Effects of a Peer Program on International Student Adjustment

Jin Abe   Donna M. Talbot   Robyn J. Geelhoed

Newly admitted international graduate and undergraduate students, the majority of whom come from Asian countries, participated in an International Peer Program (IPP). Of these students, 28 IPP participants' campus resource use and Student Adaptation to College Questionnaire (SACQ) (Baker & Siryk, 1989a) scores were compared to those of 32 international students who did not participate in the peer program. Results suggest that the IPP participants showed significantly higher social adjustment scores than the nonparticipants. Additionally, students from Asian countries had more difficulty adjusting to campus life than international students from non-Asian countries.

Church (1982) suggested that international students tend to experience a variety of adjustment concerns when matriculating at universities in the United States. These concerns included: academic problems such as adjusting to second languages or new educational systems; personal issues such as homesickness and geographic distance from familiar others; and crosscultural problems such as understanding and adjusting to new social norms. Other studies on intercultural adjustment identified social concerns as one of the biggest problems for international students (Heikinheimo & Shute, 1986; Kaczmarek, Matlock, Merta, Ames & Ross, 1994). For example, Kaczmarek et al. (1994) compared U.S. and international students' adjustment subscale scores on the Student Adaptation to College Questionnaire (SACQ) (Baker & Siryk, 1989a). They found that Social Adjustment and Institutional Attachment subscales for international students were significantly lower than for their U.S. counterparts.

Several studies suggest significant relationships between social interaction and the adjustment of international students (Furnham, 1988; Surdam & Collins, 1984; Yang, Teraoka, Eichenfield, & Audas, 1994; Zimmerman, 1995). Talking and interacting with host students was highly correlated with international students' perceptions of their adjustment to American life (Zimmerman, 1995). Surdam and Collins (1984) found that spending more leisure time with Americans was significantly correlated with the adaptation of international students. Yet, international students felt that the biggest barrier to meaningful relationships with Americans was the lack of opportunity to interact socially (Talbot, Geelhoed, & Ninggal, in press; Yang et al., 1994). Furthermore, some research highlighted that Asian students may encounter more difficulties than other international students while adjusting to campus life and trying to develop friendships with host-country nationals (Heikinheimo & Shute, 1986; Kakuta, Kher-Durlabjhi, & Bowman, 1997; Sodowsky & Plake, 1992; Talbot et al.). This is particularly important because Asian students are the largest international group studying in the United States (Institute for International Education, 1996).

Colleges and universities have tried to enhance international students' adjustment experiences through the implementation of peer programs, that is, the pairing of international and U.S. students for significant interactions. Westwood and Barker (1990) found that international students who participated in a peer program demonstrated significantly higher academic achievement and lower drop-out rates than did the nonparticipants. A similar study reported that use of some campus services was significantly higher among inter-

TABLE 1.

Select Demographics of Sample, Peer Group, and Control Group

Variables	Total Sample N = 60 N (%)		Peer Program Participants n = 28 n (%)		Control Group n = 32 n (%)	
Sex						
Male	31	(51.7)	11	(39.3)	20	(62.5)
Female	29	(48.3)	17	(60.7)	12	(37.5)
Academic Status						
Graduate	32	(53.3)	14	(50.0)	18	(56.2)
Undergraduate	28	(46.7)	14	(50.0)	14	(43.8)
Housing						
On campus	49	(81.7)	25	(89.3)	24	(75.0)
Off campus	11	(18.3)	3	(10.7)	8	(25.0)

national students in a peer program whereas their academic achievement did not differ from nonparticipants (Quintrell & Westwood, 1994).

Despite these initial findings about the potential positive influence of peer programs, very little research has been published on peer program participation and its relationship to international students' overall adjustment. Even less information is available on the relationship between peer program participation and changes in host students' attitudes toward international students and cultures. Although some studies used academic performance or use of campus services as indicators of adjustment (Quintrell & Westwood, 1994; Westwood & Barker, 1990), questions remain about the adequacy of these factors in measuring the construct of adjustment.

The Office of Residence Life (ORL) and the Office of International Student Services (OISS) at a public university in the Midwest implemented the semester-long International Peer Program (IPP) in the Fall of 1997. Approximately 2,000 of the university's 26,000 students are international, representing 97 different countries. Over half of the international population is from five Asian countries: Malaysia, Japan, India, Thailand, and South Korea.

The IPP paired 36 interested incoming international students with returning university students who volunteered as hosts. Consistent with the demographics of the university, the majority of the participating international students came from Asian countries. The role of the international students was to help host students increase their knowledge and appreciation of foreign cultures, customs, and languages. Most of the host students were White; however, a few were ethnic minorities or returning international students. The role of the host students was to have ongoing interactions with the international students to help them become more familiar with the university and the residence hall community.

After participating in a brief training, many host students corresponded, usually by E-mail, at least once with their international partners before they left their countries of origin to come to the United States. At the beginning of the Fall semester, 36 pairs of incoming international students and host university students met in person for the first time, exchanged contact information, and set up plans

for future interactions. Throughout the semester, the pairs of students had opportunities to attend monthly campus activities hosted by ORL and OISS. These activities included tailgate parties, homecoming events, and cultural fairs. Students were encouraged to plan additional activities on their own.

The purpose of this study was to (a) assess the effects a Peer Program on international students' awareness, knowledge and use of campus resources, (b) assess the effects of ongoing, organized interaction with host students on international students' adjustment, and (c) determine whether students from non-Asian countries have higher scores on adjustment scales than students from Asian countries.

METHOD

Participants

Sixty newly admitted international students at a public, Midwestern university participated in the study. This sample included two groups: 28 students who were involved in the semester-long IPP and a control group of 32 students who did not participate in the program. Whereas the majority of these students came from Asian countries, other students represented Europe, Latin America, Africa, and the Middle East. The sample was nearly evenly distributed by sex and academic status (see Table 1). The students in the sample ranged in age from 17 to 35, with a mean age of 23 years.

Instruments

Two instruments were administered in this study: SACQ (Baker & Siryk, 1989a) and the Demographics and Campus Resources Questionnaire which was developed for this study. Both are paper-and-pencil self-report instruments.

SACQ. The SACQ (Baker & Siryk, 1989a) is a 67-item self-report questionnaire; administration takes about 20 minutes. For each item, students respond on a 9-point scale, ranging on a continuum from *applies very closely to me* to *doesn't apply to me at all*. In developing the questionnaire, Baker and Siryk (Baker & Siryk, 1989b) assumed that adjustment to college is multifaceted, involving a variety of coping responses with varying degrees of effectiveness. The SACQ is divided into four

areas: an Academic Adjustment subscale (*Academic*) with 24 items, a Social Adjustment subscale (*Social*) with 20 items, a Personal-Emotional Adjustment subscale (*Personal*) with 15 items, and an Institutional Attachment subscale (*Institutional*) with 15 items. Some of the items contribute to more than one subscale, and some items only contribute to the total score but not subscale scores. Alpha coefficients for the Academic Adjustment subscale range from .81 to .90, for the Social Adjustment subscale from .83 to .91, for the Personal-Emotional Adjustment subscale from .77 to .86, and for the Institutional Attachment subscale from .85 to .91. Alpha coefficients for the SACQ range from .92 to .95 for the full scale (Baker & Siryk, 1984). The SACQ has not been normed for international student populations.

Baker and Siryk (1989b) advised that the full scale score is only meaningful when used in conjunction with the four subscales. The Academic Adjustment subscale "measures a student's success in coping with the various educational demands characteristic of the college experience" (p. 14). The Social Adjustment subscale "measures a student's success in coping with the interpersonal-societal demands inherent in the college experience" (p. 15). The Personal-Emotional Adjustment subscale "focuses on a student's intrapsychic state during his or her adjustment to college, and the degree to which he or she is experiencing general psychological distress and any concomitant somatic problems" (p. 15). The Institutional Attachment subscale "is designed to measure a student's degree of commitment to educational-institutional goals and degree of attachment to the particular institution the student is attending, especially the quality of the relationship or bond that is established between the student and the institution" (p. 15). Higher scores on the full scale and subscales indicate better self-assessed adjustment.

Demographics and Campus Resources Questionnaire. The researchers designed the three-page questionnaire specifically for this study. Demographic data included sex, age, region of origin, academic status, major, and housing arrangements (i.e., on-campus housing, off-campus housing or apartment). Additionally, students indicated the reason they chose to attend this particular university as well as whether or not this

TABLE 2.

Percentage of Students Using Select Campus Resources and Attending University Activities

| | Frequency of Use | | | | |
Resource/Activity	Never	Once	2–3 Times	4–5 Times	6 or More
OISS	8.3%	13.3%	43.3%	28.3%	6.7%
Sporting Events	33.3%	25.0%	28.3%	13.3%	
Student Life Activities	8.3%	33.3%	45.0%	11.7%	1.7%
Theater/Music Events	26.7%	15.0%	41.7%	13.3%	3.3%
International Events	23.3%	33.3%	30.0%	10.0%	3.3%

university was their first choice of institutions to attend.

Students also responded to seven statements, using a Likert-type scale from *strongly disagree* to *strongly agree*, regarding their knowledge of U.S. culture, knowledge of campus services, comfort approaching faculty members for help with academic and personal matters, satisfaction with residence hall facilities and staff, and belief that the institution is committed to serving international students. On 16 items, students indicated how frequently they used (from *never* to *6 or more times*) particular campus resources and participated in specific campus activities. Finally, some students made open-ended comments concerning their experiences with campus life.

Procedure

In December, students who had participated in the IPP during the Fall attended a closure event that included dinner and a recognition ceremony. Before this event began, the researchers asked the international students to participate in this study by signing a consent form and completing two surveys. Because of a low turnout for this event (which took place during the last week of classes), survey packets were mailed to the IPP participants who could not attend the event. These two methods of data collection yielded 28 survey packets from IPP participants, rendering a 75% return rate.

The following week, survey packets were mailed to the control group: 80 newly admitted international students who did not participate in the IPP. The OISS helped the researchers obtain a control group that mirrored the demographic composition (by sex and academic status) of the sample. Of the 80 packets mailed to the control group, 3 were returned undeliverable, and 32 were returned completed, yielding a 41.6% return rate. All survey packets were collected within a 2-week period before students left for the holiday break between semesters. The overall return rate for the entire sample of international students participating in this study (i.e., sample and control group) was 51.7%.

Each mailed survey packet included a consent form and a letter informing the student that he or she would receive a McDonald's gift certificate by returning a sealed, completed packet to OISS. The OISS receptionist placed the sealed packets into a drop-box and handed out gift certificates. Consistent with human subjects institutional review board requirements, surveys were coded for matching purposes only, which assured the participants' anonymity.

RESULTS

Demographics

Demographic information on sex, academic status, and housing arrangements for the total sample, Peer Group, and control group are presented in Table 1. Twenty-eight IPP participants and 32 students in the control group completed the surveys. Thirty-five percent of these students had lived in the United

States previously. Approximately 61.7% of the students came from Asian countries ($n = 37$). Other geographical regions represented were Europe, 18.4% ($n = 11$); South America, 10% ($n = 6$); Africa, 6.7% ($n = 4$); and the Middle East, 3.3% ($n = 2$).

When asked why they chose to study at this university, students indicated the most important reasons were: (a) they had been accepted (30%), (b) the overall cost of living (11.7%), and (c) availability of financial aid (11.7%). Most of the students majored in engineering, computer science, or business. Fifty percent ($n = 30$) of the total participants (i.e. sample and control group) reported that this university was their first choice of institutions to attend.

Campus Resource Utilization

Mean scores for the total sample for all seven statements regarding the degree of knowledge, comfort, and satisfaction with various aspects of campus life were between 2.0 (*disagree*) and 3.0 (*agree*). Additionally, correlations between responses on these statements by Peer Group versus control group revealed no statistically significant results (For reporting statistical analyses, the IPP participants will be referred to as Peer Group).

In response to items about the frequency of use of campus resources, a large percentage of the international students reported never using career services (71.7%), the counseling center (78.3%), the student employment office (71.7%), and student volunteer programs (83.3%). Many of the students indicated they had never used the health center (45.0%) or participated in student organizations (51.7%). Use of five other campus resources or activities (see Table 2) varied for international students throughout the semester. In contrast, most of the international students used the following resources at least six times during the semester: student recreation center (50%), university bookstore (63.3%), university library (85.0%), and computer labs (86.7%).

Correlations were conducted to examine the relationship between use of campus resources and degree of participation in the IPP. Statistically significant correlations were found for use of the health center ($r = .45, p < .001$) and the student

recreation center ($r = .59, p < .001$). No significant relationships were found for any other campus resources or activities.

In the open-ended comments section, the mostly commonly cited resource that contributed to students' comfort at this institution was OISS. Students also mentioned the importance of interactions with professors, friends, roommates and students through involvement in organizations. Several students indicated they needed more opportunities to develop their English conversation skills. Others mentioned they needed more information on career services, counseling services, the administration building, the library, the academic skills center, and computer services.

SACQ

Mean scores for the total sample on the full scale and subscales of the SACQ are presented in Table 3. Though slightly lower, the mean scores in this study followed a similar pattern to those reported in a 1995 study involving 34 international students' adjustment (Kaczmarek et al., 1994): full scale, $M = 434.90$ (69.22); *Academic*, $M = 162.53$ (27.47); *Social*, $M = 119.15$ (23.00); *Personal*, $M = 94.51$ (20.86); and *Institutional*, $M = 101.85$ (16.41). This similarity in pattern of scores provided additional confidence in the appropriateness of using this instrument with an international student population even though it has not been normed for this group.

ANOVAs conducted to test variances in the full scale and subscale mean scores on the SACQ

TABLE 3.
Sample Mean Scores on the SACQ Full Scale and Subscales

Adjustment Scale	*M*	*SD*	*n*
Full Scale	407.81	73.81	59
Academic	151.90	30.51	59
Social	114.75	26.20	59
Personal	87.36	17.75	59
Institutional	92.78	21.17	59

TABLE 4.
Adjustment Scale Scores for Comparison Groups

Groups		Full Scale			Academic			Social			Personal			Institutional		
	n	M	SD	p	M	SD	p	M	SD	p	M	SD	p	M	SD	p
Peer Group	27	420.62	78.16	0.22	152.07	34.08	0.97	123.22	26.47	0.02*	90.07	18.99	0.28	97.33	20.86	0.13
Control Group	32	397.00	69.33		151.75	27.70		107.59	24.10		85.06	16.59		88.94	20.98	
Asians	36	385.64	63.48	0.00*	142.58	26.27	0.00*	107.42	22.96	0.00*	84.39	16.86	0.11	86.33	19.05	0.00*
Non-Asians	23	442.52	76.74		166.48	31.63		126.22	27.29		92.00	18.49		102.87	20.73	
Lived in U.S.	21	432.29	83.20	0.06	159.05	32.66	0.18	132.90	30.92	0.04*	92.24	18.57	0.12	101.14	21.41	0.02*
Did not	38	394.29	65.36		147.95	28.94		109.68	22.02		84.66	16.93		88.16	19.83	

Note. Higher scores are associated with better self-assessed adjustment.

* $p < .05$.

by IPP participation (Peer Group vs. control group), geographical region of origin (Asian vs. other countries), and lived in U.S. previously (those who had lived in the U.S. previously vs. those who had not) are presented in Table 4. The ANOVAs by IPP participation revealed statistically significant differences in means for *Social*, $F(1, 57) = 5.63$, $p = .02$; the mean score for Peer Group was higher than for the control group. No significant results were found for mean scores on the full scale, *Academic*, *Personal*, and *Institutional* by IPP participation.

Next, when compared with mean scores for international students from non-Asian countries, Asian students scored statistically significantly lower on the full scale, $F(1, 57) = 9.56$, $p = .003$; *Academic* $F(1, 57) = 9.93$, $p = .003$; *Social* $F(1, 57) = 8.12$, $p = .006$; and *Institutional* $F(1, 57) = 9.87$, $p = .003$. Finally, ANOVAs conducted according to whether students' had lived in the U.S. previously yielded significant results on *Social* $F(1, 57) = 4.21$, $p = .04$; and *Institutional* $F(1, 57) = 5.48$, $p = .02$.

DISCUSSION

The most unused campus resources by the international students in this study were student volunteer programs, the counseling center, career services, and the student employment office. In a study on use of campus resources by international students, Bergman and Misa (1997) also found that the counseling and career centers were not used often. The most frequently used campus resources by all students in this study were computer labs, the university library, university bookstore, and the student recreation center. The only significant comparison was that IPP participants used the student recreation center more often than students in the control group. These results may be reinforced by anecdotal information from host students who described frequent, informal activities in the recreation center (e.g., ping-pong games).

The IPP participants scored significantly higher than the control group on the Social Adjustment subscale. This finding suggests that the ongoing, organized interactions created by the IPP enhanced the international students' interpersonal skills, which are crucial for success in the campus environment.

Although not statistically significant, IPP participants scored higher than the control group on the SACQ full scale and subscales (see Table 4), indicating better self-assessed adjustment. The types of activities emphasized during the pilot IPP were mainly social events (e.g., tailgate parties, movies, homecoming events). The pilot program did not emphasize academics, group development, and university spirit, which may explain why the differences for the Academic Adjustment and Institutional Attachment subscales were not significant.

To determine if other factors influenced the adjustment of international students in the study and to address the research question about Asian student adjustment, mean scores on the SACQ scales were compared using select demographic variables. As predicted from the literature (Sodowsky & Plake, 1992), students from Asian countries scored significantly lower on all the SACQ scales, except the Personal-Emotional Adjustment subscale (see Table 4). This finding reaffirms that students from Asian countries particularly struggle with adjustment to U.S. college life.

Those students who had lived in the United States previously scored significantly higher on the Social Adjustment and Institutional Attachment subscales than those who had not. This suggests that students with previous experience in the United States were better equipped to handle the institutional and societal demands of campus life and developed stronger bonds with the university they were attending. Students with higher scores may have had previous opportunities to learn how to navigate the U.S. educational system, develop stronger language skills, and become more comfortable with cultural norms different than their own.

Limitations

The SACQ has never been normed for use with international students. However, similarities in reporting patterns were found between this study and an earlier study by Kaczmarek et al. (1994). In addition, the use of idioms in some SACQ items may be difficult for new international students to understand (e.g., *Lately I have been feeling blue . . .*; *I haven't been mixing too well with*

the opposite sex lately.).

Two other potential limitations relate to the sample. First, the small sample size in this study limited the types of analyses that could be conducted with a larger sample. However, Isaac and Michael (1981) asserted that small samples were more appropriate for exploratory research and pilot studies such as this one. Secondly, the researchers recognized the limitations of the nonrandom selection of the IPP sample. Though all international students who come to the United States to study are motivated to engage new cultures and new people, those who volunteer to participate in a peer program may be more socially inclined. The sampling and similar distribution of IPP participants and control group by other demographic variables, however, provided some evidence that the two groups were not significantly different.

Implications

The peer program featured in this study, which focused on social interactions, accomplished its goal; the IPP had a significant impact on international students' social adjustment. Thus, peer programs, if planned properly, could positively influence other areas of adjustment such as the development of academic skills. For example, pairing students with similar academic interests could potentially enhance academic adjustment of international students.

Host students could also be trained to teach international students about academic skills and resources needed to succeed in the United States. Strategies also can be applied to increase the sense of institutional attachment. For instance, peer program administrators could require participants to get involved in planning and implementing a service project for campus development. Involve-ment in this type of activity could help international students recognize their impact on the campus community as well as facilitate a sense of belonging.

Consistent with Church (1982), this study highlighted the diverse adjustment needs among international students. Future peer program administrators should target specific adjustment goals (i.e., academic, social, personal-emotional, or institutional attachment), intentionally shaping the content of the peer programs to achieve certain outcomes. Similarly, defining specific adjustment outcomes in evaluation will help researchers understand which adjustment needs are being met by a given peer program.

Another indication from this study, as well as from previous literature (Sheehan & Pearson, 1995; Sodowsky & Plake, 1992), is the need for more focus on the adjustment of Asian students. Not only are Asian students the largest international population studying in the United States, but they are also the international population struggling the most to adjust to the U.S. educational system and campus life. Given these two factors, more research needs to be conducted to understand why and how Asian students are challenged in the college setting. Within-group differences between Asian students will also need to be explored. This future research would add to the growing body of inquiry regarding the differences within international and minority groups (Sodowsky & Plake, 1992).

Correspondence concerning this article should be addressed to Jin Abe, Office of International Affairs, Western Michigan University, Kalamazoo, MI 49008; jinabe@ibm.net

REFERENCES

Baker, R. W., & Siryk, B. (1984). Measuring adjustment to college. *Journal of Counseling Psychology, 31,* 179-189.

Baker, R. W., & Siryk, B. (1989a). *Student Adaptation to College Questionnaire (SACQ)*. Los Angeles: Western Psychological Services.

Baker, R. W., & Siryk, B. (1989b). *Student Adaptation to College Questionnaire (SACQ) Manual*. Los Angeles: Western Psychological Services.

Bergman, C., & Misa, J. (1997). *International student needs assessment survey*. Paper presented at the annual meeting of NAFSA: Association of International Educators, Vancouver, Canada.

Church, A. T. (1982). Sojourner adjustment. *Psychological Bulletin, 91*, 540-572.

Furnham, A. (1988). The adjustment of sojourners. In Y. Y. Kim & W. B. Gundykunst (Eds.), *Crosscultural adaptation: Current approaches* (pp. 42-61). Newbury Park, CA: Sage.

Heikinheimo, P. S., & Shute, J. C. M. (1986). The adaptation of foreign students: Students views and institutional implications. *Journal of College Student Personnel, 27,* 399-406.

Institute for International Education. (1996). *Open Doors 1994-95*. New York: Institute for International Education Books.

Isaac, S., & Michael, W. B. (1981). *Handbook in research and evaluation* (2nd ed.). San Diego, CA: EdITS.

Kaczmarek, P. G., Matlock, G., Merta, R., Ames, M. H., & Ross, M. (1994). An assessment of international college student adjustment. *International Journal for the Advancement of Counseling, 17*, 241-247.

Kakuta, M., Kher-Durlabjhi, N., & Bowman, R. (1997). Gender differences in adjustment to American colleges among Japanese students. *Student Affairs Journal-Online* [Online], 22 paragraphs. Available: http://www.sajo.org [1997, February 13]

Quintrell, N., & Westwood, M. (1994). The influence of a peer-pairing program on international student's first year experience and use of student services. *Higher Education Research and Development, 13*, 49-57.

Sheehan, O. T. O., & Pearson, F. (1995). Asian international and American students' psychosocial development. *Journal of College Student Development, 36*, 522-530.

Sodowsky, G. R., & Plake, B. S. (1992). A study of acculturation differences among international people and suggestions for sensitivity to within-group differences. *Journal of Counseling and Development, 71*, 53-59.

Surdam, J. C., & Collins, J. R. (1984). Adaptation of international students: A cause for concern. *Journal of College Student Personnel, 25*, 240-245.

Talbot, D. M., Geelhoed, R. J., & Ninggal, M. T. (in press). A qualitative study of Asian international students' attitudes toward African-Americans. *NASPA Journal*.

Westwood, M. J., & Barker, M. (1990). Academic achievement and social adaptation among international students: A comparison groups study of the peer-paring program. *International Journal of Intercultural Relations, 14*, 251-263.

Yang, B., Teraoka, M., Eichenfield, G. A., & Audas, M. C. (1994). Meaningful relationships between Asian international and U.S. college students: A descriptive study. *College Student Journal, 28*, 108-115.

Zimmerman, S. (1995). Perceptions of intercultural communication competence and international student adaptation to an American campus. *Communication Education, 44*, 321-335.