms to the pattern discerned for these students of the humanities and social sciences. Would language proficiency and aspects of intercultural competence seem to be such powerfully contributory factors for students following programmes where language and communication, while still important, would be of less central importance to academic achievement?

We conclude by pointing out that although features of the experiences of international students around the globe might be of a similar nature, more host-country specific factors such as climate, the economy and academic conventions could further influence student sojourner adjustment. A cross-location comparison was beyond the scope of this study, but future research could very usefully include comparative studies of student sojourner adjustment across different host countries.

(5833 words)

References


Table 1. Questionnaire participants.

<table>
<thead>
<tr>
<th>Age range</th>
<th>21-43 (M=25.26)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male (26)</td>
</tr>
<tr>
<td>MA Programme of study</td>
<td>43 TESOL and AL</td>
</tr>
<tr>
<td>Nationality</td>
<td>38 Chinese (PRC)</td>
</tr>
</tbody>
</table>
Table 2 Interview Participants

<table>
<thead>
<tr>
<th>Participant</th>
<th>Gender</th>
<th>Nationality</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>F</td>
<td>Joint Canadian and French</td>
</tr>
<tr>
<td>P2</td>
<td>F</td>
<td>People’s Republic of China</td>
</tr>
<tr>
<td>P3</td>
<td>F</td>
<td>People’s Republic of China</td>
</tr>
<tr>
<td>P4</td>
<td>M</td>
<td>Germany</td>
</tr>
<tr>
<td>P5</td>
<td>F</td>
<td>Lichtenstein</td>
</tr>
<tr>
<td>P6</td>
<td>F</td>
<td>USA</td>
</tr>
</tbody>
</table>
Table 3. Subscales in the survey: Reliabilities and example items.

<table>
<thead>
<tr>
<th>Subscales of Contributory Factors</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intercultural Competence</strong></td>
<td></td>
</tr>
<tr>
<td>Cultural Empathy (CE, 18 items),</td>
<td></td>
</tr>
<tr>
<td>( \alpha = .82 ) Example:</td>
<td></td>
</tr>
<tr>
<td>Notices when someone is in trouble</td>
<td></td>
</tr>
<tr>
<td>Open Mindedness (OM, 18 items),</td>
<td></td>
</tr>
<tr>
<td>( \alpha = .79 ) Example:</td>
<td></td>
</tr>
<tr>
<td>Finds other religions interesting</td>
<td></td>
</tr>
<tr>
<td>Social Initiative (SI, 17 items),</td>
<td></td>
</tr>
<tr>
<td>( \alpha = .79 ) Example:</td>
<td></td>
</tr>
<tr>
<td>Makes contacts easily</td>
<td></td>
</tr>
<tr>
<td>Emotional Stability (ES, 20 items),</td>
<td>( \alpha = .82 ) Example:</td>
</tr>
<tr>
<td>( \alpha = .82 ) Example:</td>
<td></td>
</tr>
<tr>
<td>Forgets setbacks easily</td>
<td></td>
</tr>
<tr>
<td>Flexibility (FL, 14 items),</td>
<td>Social Support (SS, 10 items),</td>
</tr>
<tr>
<td>( \alpha = .71 ) Example:</td>
<td>( \alpha = .80 ) Example:</td>
</tr>
<tr>
<td>Changes easily from one activity to another’</td>
<td>Have people invited you to a dinner, party or other social event?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subscales of Outcome Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction With Life in the New Environment (SWL) (SL, 5 items), ( \alpha = .92 ) Example: I am satisfied with my life here.</td>
</tr>
</tbody>
</table>
Table 4. Overall responses to questionnaire items and subscales.

<table>
<thead>
<tr>
<th>contributor factors</th>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
<th>SD</th>
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</thead>
<tbody>
<tr>
<td><strong>IC MPQ scales</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
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<td>3.61</td>
<td>4</td>
<td>3</td>
<td>0.88</td>
</tr>
<tr>
<td>CE</td>
<td>3.66</td>
<td>3.67</td>
<td>3.83</td>
<td>0.43</td>
</tr>
<tr>
<td>OM</td>
<td>3.63</td>
<td>3.58</td>
<td>3.06</td>
<td>0.46</td>
</tr>
<tr>
<td>SI</td>
<td>3.25</td>
<td>3.18</td>
<td>3.12</td>
<td>0.48</td>
</tr>
<tr>
<td>ES</td>
<td>3.14</td>
<td>3.13</td>
<td>3.05</td>
<td>0.47</td>
</tr>
<tr>
<td>FL</td>
<td>3.14</td>
<td>3.11</td>
<td>3</td>
<td>0.4</td>
</tr>
<tr>
<td><strong>Social contact</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>British people</td>
<td>2.64</td>
<td>3</td>
<td>2</td>
<td>1.18</td>
</tr>
<tr>
<td>Own nationality</td>
<td>3.88</td>
<td>4</td>
<td>5</td>
<td>1.22</td>
</tr>
<tr>
<td>Non-conationals</td>
<td>3.57</td>
<td>4</td>
<td>4</td>
<td>0.97</td>
</tr>
<tr>
<td><strong>Social Support</strong></td>
<td>3.08</td>
<td>3.1</td>
<td>3.1</td>
<td>0.65</td>
</tr>
<tr>
<td><strong>Outcome indices</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Academic Achievement</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taught</td>
<td>40.67</td>
<td>40.43</td>
<td>40.47</td>
<td>4.17</td>
</tr>
<tr>
<td>Research</td>
<td>20.57</td>
<td>20.67</td>
<td>20.67</td>
<td>2.12</td>
</tr>
<tr>
<td>Overall grade</td>
<td>61.24</td>
<td>60.85</td>
<td>59.1</td>
<td>5.56</td>
</tr>
<tr>
<td>Psychological Wellbeing</td>
<td>3.41</td>
<td>3.5</td>
<td>3.67</td>
<td>0.64</td>
</tr>
<tr>
<td>Satisfaction with life in UK</td>
<td>3.19</td>
<td>3.2</td>
<td>3</td>
<td>0.72</td>
</tr>
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</table>
Table 5. Associations between language ability and academic achievement.

<table>
<thead>
<tr>
<th>Academic success</th>
<th>R</th>
<th>Sig</th>
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</thead>
<tbody>
<tr>
<td>Overall grade</td>
<td>0.37</td>
<td>.0001</td>
</tr>
<tr>
<td>Research grade</td>
<td>0.35</td>
<td>.0001</td>
</tr>
<tr>
<td>Taught grade</td>
<td>0.33</td>
<td>.001</td>
</tr>
</tbody>
</table>
Table 6. Regression analysis of intercultural competence and academic achievement, psychological wellbeing and satisfaction with life.

<table>
<thead>
<tr>
<th></th>
<th>Overall Grade</th>
<th>Research Grade</th>
<th>Taught Grade</th>
<th>PW</th>
<th>SWL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\beta$</td>
<td>$t$</td>
<td>$\beta$</td>
<td>$t$</td>
<td>$\beta$</td>
</tr>
<tr>
<td>(Constant)</td>
<td>7.98**</td>
<td>5.44**</td>
<td>8.46**</td>
<td>0.18</td>
<td>1.33</td>
</tr>
<tr>
<td>Mean CE</td>
<td>0.58</td>
<td>3.44**</td>
<td>0.43</td>
<td>2.42**</td>
<td>0.59</td>
</tr>
<tr>
<td>Mean OM</td>
<td>-0.50</td>
<td>-2.65**</td>
<td>-0.31</td>
<td>-1.54</td>
<td>-0.56</td>
</tr>
<tr>
<td>Mean SI</td>
<td>0.26</td>
<td>1.54</td>
<td>0.14</td>
<td>0.78</td>
<td>0.31</td>
</tr>
<tr>
<td>Mean ES</td>
<td>0.07</td>
<td>0.58</td>
<td>-0.01</td>
<td>0.13</td>
<td>0.12</td>
</tr>
<tr>
<td>Mean FL</td>
<td>0.08</td>
<td>0.73</td>
<td>0.15</td>
<td>1.20</td>
<td>0.03</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.24</td>
<td>0.14</td>
<td>0.26</td>
<td></td>
<td>0.55</td>
</tr>
</tbody>
</table>

Adjusted R-squared 0.19 0.083 0.21 0.52 0.23

F (6,68) 4.564 2.36 5.129 17.16 5.626

Sig. 0.001 0.04 0.0001 0.0001 0.0001

** significant at the 99% level  * significant at the 95% level  ^significant at the 90% level
Table 7. Regression analysis of degrees of social contact and academic achievement, psychological wellbeing and satisfaction with life.

<table>
<thead>
<tr>
<th></th>
<th>Grade</th>
<th>Research</th>
<th>Taught</th>
<th>PW</th>
<th>SL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\beta$</td>
<td>$t$</td>
<td>$\beta$</td>
<td>$t$</td>
<td>$\beta$</td>
</tr>
<tr>
<td>Constant</td>
<td>21.68**</td>
<td>15.65**</td>
<td>22.14**</td>
<td>6.89**</td>
<td>6.40**</td>
</tr>
<tr>
<td>Contact with British</td>
<td>0.12</td>
<td>1.22</td>
<td>-0.11</td>
<td>0.19</td>
<td>1.916*</td>
</tr>
<tr>
<td>Contact with own nationality</td>
<td>-0.08</td>
<td>-0.82</td>
<td>-0.46</td>
<td>-0.09</td>
<td>-0.92</td>
</tr>
<tr>
<td>Contact with non-conationals</td>
<td>0.32</td>
<td>3.15**</td>
<td>0.38</td>
<td>3.76**</td>
<td>0.23</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.15</td>
<td>0.15</td>
<td>0.13</td>
<td>0.10</td>
<td>0.09</td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.13</td>
<td>0.12</td>
<td>0.10</td>
<td>0.07</td>
<td>0.06</td>
</tr>
<tr>
<td>F</td>
<td>6.01</td>
<td>5.68</td>
<td>5.04</td>
<td>3.71</td>
<td>3.42</td>
</tr>
<tr>
<td>Sig</td>
<td>.001**</td>
<td>.001**</td>
<td>.003**</td>
<td>0.01</td>
<td>0.02</td>
</tr>
</tbody>
</table>

** significant at the 99% level  * significant at the 95% level  ^significant at the 90% level
Figure 1. Analytical framework: Contributory and outcome factors in adjustment of international students investigated in this study.

**Contributory Factors**

- Language proficiency
  - *IELTS/TOEFL scores* (matched on this sample)
  - *Self-rating*

- Previous academic achievement
  - *Matched on this sample*

- Intercultural Competence (IC)
  - *Cultural Empathy subscale*
  - *Open Mindedness subscale*
  - *Social Initiative subscale*
  - *Emotional Stability subscale*
  - *Flexibility subscale*

- Social contact in the UK
  - *With co-national*
  - *With other international students*
  - *With host community*

- Social support in the UK
  - *Subscale*

**Outcomes**

- Academic achievement
  - *On taught element*
  - *On research element*
  - *Overall*

- Psychological wellbeing
  - *Subscale*

- Satisfaction with life in the new environment
  - *Subscale*
Figure 2. Significant associations between contributory factors and outcome indices.

**Contributory Factors**
- Language proficiency
- Cultural Empathy
- Open Mindedness
- Contacts with non-conational international students

**Outcomes**
- Academic Success Overall
- Academic Success Taught
- Academic Success Research
- Psychological Wellbeing
- Satisfaction With Life in the New Environment