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Adaptation to a Sibling Culture: The Satisfaction and Persistence Intentions of Mainland Chinese Postgraduate Students at a Hong Kong University

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ABSTRACT

This study proposed and tested a model of the adaptation of postgraduate students to a “sibling culture”, namely, Mainland Chinese students at the University of Hong Kong. The model was based on higher education literature combined with acculturation elements for the construct of social integration. Students’ satisfaction with their experience in this cultural setting and the likelihood of their persistence were used as the indicators of their adaptation in a model linking various background variables such as academic and social integration to adaptation. The participants were 103 current research students. Analysis showed that academic integration was more strongly related than social integration to their satisfaction and likely persistence in post-graduate study at this university. Among the background variables measured, motivation and Cantonese but not English language skills showed a significant relationship with postgraduate students’ academic and social integration. Implications for research on and assistance to mainland postgraduate students in Hong Kong are discussed.

Introduction

Studies of the adaptation of international students have focused mainly on socio-cultural and psychological adjustment (Ward, 2001). While academic problems have been identified as a major acculturation problem, they have been largely neglected in acculturation studies. Research on international postgraduate students is also lacking.

In recent years the People's Republic of China (PRC) has become an increasing source of international students for universities in countries such as Australia, the United Kingdom and the USA (e.g. Huang, 2003). Considering the resources and revenue involved it is surprising that little research has been directed to the adjustment of such students. This lack is particularly true at the postgraduate level at which more and more of these students are studying.

The same lack of research applies to Hong Kong whose universities have also attracted large numbers of Mainland postgraduate students in the last ten years. From 1990 to 2005/6 academic year, the number of mainland postgraduate students who registered in Hong Kong universities has increased from virtually zero to 2270, accounting for 89% of all such international students studying in Hong Kong (University Grants Council, 2006). However, adjustment to studying in Hong Kong may well be different from studying at a Western university for such students. For a hundred years the former was a British colony but in 1997 was returned to China. Hong Kong and Mainland China may be considered sibling cultures as they share a similar cultural heritage. This paper reports an initial study involving the proposal and testing of a model of the adjustment of Mainland research postgraduates (MRPs) at a university in Hong Kong.

International Students

Studying at a foreign university requires adaptation to different cultural, social and educational environments. How much adaptation is required depends on just how different these environments are from those with which the students are familiar. According to leading acculturation researcher Berry (1985), international students' difficulties in adaptation to an unfamiliar culture can be classified as environmental (e.g. problems with climate, housing food, etc.), socio-cultural (such as problems with

social norms, interpersonal and intergroup relations), academic (problems with language, teaching styles, etc.) and personal (problem with self-esteem, identity, and mental health, etc.). The overcoming of such problems often leads to greater satisfaction with life as an international student (Altbach et al., 1985; Klineberg & Hull, 1979).

Among the problems that may influence the acculturation of international students, three variables stood out as influencing positive cross-cultural contacts of international students in foreign countries: language problems, contact problems with local people and financial problems (e.g., Altbach et al., 1985; Hubbard, 1994; Klineberg & Hull, 1979; Neumann, 1985; Robertson et al., 2000). Chinese international students reported in previous empirical studies particular problems in terms of learning approaches (e.g., Liu, 2001; Xu, 2002) and making friends (e.g., Chen, 1998). However, in spite of these problems, many Chinese students reported satisfaction with the experience of learning in foreign universities (e.g., Xu, 2002) and did well academically (Huang, 1997).

Though academic problems have been listed as one of the major problems, recent acculturation studies typically have centered on social adaptation issues due to cultural differences (e.g., Hernandez, 2000; Herzig, 2004; Nettles, 1990). However, Klineberg and Hull (1979) argued that for international student adjustment to differences in academic factors might be just as important as social factors. It is proposed in this study that the adaptation of international students would be better understood in terms of adjusting to an educational as well as to a cultural environment.

Acculturation in a Sibling Cultural Context

Most current studies of international students focus on adaptation to a very different culture: such as African or Asian students at American universities. A much less studied aspect of acculturation is that of people moving to closely related but still different countries, e.g. Canadians moving to the USA, New Zealanders moving to Australia, or Mainland Chinese moving to Hong Kong or Singapore. In each of these cases the two countries share a common language and much of their cultural heritage but subtle, or sometimes not so subtle, differences exist. We shall use the term 'sibling cultures' to describe the cultures of such pairs of countries.

Among the few researchers who have studied systematically adaptation in sibling cultural contexts are Ward and Kennedy (1993, 1999), Selmer and Shiu (1999) and Tsang (2001). Their research has shown that the similar cultural background of sojourners did facilitate their sociocultural adaptation to host cultures (e.g., Ward & Kennedy, 1993, 1999), especially in terms of language (e.g., Selmer & Shiu, 1999). However, even though the contacting cultures share similarities with each other, sojourners still had major difficulties in their interactions with local people in the work place (Selmer & Shiu, 1999). International students even reported that there were more difficulties adjusting to the institutional environment in sibling cultures than to the culture (Klineberg & Hull, 1979; Tsang, 2001).

There are some salient studies on the adaptation of newly arrived Mainland Chinese adolescent students in Hong Kong (Chan *et al.*, 1997; Chen, 2001; Rao & Yuen, 2001; Research team on Newly Arrived Mainland Adolescents, 2001). It was found that the main problems these children faced were largely institutional such as appropriate placement in school, adjustment to a new education system and curricula, and adaptation to a new school environment as well as prejudice and marginalization from Hong Kong peers, and adjustment to the changes in family relations (Rao & Yuen, 2001). Besides institutional environment, proficiency in the local language, Cantonese in this particular case, was also found to be significant for these children's adaptation.

The Cultures of Hong Kong and Mainland China

Hong Kong is geographically and historically a part of China. But from 1842 until 1997, it was under British rule and developed under a different economic, political, and legal system (Tsui, 1998). Some practices continue in much the same way today. The higher education system of Hong Kong, for example, still reflects management and educational practices typical of Western countries (Watkins & Biggs, 2001; Zhang, 1997). The culture of Hong Kong has developed into a mix of traditional Chinese and western cultures over the years (Lau & Kuan, 1989; Roberts, 1992). Mainland China in the same period also went through the establishment of a new political system, the Cultural Revolution and other social events, including a recent emphasis on modernization and internationalization. The distinct experiences of the two societies have led to differences between the two cultures.

Nonetheless, the common Chinese heritage between Hong Kong and Mainland China remains an important ethnical and cultural characteristic of Hong Kong. According to 2003 statistics, almost 98 per cent of the people in Hong Kong are Chinese (Selmer *et al.*, 2003). These people still share with Mainlanders some cultural denominators, which define them as Chinese (Selmer & Shiu, 1999). These commonalities include basic beliefs and values based on Confucian, Buddhist, and Taoist principles. Recently, with the return of Hong Kong to China, Hong Kong has begun to reintegrate with Mainland China. The commonalities between them have been further accentuated. One example of this is the wider use of Putonghua, the national language of the PRC, in Hong Kong since 1997. This is the practice of the central government being adopted by the Hong Kong government (although the political systems are still fundamentally different) as well as voluntary actions taken by the Hong Kong people.

As both the cultures of Mainland China and Hong Kong originated from Chinese traditional culture but have become somewhat different, they may be considered sibling cultures. According to Berry (1990), acculturation often brings about a mutual influence between two cultures. The capitalist system of Hong Kong seems to be assisting China to adapt to a more global perspective. The continuing influx of mainland immigrants (both adult and children) and visitors to Hong Kong seems also to be having an impact on the cultural ecology of Hong Kong.

Towards a Model of the Adjustment of Mainland Postgraduates

Starting in the 1970s there has been an extensive literature published in the USA and elsewhere reporting, theoretical developments and empirical data on the adjustment of undergraduates to college life. This has done much to clarify our understanding of the processes involved in adjusting to becoming a student and the likely outcomes such as intellectual development (Astin, 1993; Pascarella & Terenzini, 1991) and persistence in the course (Tinto, 1987). The model proposed by Pascarella and Terenzini (1991) has been particularly influential in explaining these processes. This model proposes that student background characteristics such as motivation, academic aptitude, and socioeconomic status and the learning environment of their university influence their social and academic integration into life as an undergraduate student, which in turn

influences their overall satisfaction with university and ultimately their likelihood of either dropping out from their course or achieving better results.

As yet we are not aware of any application of this model to research into satisfaction with postgraduate studies. The latter research has usually consisted of descriptive-level surveys of student problems (e.g., Mullins et al., 1995), which may be useful in practical terms but rather disappointing in respect of building a theoretical understanding of these phenomena.

In this research we have adapted the basic model proposed by Pascarella and Terenzini (1991) for the context of Mainland Research Postgraduates (MRPs) at a university in Hong Kong (see Figure 1). In particular, the constructs in the model of 'background characteristics', 'academic integration', and 'social integration' and their measurement were reconceptualised based on a pilot study with MRPs.

According to pilot interviews conducted by the first author, the major problems encountered by mainland postgraduates in Hong Kong included language problems, adjustment to the new educational system, and separation from their families. Their problems with languages involved two different tongues, Cantonese and English. Cantonese is the local language of Hong Kong. Although it is sometimes considered a dialect of the Chinese language, Putonghua, it is quite strange to those who come from provinces other than Guangdong and Guangxi. In daily life in Hong Kong, both the official language of the mainland, Putonghua, and Cantonese are used, but in class and interaction with their supervisors English is mainly used, as the latter is the official language of instruction at the University of Hong Kong. Indeed many Western lecturers such as the second author do not speak any variety of Chinese. In addition there are many other formal and informal occasions when students need to communicate in English: when referred to university services, when attending seminars, when taking part in faculty social functions and so on. Educational problems include adjustment to the administration of the university, the instructional styles of their supervisors, and the challenges of research work. While these are likely to be problems encountered by postgraduates anywhere in the world, in the case of MRPs these are accentuated by differences between the Hong Kong and Mainland education systems and cultural differences between their own and their supervisors' views of education. The pilot interviews were used to provide items for the measures of Social and Academic Integration (see below).

Method

Participants

The data were collected from MRPs of all 10 faculties who were registered in the University of Hong Kong (HKU) for research degrees. HKU is the oldest of the seven universities in Hong Kong and a major one. The questionnaires were presented in Chinese using the traditional translation and back-translation approach when necessary (Brislin, 1970). The English-written questionnaires were translated into Chinese first and then translated back into English by an independent translator. By comparing the original and back translated documents, the quality of the translation was verified. Of the 112 MRPs who received the questionnaires, 103 returned the forms filled in completely. The response rate was a very acceptable 92%. More than one third (38.8%) of participants were from the Faculty of Engineering while 23.3% were from the Faculty of Science and 10.7% from the Faculty of Medicine. The majority of the sample was registered for the PhD degree (75.7%, $n = 78$).

Measures: Background Characteristics

Included in this category of the questionnaire were items asking the student's age (in years), their parents academic background (1 = primary school; 5 = postgraduate or above); length of time at HKU (in years); whether they had been overseas or not (1 = no experience; 6 = over 12 months); their previous highest academic achievement (1 = Bachelor's degree; 2 = Masters' degree); their satisfaction with both their previous work and their academic experience (on a scale from "1 = very dissatisfied" to "5 = very satisfied"); language proficiency and motivation (intrinsic interest in learning and desire for academic success).

Language proficiency was assessed for both English and Cantonese. The participants were asked to give the score they obtained on the Test of English as a Foreign Language (TOEFL; <http://www.hku.hk/gradsch/text/app/html/03-1.htm>), a required admission's test for most MRPs enrolling at HKU. They were also asked to rate their own proficiency in listening to, speaking, reading, and writing English, and Cantonese on a 4-point rating scale from "1 = poor" to "4 = excellent".

Motivation was assessed by seven items tapping deep motivation and seven items tapping achievement motivation from the Study Process Questionnaire (SPQ; Biggs, 1987). The deep motivation entailed an

intrinsic interest in the subject and a desire for deep understanding, which was usually correlated with a personal commitment to learning. Achieving motivation, on the other hand, was focused on the competition with peers for the highest marks, which might lead to optimal engagement in study like deep motivation. However, the nature of “achieving” engagement depends on what earns the most marks. Participants responded to items on a 5-point scale (“1 = this statement is never true of me” to “5 = this statement is completely true of me”). The SPQ has been translated into Chinese and responses to this version of the SPQ have been shown to have very adequate reliability for Chinese respondents (Biggs, 1992; Watkins, 1996).

Social Integration, Academic Integration, and Persistence

The measures of social integration, academic integration and persistence were modified from the work by Pascarella and Terenzini (1980). All were measured on a 5-point scale from 1 (strongly disagree) to 5 (strongly agree). These scales have been widely used in many studies on college impact (Milem & Berger, 1997). But as this set of scales was mainly employed in studies where western undergraduate samples were involved, some modifications were done to make them more suitable for the MRPs in this study.

The main modifications of these scales were in the assessment of students’ social integration. This was done in two ways. First Berry’s (1985) categorization of acculturation problems was utilized to develop questions for a semi-structured focus-group discussion and the pilot interviews described earlier to better understand MRPs’ experience of these issues. During the discussion and interviews, attention was directed to the areas covered in most acculturation studies. The topics include MRPs’ experiences in Hong Kong, including residential experiences, their interaction with Hong Kong People, peer interactions, relations with the staff, and their psychological feelings about their stay in Hong Kong. Information from the discussion and interviews was used in the development of the scales. The researcher also borrowed some items on cultural adaptation from Chen (2001) and the research team on Newly Arrived Mainland Adolescents (2001). The modified measurement of this part included 17 items on social integration, 6 items on academic integration, and 3 items on persistence. They measured MRPs’ interactions with peers, faculty, and Hong Kong culture; academic

development and performance; and their intentions to finish their programs. Some sample items adopted from these scales are “I seem to think differently to Hong Kong people on a number of issues”; “Since coming to this university I have developed close personal relationships with other students”, and “It is very important for me to complete the program for which I am registered in this university.”

Overall Satisfaction

This 5-point scale (6 items) from ‘1 = strongly disagree’ to ‘5 = strongly agree’ was developed to measure overall satisfaction with their life in Hong Kong as a whole. Sample items are “I like my present life” and “My life here is meaningful.”

Results

Descriptive Statistics

Most of the participants were aged between 24 and 30 while 30% reported being older than 30 years. Half of the respondents (56%) had stayed in Hong Kong over 12 months. Most (71%) had acquired a postgraduate degree before coming to the University of Hong Kong and 67% had been involved in academic work previously. The majority (81.6%) had no overseas experience before registration at the University of Hong Kong. Most of the MRPs in the survey were single (62.7%). About 23.3% of the mothers of these MRPs and 48.6% of their fathers had reached undergraduate or higher level of education. Most of the students who participated in this survey had quite high Test of English as a Foreign Language (TOEFL) scores (65.7% were over 603) but a majority felt inadequate in listening to English (61.2%) and speaking English (75.5%). When asked about their proficiency in the local language, Cantonese, 82.5% rated themselves as “poor” or “moderate”.

On the whole, the MRPs in the survey reported a high level of deep motivation (mean = 22.3, SD = 5.11) and a comparatively slightly lower level of achieving motivation (mean = 21.8, SD = 4.58) on a 7-item 5-point scale. The participants also reported a high degree of persistence (mean = 11.9, SD = 2.48; 4-item; 1 = strongly disagree, 5 = strongly agree) and overall satisfaction with their present life (mean = 20.5, SD = 5.00; 6-item; 1 = strongly disagree, 5 = strongly agree)

Reliability

The internal consistency reliability estimates, coefficient alpha, of responses to the main scales were quite satisfactory: deep motivation = .78; achieving motivation = .73; social integration = .84; academic integration = .85; satisfaction = .88; and persistence = .70.

Correlations

Correlations between all the measures of background characteristics, academic integration, social integration, satisfaction and persistence measures were obtained. While some correlations are significant, they are not very large. As our main interest was with correlations with the latter four variables only those measures found to significantly correlate with these variables are reported here (see Table 1 & Table 2). MRPs' proficiency in Cantonese displayed positive and statistically significant correlations with their academic ($r = .20, p < .05$) and social integration ($r = .34, p < .01$). Though the TOEFL score and overall self-evaluated English proficiency showed no significant association with students' academic integration, social integration, satisfaction, and persistence, the specific self-evaluated English skills were found to be correlated with these variables (see Table 1): listening skill was significantly correlated with MRPs' social integration ($r = .29, p < .01$) and satisfaction ($r = .24, p < .05$); speaking skill was associated with social integration ($r = .27, p < .01$), academic integration ($r = .29, p < .01$), and satisfaction ($r = .30, p < .01$); reading was correlated with social integration ($r = .28, p < .01$); and writing was correlated with social integration ($r = .32, p < .01$) and academic integration ($r = .28, p < .01$).

Variables like age, residential time in Hong Kong, satisfaction with previous work, overseas experience, and parents' education showed no significant relationships with academic integration, social integration, satisfaction, or persistence. Deep motivation displayed positive correlations with student academic integration ($r = .51, p < .01$), social integration ($r = .31, p < .01$), satisfaction ($r = .40, p < .01$), and persistence ($r = .36, p < .01$). Achieving motivation also had a positive correlation with academic integration ($r = .31, p < .01$) and persistence ($r = .26, p < .01$). The correlations among adaptation variables were found to be very significant. Academic integration was highly associated with social integration ($r = .56, p < .01$), satisfaction ($r = .80, p < .01$), and persistence ($r = .65, p < .01$). Other positive correlations were found between social

Table 1: Intercorrelations Among Language Proficiency and University Adaptation Variables

| | Cantonese | English listening | English speaking | English reading | English writing | Academic integration | Social integration | Satisfaction | Persistence |
|----------------------|-----------|-------------------|------------------|-----------------|-----------------|----------------------|--------------------|--------------|-------------|
| Cantonese | 1.00 | | | | | | | | |
| English listening | .17 | 1.00 | | | | | | | |
| English speaking | .24* | .70** | 1.00 | | | | | | |
| English reading | .07 | .54** | .31** | 1.00 | | | | | |
| English writing | .22* | .41** | .48** | .63** | 1.00 | | | | |
| Academic integration | .20* | .19 | .29** | .19 | .28** | 1.00 | | | |
| Social integration | .34** | .29** | .27** | .28** | .32** | .56** | 1.00 | | |
| Satisfaction | .18 | .24* | .30** | .12 | .17 | .80** | .69** | 1.00 | |
| Persistence | .15 | .07 | .16 | .07 | .16 | .65** | .40** | .61** | 1.00 |

* Correlation is significant at the 0.05 level.

** Correlation is significant at the 0.01 level.

Table 2: Further Intercorrelations Among Background and Adaptation to University Variables

| | Achieving motivation | Deep motivation | Interaction with HK people | Interaction with supervisor | Interaction with peers | Academic integration | Social integration | Satisfaction | Persistence |
|-----------------------------|----------------------|-----------------|----------------------------|-----------------------------|------------------------|----------------------|--------------------|--------------|-------------|
| Achieving motivation | 1.00 | | | | | | | | |
| Deep motivation | .47** | 1.00 | | | | | | | |
| Interaction with HK people | -.00 | .00 | 1.00 | | | | | | |
| Interaction with supervisor | .21* | .22* | .40** | 1.00 | | | | | |
| Interaction with peers | .09 | .23* | .42** | .17 | 1.00 | | | | |
| Academic integration | .31** | .51** | .41** | .35** | .42** | 1.00 | | | |
| Social integration | .15 | .31** | - | - | - | .56** | 1.00 | | |
| Satisfaction | .18 | .40** | .52** | .40** | .45** | .80** | .69** | 1.00 | |
| Persistence | .26** | .36** | .25* | .38** | .24* | .65** | .40** | .61** | 1.00 |

* Correlation is significant at the 0.05 level.

** Correlation is significant at the 0.01 level.

integration and satisfaction ($r = .69, p < .01$), social integration and persistence ($r = .40, p < .01$), and satisfaction and persistence ($r = .61, p < .01$) (see Table 2).

Analysis was also conducted to identify the correlations of the subcomponents of social integration with academic integration, satisfaction and persistence. They were MRPs' interactions with peers, faculty, supervisor, and Hong Kong people. The results showed the correlations were all positive and significant (see Table 2).

Path Analysis

Path analysis was then used to test the interrelationships between the variables in our proposed model. This method helped estimate to what extent a set of independent variables might explain the proportion of the variance in a dependent variable through a significance test of R^2 and the relative predictive importance of the independent variables by comparing beta weights. Using this method also allowed for assessing not only the direct effects of variables but also the variable's indirect effects through one or more other variables (Asher, 1984; Everitt & Dunn, 1991). The results of the analyses can be seen in Figure 2. Of the background variables, only Gender, Cantonese Proficiency, and Deep Motivation contributed significantly to social integration, academic integration, satisfaction and persistence. Thirty-four percent of the variance of Academic integration was accounted for by the background variables, principally Deep Motivation ($\beta = .53$) and Cantonese Proficiency ($\beta = .25$). Somewhat less of the variance of Social integration (23%) was accounted for, again mainly by the same two variables, Deep Motivation ($\beta = .34$) and Cantonese Proficiency ($\beta = .37$). The statistically significant direct contributions to Satisfaction ($R^2 = .75$) were from Academic Integration ($\beta = .60$), Social Integration ($\beta = .37$) and Gender ($\beta = -.12$). The paths leading directly to Persistence ($R^2 = .46$) were from Academic Integration ($\beta = .44$) and Satisfaction ($\beta = .31$). An indirect path ($\beta = .11$) from Social Integration to Persistence could also be identified.

According to Tinto's model (1987), academic and social integration involve several basic components. The degree of academic integration is determined primarily by the student's academic performance and his/her level of intellectual development. Social integration is primarily regarded as a function of the quality of peer-group interactions and the

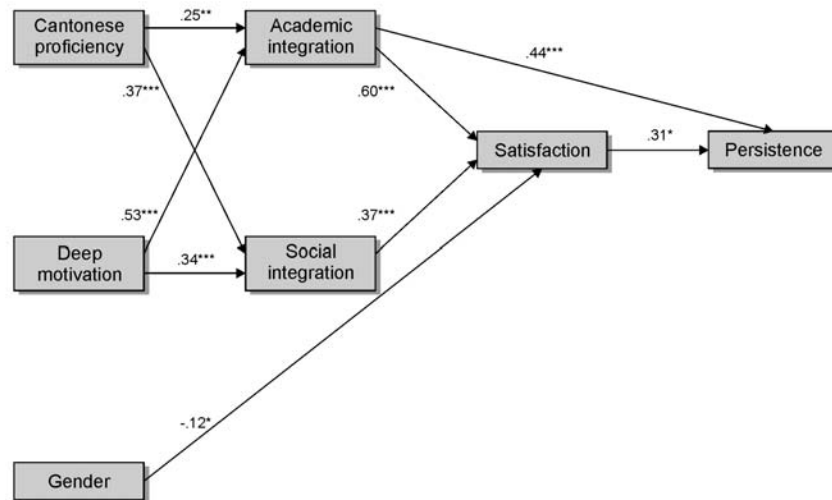


Figure 1: Results of Path Analysis from First Model

* $p < .05$; ** $p < .005$; *** $p < .001$

Academic integration: $R^2 = .34$, $p < .000$; Social integration: $R^2 = .23$, $p < .000$; Satisfaction: $R^2 = .75$, $p < .000$; Persistence: $R^2 = .46$, $p < .000$

quality of student interaction with faculty. Though Tinto's model places interaction with faculty in the domain of social integration, he clearly suggests that such interactions may also enhance academic integration. Pascarella and Terenzini's (1980) followed Tinto's way of classifying academic integration and social integration domains when developing the scales to predict college student persistence, as did the present research initially.

In this research, the researchers, based on the pilot interviews, also reconceptualised these variables by analyzing the subcomponents separately for path analysis (see Figure 2). The results allowed a more detailed exploration of the relationships among these variables. Among all the factors measured in the scales, student academic development was the only variable that showed a direct influence on student persistence at the university ($\beta = .39$). Together with the indirect path from Cantonese Proficiency ($\beta = .09$) and Deep Motivation ($\beta = .18$), 50% of the variance of Persistence was explained. An impressive eighty percent of the variance of Satisfaction was accounted for by Academic Development ($\beta = .61$), Interaction with Faculty ($\beta = .31$) and to a lesser extent, Hong Kong Culture ($\beta = .17$).

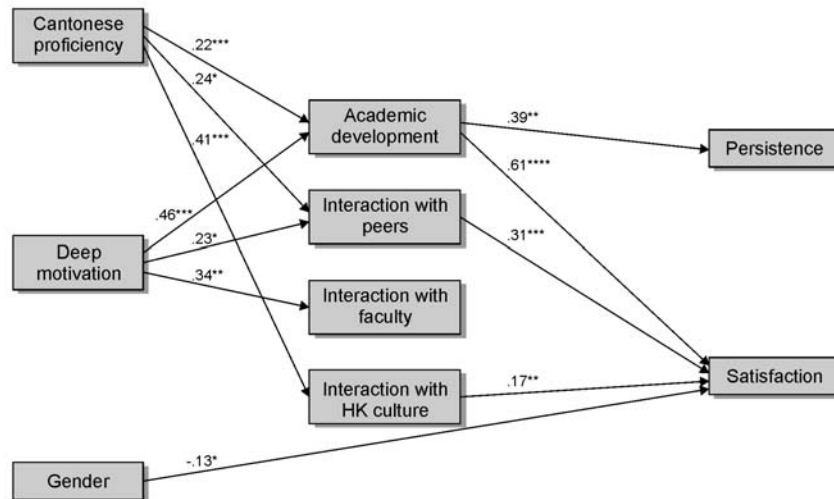


Figure 2: Results of Path Analysis for Modified Model

* $p < .05$; ** $p < .01$; *** $p < .001$

Academic development: $R^2 = .37$, $p < .000$; Interaction with peers: $R^2 = .22$, $p < .002$;
 Interaction with faculty: $R^2 = .23$, $p < .001$; Interaction with HK culture: $R^2 = .23$, $p < .002$;
 Satisfaction: $R^2 = .80$, $p < .000$; Persistence: $R^2 = .50$, $p < .000$

Discussion

This research has utilized and tested theoretical notions derived both from the higher education and acculturation literature. Generally, the results supported the correlation patterns among the major variables in the model adopted from the previous North American studies on undergraduate students. However, in contrast to the previous studies on foreign students, which emphasized largely the influence of social integration, the academic factor provided a more significant contribution to student satisfaction and persistence in this study. This was especially true in the path analysis where integration elements were separated (see Figure 2). These findings supported the researchers' assumption that international students' adaptation should also be considered in terms of adjusting to an educational environment rather than only to a cultural environment as the acculturation literature typically emphasises.

Why academic integration had such a salient influence may be due to the long-existing emphasis on academic achievement among Chinese people (Watkins & Biggs, 2001). The SPQ scale means obtained in this

study showed the MRPs scored very highly on deep and achieving motivation, suggesting the MRPs regarded their academic development highly. Therefore, it is very likely that the more adequate they considered their academic development, the more likely they were to feel satisfied and determined to persist. Another explanation of the marked effect of academic development on student satisfaction and persistence may come from the major task MRPs were performing at university. As the pilot interviews had made clear, research work had become one of the most important parts of their present life. Therefore, their overall satisfaction with their life in Hong Kong and decisions of whether or not to continue may well be influenced by their academic experiences. The greater progress they considered they were making in their studies, the more satisfied they may feel and the more likely they would be to persist.

The major tasks MRPs performed at this university also help to explain the high contributions of deep motivation to academic integration, satisfaction and persistence. First of all, every MRP was performing a research task that required a deep understanding of his/her area. To graduate, they were obliged to produce some original ideas and contribute to the research literature. Such tasks obviously demand what researchers define as a deep approach to learning (Biggs, 1996). So it may be argued that the adoption of deep motivation could aid MRPs' academic development. The reason why deep motivation was also indirectly influencing persistence might be explained by the effect of goal commitment on persistence. Tinto (1987) pointed out that, at the individual level, commitment is one of the primary roots of persistence. It is considered to not only to help set the boundaries of individual attainment but also serves to colour the character of individual experiences in the institution after entering. Individual commitment usually takes two major forms, goal commitment and institutional commitment. Goal commitment is the students' commitment to educational and occupational goals the student holds while institutional commitment indicates the degree to which he or she is willing to work toward the attainment of goals within a given higher educational institution. Institutional commitment may influence a student's decision whether or not to persist on a study in a particular university while goal commitment helps predict whether or not this student would continue to pursue a higher education on a whole. In the MRPs' case, the student task in HKU was highly demanding in terms of their interest in and willingness to study. Therefore, it is very likely that the MRPs who had higher goal commitment, that is had a deep motivation to study, were more likely to persist.

The finding that gender contributed to satisfaction should be carefully interpreted because the sample size was comparatively small. The higher level of overall satisfaction found among MRP females in the University of Hong Kong is somewhat inconsistent with some of the results from previous acculturation research (e.g., Seagram *et al.*, 1998) that female students usually feel more dissatisfied in foreign universities because they need to take more family responsibilities than their male counterparts. However, it could be argued that 76.7% of the female MRPs in this survey were under 30, younger than those who were investigated in Seagram *et al.*'s research (average age at commencement of their program was 29.74) and 65.1 % were single. So to some degree, the influence of family responsibilities may not have had that much effect on the MRPs in this survey. Nevertheless, the question why female MRPs would feel more satisfied than male MRPs in this survey remains to be further investigated, probably by in-depth qualitative methods.

Though MRPs were adapting in a sibling culture, they still reported language and contact problems like international students did (e.g., Altbach *et al.*, 1985; Hubbard, 1994; Klineberg & Hull, 1979; Poyrazli *et al.*, 2002). The language problems functioned in different manners, however. First, MRPs' proficiency in the local language, Cantonese, which was supposed to be used mainly in the context of social integration, had a significant influence on their adaptation. However, the test scores of English proficiency, another non-native language of MRPs that was used frequently in academic activities, did not provide significant contributions to either academic or social integration. This may be understood if we look into the TOEFL scores of these students at admission. The general English standard of the MRPs was fairly high: 65% of the MRPs scored over 600. Moreover, the range of scores is restricted by a minimum entry score requirement (550), which may attenuate the correlations obtained. The third finding on language was that though neither the TOEFL score nor their self-perceived overall English proficiency showed any correlations with their adaptation, their individual self-evaluated language skills did. This was consistent with most studies on Chinese student overseas (e.g., Pak *et al.*, 1985; Swagler & Ellis, 2003) that the students' own perceptions of themselves in English skills were an influential factor in their adaptation.

Another finding on English proficiency was the MRPs' tendency to evaluate themselves as having differential strengths and weaknesses in particular English skills: comparatively stronger in reading and writing

and weaker in listening and speaking. This phenomenon may partially result from the traditional English education method that had prevailed in Mainland China. The majority of the present MRP (94.2%) were studying in middle school prior to the communicative teaching method being implemented widely in the PRC in 1993. In their time, reading and translation abilities were especially emphasized in English teaching. In their PRC studies, most of the students got little practice in listening to and speaking English. Even writing was confined to spelling of words and sentence translation during the junior middle school and earlier senior middle school stages. It was not until the last two years in the senior middle school that PRC teachers began to train their students in the ability to write short essays of about 100 words. Therefore, it is understandable that many current MRPs rated themselves lowest in listening and speaking competence, comparatively low in writing ability but a little higher in reading.

By including both educational factors and acculturation factors in the one study, this research has provided a systematic analysis of the importance of these factors to the adaptation of MRPs. There are several theoretical and practical implications from this study. On the whole, this study supported the influence of both academic and social factors on MRP's adaptation, indicating the necessity of focusing on both areas for the study of the adaptation of international students in the future. Another thing we could learn from this study is to take into consideration the contributions of each individual integration element to student adaptation as it helps us understand how important each element is in student adaptation. Thirdly, the comparatively more salient role of academic integration found in this study suggested the particular importance of educational factors to postgraduate students. This may suggest that, in sibling cultural settings, university administrators may need to put the greatest emphasis on how to promote the academic development of international postgraduate students in order to enhance their overall satisfaction with their life. The higher satisfaction may help to improve their persistence. The authors would predict that the less similar are the host and home cultures the more social integration is likely to be salient. Fourthly, social integration may be playing a moderating role in the adaptation of international students in sibling cultures. The satisfactory interactions with peer, faculty and host culture may help them establish a higher degree of overall satisfaction with their life in host countries and then encourage persistence indirectly. Therefore, establishment of a

friendly atmosphere among the people around them will be helpful to their adaptation. Lastly, facilitating competency in the host language is another useful measure to promote the adaptation of international students, even if it differs from the language of instruction.

The earlier literature review had identified only a few studies on the adaptation of international students to the sibling cultural environment. The present study has added knowledge the field. Future research could involve other sibling cultural environment such Malaysia and Indonesia, India and Bangladesh, Central Asia and Turkey, Australia and America, and so on. They would help further understand the relationship between cultural differences and students' adaptation. Based on the present study, in future, we hope to survey MRPs from all universities in Hong Kong. This should allow investigation of the influence of different educational contexts on the adaptation of such students. A larger sample size would also allow the valid use of a more powerful statistical technique, structural equation modeling, to test the fit of data to the hypothesized model. Use of a motivation scale better reflecting emic motivational constructs emphasising social aspects would also be advisable (c.f. Yu, 1996). Further investigations, perhaps using qualitative methods, could look more deeply into language and supervision problems of mainland students.

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