

# Assessing the Impact of Study Abroad on Student Learning at Michigan State University

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## **Introduction**

Michigan State University (MSU) is strongly committed to the idea that study abroad is deeply beneficial and important for undergraduate students. However there is a relative scarcity of systematically gathered qualitative and quantitative information that assesses the impact of study abroad. In the summer of 2000, MSU implemented a broad plan to design and put in place mechanisms for continuously assessing the impact of study abroad on students, on faculty, and on MSU as a whole. From the beginning, “assessment of the impact of study abroad” was broadly construed to focus on measuring the acquisition of knowledge, skills and attitudes that students need to live and work in the 21<sup>st</sup> century. Specifically, this would include intellectual growth, personal growth, intercultural awareness, and professional development, but not the evaluation of specific study abroad programs. An institutional assessment committee was established to oversee the project, setting the general direction and goals of the project, with the day-to-day responsibility for the activities of the project delegated to staff members.

The assessment project is expected to continue indefinitely and so far two phases have been completed. Phase I (summer of 2000–May 2001) focused almost solely on certain aspects of the impact of study abroad on students. Phase II (May 2001–December 2002) continued the student-focused assessment, and included first steps of assessing the impact of study abroad on faculty and on college budgets. Phase III (started in January 2003) will continue components of assessment of student learning while also looking into other aspects of the effects of study abroad on the University.

The project has been sensitive to the potential for taking on more than it can accomplish. In particular, care has been taken not to attempt to undertake studies that involve a level of complexity of experimental design that is beyond the project’s

resources. For example, no attempt has been made to assess quantitatively the impact of study abroad on foreign language acquisition, or to measure the differences in learning achieved in an MSU course taught abroad as compared to the same course taught on the home campus. On the other hand, the assessment project has sought to use triangulation methodology by analyzing certain aspects of the impact on student learning of studying abroad with more than one methodology.

The project has proceeded inductively; that is, inferring general results from specific student and faculty responses. The results of the project were obtained primarily for internal MSU use. Therefore, while we recognize that our conclusions may be similar to some to be found in the literature, the discussion presented here is limited to these internal results, and not intended to be comparative. To this end, we have not undertaken a search of the existing literature in order to provide a bibliography and citations.

### **Goals for Study Abroad**

Virtually every aspect of and experience associated with study abroad involves student learning, and therefore the MSU assessment of student learning abroad involves many possible learning areas and outcomes. However, the project has focused on the following six goals of study abroad, as articulated by MSU's International Studies and Programs Office of Study Abroad, according to which study abroad should:

1. Facilitate students' intellectual growth
2. Contribute to students' professional development
3. Accelerate students' personal growth
4. Develop students' skills for relating to culturally different others
5. Enhance students' self-awareness and understanding of their own culture
6. Contribute to the internationalization of the student's home department, college, or university

Each of the first five of these goals describes learning by students who study abroad, whereas the sixth goal involves, in part, the impact of those who have studied abroad on learning by students who have not studied abroad. The project assessed the degree to which MSU's study abroad programs have progressed toward attaining each of these goals.

### **Research Design**

Guided by a belief in the gestalt of study abroad, and driven by the challenge to assess accurately an effect that has been elusive to measure in the past, the project decided to employ multiple methods, both qualitative and quantitative, to assess

progress toward attaining each of the goals of study abroad in an effort to triangulate and verify our findings.

## Data Sources

### *Student self-assessment*

We have relied heavily on the students' assessment of the impact on themselves of their experiences studying abroad. One form of this is surveys administered to the study abroad participants prior to departure (pre-surveys) and again after their return (post-surveys). For example, the project has undertaken extensive quantitative data analysis of about 2,500 student questionnaires, including surveys of study abroad participants during the 1999–2000 academic years and several waves of pre-departure and post-return surveys for participants from winter break 2000–2001 through summer 2002. Other forms of student self-assessment are journals written by the students while abroad, focus groups involving students who have recently returned from studying abroad, and articles solicited from returnees by the Office of Study Abroad (“Tales from Abroad”).

### *Faculty observation*

We have taken advantage of the experience and maturity of seasoned faculty leaders of study abroad programs by soliciting from them written reports that contain their reflections on what they have observed to be the impact of their programs on their students. In the spring of 2002, four of MSU's colleges (Agriculture and Natural Resources, Arts and Letters, James Madison, and Nursing) were invited to cooperate in piloting study abroad impact assessment projects. From these colleges, seven members of the faculty who were leading study abroad programs during Summer 2002 provided end-of-program, in-depth, case study reports that described their observations of the impact of their programs on the student participants. A similar project with different faculty was undertaken during Summer 2003 but analysis of the resulting reports has not yet been completed. A third cohort of faculty will be recruited to provide such reports in 2004.

### *Secondary data analysis*

The project used information in the University's central student database to compare various aspects of students who have studied abroad with those who have not. For the project's purposes, we have defined a cohort for a given year to be all those students who entered MSU for the first time in the fall of that year and who graduated within six years of when they entered. Thus the 1994 cohort, the first one that we

studied, comprised those students who first entered MSU in the fall of 1994 and who were graduated by the end of the summer of 2000. While we discussed other possible cohort definitions (e.g., all those students graduating in a given year), we feel that this definition provides optimal homogeneity in the cohort in terms of age and background.

#### *Surveys by other campus units*

We have incorporated into our project data from relevant surveys conducted by other units within MSU, namely a survey of alumni of the Eli Broad College of Business by Career Services and Placement and surveys of students living in the University's residence halls by the Department of Residence Life.

### **Survey Respondents**

Surveys were mailed to undergraduates who participated in study abroad programs during 1999 through 2002. Respondents completing post-surveys consisted of 1104 participants from 295 study abroad programs in about 40 countries. Of these, 74% were women, 89% were Caucasian, and, while all (non-graduate) colleges were represented, 62% came from the colleges of arts and letters, business, communication, natural science, and social science.

Because the return of post-surveys was voluntary and involved far fewer responses than the number of surveys sent out, one could question whether sampling bias has been introduced. While there is no way of ruling that out for certain, the written comments by the respondents in the sample contained both pleased and disaffected students. From this, it is reasonable to conclude that the sample is unbiased.

### **Survey Instruments**

A pilot set of paper and pencil surveys, administered before departure (pre-surveys) and after return (post-survey), employed twenty-one questions related to expected outcomes of study abroad and ten that focused on impressions about the host country and its people. Each of these 31 questions was anchored on a five-point, Likert-type scale ranging from 1 ("Not at all") to 5 ("Very much"). Other questions focused on prior experiences abroad and gathered basic program information. Finally, there were three open-ended questions. After the pilot phase, revised pre- and post-surveys that could be optically scanned were adopted. The number of predeparture survey questions was increased to 33, adding questions focusing on student expectations for the upcoming study abroad experience. Earlier questions about the host country and its people were dropped. The post-survey adopted the same changes; however, it focused on outcomes from the study abroad experience.

Factor analysis was conducted to identify how well survey items measured progress toward attaining study abroad goals. This statistical technique winnows out weaker items and sorts interrelated scale items into a smaller number of factors. This process yielded seven factors, five of which were directly related to the four primary areas of intellectual growth, personal growth, intercultural awareness, and professional development. The remaining two (not addressed in this article) measured attitudes toward MSU and study abroad in general.

Principal component analysis on the initial 33 items yielded eight components with eigenvalues greater than 1. Total variance explained was 63%. Items with low coefficients and factors with only one item were deleted. Following Varimax rotation with Kaiser normalization, seven factors (measured by 27 items) emerged, of which five are directly related to the four primary areas of intellectual growth, personal growth, intercultural awareness, and professional development.

In the survey item distribution, two factors associated with intellectual growth were Language Learning and Academic Performance. The Language Learning factor included two items:

- “As a result of my study abroad experience my ability to speak a foreign language has improved”
- “Studying abroad has contributed to my desire to begin learning a foreign language.”

Academic Performance encompassed two items:

- “My study abroad experience has led to an improvement of my academic performance”
- “Studying abroad has enhanced my critical thinking skills.”

The factor of Personal Growth was measured by nine items:

- “Study abroad has enhanced my independence”
- “Study abroad has enhanced my self-reliance”
- “Studying abroad has increased my ability to cope with unfamiliar situations”
- “My study abroad experience has improved my problem-solving skills”
- “Studying abroad has helped me develop leadership skills”
- “My study abroad experience has increased my level of comfort with people different from myself”

- “My study abroad experience has increased my ability to interact effectively with people from different backgrounds”
- “As a result of my study abroad experience, I have become more open-minded”
- “Study abroad has increased my feeling of personal effectiveness.”

Intercultural Awareness encompassed six items:

- “My study abroad experience has enhanced my understanding of international issues”
- “Study abroad has contributed to my understanding of other cultures”
- “Study abroad has increased my appreciation of human difference”
- “My study abroad experience has increased my curiosity about other cultures”
- “Studying abroad has contributed to my understanding of my host country”
- “My study abroad experience has increased my understanding of my own culture”

Finally, Professional Development was measured by two items:

- “Studying abroad has made me reconsider my career plans”
- “Studying abroad has helped me find professional direction.”

Overall alpha for the seven-factor scale (including the two we have omitted) was .90; alpha measures for the five individual factors were .92 for Personal Growth, .84 for Intercultural Growth, .66 for Career Development, .68 for Language Learning, and .57 for Academic Performance. Throughout the survey, analysis showed a high level of scalar reliability, which indicates that the scales are consistently and uniformly measuring these factors. The lower reliabilities for the last three items can be attributed to their being two-item measures.

## **Findings and Discussion**

We will discuss some of the projects findings from student surveys, faculty reports, and the MSU database in terms of the primary areas in which MSU intends study abroad to have an impact on students: intellectual growth (including both academic performance and language learning), personal growth, intercultural awareness, and professional development.

## Student Surveys

In examining postmeasures for student respondents who participated in study abroad in 1999-2002, the mean (average) scores for five general categories were Intercultural Awareness, 4.13; Personal Growth, 3.78; Academic Performance, 3.22; Language Learning, 2.73; and Professional Development, 2.72. For the survey factors to be valid, one would expect strong relationships (correlations) among the factors. In this case, the five factors are all moderately and positively correlated with each other at a statistically significant level. Length of sojourn is also positively correlated with each of the five factors (see Table 1).

While data were collected by program departure and return dates, e.g., Winter Break 2000-2001, Summer Semester 2002, etc., initial analyses revealed that organizing data by length of sojourn (e.g., less than three weeks, three to seven weeks, seven to 14 weeks, academic year) aided the interpretation of findings. This is supported by the fact that such organization yielded less within-group variation and more between-group variation. This approach also allows for easy comparison of responses based on sojourn length.

In examining only the post-measures for the five general factors, it is evident that the longer the program the stronger the post-program response (see Table 2). For Personal Growth, Intercultural Awareness and Academic Performance measures, mean ratings gradually increased as program length increased. Regarding Language Learning and Professional Development, Winter Break participants scored higher than those in

**Table 1: Correlations of Student Learning Factors and Length of Study Abroad Sojourn**

Variable		1	2	3	4	5	6
1. Length of Sojourn	Correlation Subjects	1 1159					
2. Personal Growth	Correlation Subjects	.169 1106	1 1106				
3. Intercultural Growth	Correlation Subjects	.183 1128	.721 1080	1 1128			
4. Career Development	Correlation Subjects	.176 1143	.468 1096	.413 1115	1 1143		
5. Language Learning	Correlation Subjects	.199 1128	.324 1080	.353 1099	.303 1115	1 1128	
6. Academic Performance	Correlation Subjects	.080 1142	.624 1095	.501 1114	.416 1131	.212 1115	1 1142

*All correlations are significant at the 0.01 level (2-tailed).*

summer sessions, but then the upward trend in scores resumed with semester and academic-year participants.

**Table 2: Means for Student Learning Factors and Length of Study Abroad Sojourn**

Variable		Length of Sojourn				
		<3 Weeks	3-7 Weeks	7-14 Weeks	Academic Year	Total
1. Personal Growth	Mean	3.62	3.73	4.10	4.13	3.78
	Subjects	29	907	155	15	1106
	Std. Dev.	.766	.790	.632	.580	.778
2. Intercultural Growth	Mean	3.99	4.08	4.41	4.46	4.13
	Subjects	27	925	161	15	1128
	Std. Dev.	.525	.653	.549	.478	.646
3. Career Development	Mean	2.70	2.63	3.13	3.60	2.72
	Subjects	28	938	162	15	1143
	Std. Dev.	1.125	1.038	1.006	.967	1.053
4. Language Learning	Mean	3.07	2.59	3.36	4.00	2.73
	Subjects	28	925	160	15	1128
	Std. Dev.	1.289	1.245	1.253	1.069	1.281
5. Academic Performance	Mean	3.04	3.19	3.36	3.53	3.22
	Subjects	28	940	159	15	1142
	Std. Dev.	.981	.894	.957	.876	.907

Regardless of program length, all the post-measures are relatively strong. Keeping in mind that 3.0 would be a moderate rating, means for Personal Growth, Academic Performance and Intercultural Awareness were all higher than this mid-point. More specifically, for Intercultural Awareness the mean scores were 3.99 and higher, which is significant. Less impact was demonstrated in Professional Development; however, we can't expect one program to dramatically change career paths. Language Learning scores were also somewhat lower, probably reflecting the fact that many programs do not contain a foreign language component. Overall, there is a strong perception of significant gain from participation in study abroad and it is evident that short-term programs provide notable value.

Independent t-tests, where all pre-scores are statistically compared to all post-scores, were conducted on the five general factors. For three factors, Intercultural Awareness, Language Learning, and Professional Development, there was no statistically significant difference between pre- and post-scores. Personal Growth and Academic Performance did reveal statistically significant differences. However, both were in the

opposite direction from what had been anticipated; that is, pre-test scores were each higher than those of the post-test. While that might be reason for concern, the fact remains that the mean difference for the Personal Growth scores was only .12, which is not large considering that the postscore was still a very positive 3.78. The mean difference for Academic Performance is larger, .3; however, once again the overall measures are very positive. Also, given the fact that the reliability for this factor is somewhat lower, the findings may be as much a measurement issue as anything else.

Paired t-tests, where individual students' pre- and post-scores are compared, revealed similar findings in that there were statistically significant differences for Personal Growth, Intercultural Awareness, Professional Development, and Academic Performance, with each prescore being higher than the post. Once again, however, mean differences were still very small, ranging from .06 to .18, and overall means were very positive.

The t-test approach has both benefits and problems. It is based on the assumption that the impact of the intervention (in this case, the study abroad experience) can be demonstrated by comparing the pre- and post-study abroad participation survey measures. When significant differences are found, it is always up to interpretation whether the change is specifically due to the intervening experience or to other factors. In the present assessment study interpretation of t-scores is not clear-cut; there are three likely explanations for the pre and post-test findings. First, they could be the result of exceptionally high expectations being held by study abroad participants and an especially effective promotion by the Office of Study Abroad. However, the more likely interpretation is that it is a case of "gamma change," where the intervention experienced (in this case, study abroad) leads participants to revise their initial measurement scale, e.g., more accurately ranking the outcomes of the experiences based on what they know post-study abroad versus expectations held before departure. Finally, there may be a problem with the pre/post survey questions in that the pre-survey focused on expectations while the post-survey focused on outcomes. Future research will need to address this possible conundrum. Also important is that the post-measures are very positive, and even when they are lower than the pre-departure measures, they do not demonstrate large differences.

## Faculty Reports

What follows is a discussion of the key themes running through the faculty reports we elicited, organized by the four primary areas of impact. As remarked above, these reports came from seven veteran program leaders who were asked to provide their observations of the impact on their students of their Summer 2002 study abroad programs. We purposefully did not suggest a common format, allowing each of them to decide what was most suitable to report.

## Intellectual Growth

It would be surprising if there were not a clear feeling from all faculty members that their students had gained a significant amount of academic knowledge and some intellectual maturity while participating in their study abroad programs. The same would be the case for courses offered on-campus in East Lansing. What is much harder to ascertain is whether students learned *more or differently* academically and matured *more or differently* intellectually while studying abroad than they would have if they had studied the same material on-campus. It is this potentially increased benefit of study abroad that we discuss.

First let us mention briefly the traditional study abroad subject, foreign language. It is natural to assume the benefit to acquisition of a foreign language provided by living in a place where that language is spoken. However the level of benefit varies with the level of immersions the program offers. For example, do students regularly face circumstances in which they must understand and speak the language of the host country? Do they live in homes where English is not spoken? Only one of the seven faculty-observed programs reporting to the project had a formal foreign language requirement for participation (Spanish). The leader of this program wrote persuasively of his conviction that “they [the students] learned Spanish really well.” To quote further:

I have a biased suspicion that one is likely to learn a foreign language especially well in a context like this. Of course, it is a great help to be learning a language in the foreign country where it is spoken, and also to live with a family at the same time. This surely is the major feature. But I am thinking further of the fact that the students are at the same time engaged in a learning experience about the country, and when there is a unified theme and they can learn more about it by using their Spanish — when one of the ways they can learn about this topic is not just to try to understand the news, but to talk with their family (and where other students are engaged in the same process). Anyway, for some anecdotal evidence: There were various times when we had a presentation given to us in Spanish. . . . Once we found upon arrival that the speaker was going to speak to us in Spanish. We got impromptu translation from the one semi-fluent student, but it was clear that most of the students were understanding a great deal on their own, and several of them (not just the ones who came to the class already at a fairly high level) asked questions in Spanish.

I am of course biased and want them to be successful in these various ways. All I can say is that I was indeed (pleasantly) surprised how well they did in this regard. Also, students often mentioned how pleased and excited they were that they were able to communicate as well as they could. This plausibly is one factor

causing them to be confident about their abilities to get along and around in new settings.

I believe that 4 or 5 said that they are taking Spanish now in one way or another; others said that they plan to in the future, but their schedules are too packed right now.

While it is beyond the means of this project to measure precisely whether students learn more academically and mature more intellectually while studying abroad than they do studying the same material on-campus, there is unequivocal qualitative evidence that they do. All of the reports reflect the belief by both faculty and students that they, the students, learn more and more deeply while studying abroad. One faculty leader, answering the question of whether this is the case, said:

Definitely. Because everything that happened, everything they saw, everything they did and heard and noticed and didn't like supported, subverted, questioned, challenged, added to, confirmed, altered, verified, disputed what they had learned 'formally', which just couldn't have happened had they taken eight credits in East Lansing.

The predominant verdict is that there is increased academic benefit as a result of studying abroad, but two faculty program leaders reported a dynamic that sometimes worked against this added value. It involves the conflict some students feel between the social opportunities and the academic obligations presented on a study abroad program. Surely this is not an unknown conflict for many students who never leave East Lansing, but studying abroad can accentuate the problem. Sometimes it is connected to the more readily available alcohol and soft drugs in some foreign countries, but, absent this issue, there still can be compelling pressures to socialize with one's traveling companions and with the local students, pressures that sometimes undermine the academic commitment of the students. But even on one of the programs where this was viewed as a problem, one of the students commented that it was:

Having ten lectures in four days seemed overwhelming at first, but it went by real fast and hit all the important topics. The boring nightlife was a disappointment, since this is supposed to be a college town. The academic experience more than made up for it though. Nice to stimulate your brain with thoughts and ideas rather than killing it by downing pilsner.

### *Personal Growth*

In reading these reports, it is striking to see on balance how large an impact on personal growth the study abroad experience has. Some of this effect has nothing to do

with the 'abroad' part of study abroad; it has to do with intensely learning in a small group, together day and night in an unfamiliar setting. Doing so in Boston, Bellingham, or Beloit would have a big impact. But the psychological challenge posed by the unfamiliar is particularly acute when abroad and, while sometimes the anguish it can cause (e.g., homesickness, depression) can diminish the benefit, there is no doubt that the predominant effect on personal growth is positive and profound.

Virtually all of these reports comment on the increased confidence and self-reliance observed in the students and on the way the experience increased in many the wish to travel abroad more in the future. A number of reports mention the way in which cultivating one's patience and sense of humor help deal with the unexpected and the unfamiliar. Some effects were quite specific in nature: increased punctuality (to avoid being left behind), a desire to learn another language, an appreciation of art. But more were described as a pervasive, intangible change of perception of the world and one-self. The following student quotes—from different programs, one in Europe, one in Latin America—illustrate:

It is... interesting to see what attitudes, behaviors and other personality traits have stayed the same in myself, now that I am free from US and home influences. I feel like I have a greater understanding of who I am and why, now that I can look at myself in a completely different situation. It was almost like an experiment: take away natural surroundings and friends and family and see what stays the same. It is incredible how clear my perception of my own self — my values, strengths and weakness — is now that I have looked at it more objectively.

It is odd because I studied abroad to learn; to learn facts, statistics, and to gain knowledge. But instead I came away realizing more about myself than anything else. I realize more my intellectual interests, more my ability to communicate, and, once more, my place in the world. I realize how much I can depend on myself and how much I need to depend on others. If I had the chance, I would do the trip all over again. It broadened in every sense my idea of the world.

### *Intercultural Awareness*

MSU's goals of study abroad contain two items directly related to intercultural awareness, the first relate to students' ability to understand and adapt to cultures other than their own, the second to the students' increased understanding of their own culture resulting from comparing it to the host culture and from looking at it from the outside. But when reading these reports, one finds, not unexpectedly, that much of the second occurs in tandem with the first, when an insight into one's own culture comes from an experience in a new one that illuminates an unanticipated difference.

Becoming culturally aware takes work. One faculty leader quoted a student, “Cultural immersion takes effort,” and then continued that the student wasn’t complaining about how hard it was but rather was realizing that, “in order to gain the most from the experience, you should attempt to learn the language, the history and other aspects of the culture that are important to the people.”

In some cases intercultural awareness is an insight into comparative values. One faculty leader of a Latin American program reported, perhaps optimistically, that some of his students learned “what happiness is (and how you can have it with much less in the way of material resources and possessions).” A student on another program said:

I realized how little it takes to be truly happy. Americans can learn so much from this European, slower paced view of life.

And a third reflected on the place of the United States in the world:

Study abroad is doing a wonderful job of taking me off the pedestal I often stand on as a citizen of a hegemon and moving me back down where I belong.

Many students, especially those on programs in Latin America, gain insight about the different standards of living between the U. S. and the countries they visited. They also learn from speaking to local people (and in some cases from reading newspapers) about the attitudes in the host countries towards the United States and Americans. In some cases this can be disconcerting:

I think I learned that Americans are annoying to people in other countries. Not all Americans, but many.

Others came to notice the differences in what is ingested here and abroad and, in some cases, to appreciate some of the things we have in the United States that are not found everywhere. One is freedom from smoke. Another is the difference in microbes in the water:

Being able to focus on things in life that I would never focus on if I were not in a different part of the world. Also things you like or dislike about your home become more apparent than when having nothing to compare it to. For example something small that I will never take for granted again is drinking the tap water in the part of the world that your stomach is used to, or having a cup of water in front of you in a restaurant with ice that never empties. I was so sick of paying for bottled water that cost more than my meal.

In addition, a majority of the reports mentioned student enthusiasm for eating the unfamiliar foods of their host countries. There was reflection in at least one of the reports of the issue of unwise use of alcohol by students who are not used to its ready

availability. This is a problem encountered by many study abroad programs at many universities and is well summarized by this comment from a faculty leader.

Over the last years, I have observed that undergraduates seem to have greater difficulty adapting to the freedom of choices (use of leisure time and alcohol consumption) provided in typical European program settings. They seem to abuse alcohol more than their European peers of the same age, some of whom are accustomed to using (for their U.S. peers, illegal) substances in moderation, starting at the legal age of 16.

Finally, we mention another important area of intercultural awareness that is reflected not only in these reports but also in other student comments: the experience of being a minority, of being identifiably different from most of those around one. Students' comments reflect how much this helps them to understand what the experience of being a minority in the U.S. is like.

### *Professional Development of Students*

Professional development in the context of study abroad can be viewed broadly or narrowly. Certainly the entire academic experience in a program offered by a professional unit such as the College of Nursing can be considered as contributing to professional development. But for the purposes of this report we choose the more restricted view that professional development involves the choice of career, the development of awareness of how a student's intended profession may be viewed and practiced differently in different cultures, and the acquisition of attitudes and cross-cultural skills that help a person to be an effective professional. While professional development in this sense could be viewed as an explicit goal of the seven programs and while, to one degree or another, it was considered by a majority of the faculty program leaders, it is clear from reading these reports that overall it was the least impacted of the four areas we are discussing.

The most frequently mentioned impact on professional development is in the area of career choice. For a number of students on these programs, study abroad provided the determining experience in choosing a career. In some cases it confirmed a choice they had already made, in others it caused them to change fields or to narrow their choices. But either way, studying abroad was a crucial factor in their decision.

Study abroad sometimes has an immediate impact on student opportunity in their remaining time as an undergraduate. To quote a program leader:

One undergraduate student used his course material and experience to write an outstanding paper on solid waste management. The quality of the paper and his overseas study credentials helped him to secure a fellowship grant from the MI

chapter of an engineering association during his senior year.

For the nursing program, it was clear from the comments by the faculty leader and the students that much insight had been gained about how their intended profession was practiced in the U.K. as compared to in the U.S.

I realize now that I learned more about the similarities than anything else — overcrowding in hospitals, not enough money, and not enough services in the right places. The world got smaller because we are so alike.

For the two programs with an explicit goal of professional development, the impact was seen in such areas as better understanding of foreign career options, increased confidence in asking technical questions in a setting where English is the second or third language, how to handle oneself in a professional setting, and gaining exposure and applied knowledge that might increase the students' marketability.

While perhaps not connected directly to any one of the goals of study abroad, we wish to mention the topic of group dynamics, which was mentioned explicitly or implicitly in a majority of the faculty reports. The overall impression from reading these comments is how gratified the faculty leaders were at the way in which their groups traveled and learned together, looked out for each other in a pinch, made new friendships. One of the programs had students from three different countries participating and the leader reported that they all learned from the intercultural contacts within the group.

However, it would be naive to suppose that groups of strangers traveling and living together for a month or so in unfamiliar surroundings do not sometimes run into rocky patches. One faculty leader described in considerable depth the personality traits of each of the participants in the program and how they affected other individuals and the group as a whole. One can see from this report the subtle ways in which each personality contributed to the interactions within the group. One depressed student, another preoccupied with her approaching wedding, a third with a tendency to assume a leadership role that the others may not wish to grant—all these have their ways of introducing fetching variation on the good days but wrenching stress when it is 90 degrees outside and one has been all day on a crowded train. This program leader concluded his report with:

I should ... add that I refer to it as "the group" and inevitably an impact assessment such as this one has to generalize and point out patterns and trends, but what is most striking to me is that this group consisted of nineteen individuals, each student different from the other, and each one reacting in a unique and personal way to their study abroad experience. They might be saying similar

things, and reacting along similar lines, but there is no doubt in my mind that what we have here are nineteen highly individualistic human beings, reacting in nineteen different ways, and taking home nineteen completely different experiences. That fact is to me the most significant.

A reader of these reports is left with the unequivocal impression that the impact of the study abroad programs for virtually every student in this pilot project was positive in each of the areas considered, though perhaps especially in personal growth and intercultural awareness. But most important may be the way in which study abroad provides an opportunity for a synergy to be established between the academic, professional, personal, and intercultural components of the experience, leading to an overall effect greater than the sum of the individual pieces. To quote one of the students:

I have learned more on this trip than I could ever possibly learn in a classroom situation. The reading and lectures were so much more relevant being in the country. While having profs from different cultures is also a great experience, meeting students our age, traveling, sightseeing, trying new food, communicating, and everything else that could not possibly be mentioned in a writing like this, make the program an unforgettable experience.

### **Findings from MSU's Central Database**

We end our discussion of results with a brief comment on some of the corollary information provided by MSU's central database.

In the winter of each year since the start of the project, statistical comparisons are provided of those of the cohort who have studied abroad and those who have not, using information from the University's central database. Primarily, these comparisons have concerned the demographics of the cohort, such items as participation rates by gender, college, residency, first year of participation, time to graduation. While all of these items are interesting, and valuable to understanding the picture of study abroad at MSU as a whole, many have nothing directly to do with MSU's students' learning abroad.

One area connected to learning abroad about which one can infer from these cohort analyses is the student's time to graduation. Data on time-to-graduation and number-of-terms-enrolled show that, on average, study abroad participants enroll for more terms before graduating than do non-participants *but* that they take less time to graduate. This makes sense considering that, for example, a student might study abroad during a summer, thereby adding one term of enrollment but reducing the length of time from first enrollment to graduation. While this is not connected to student learning, it is of interest because of the oft heard concern on the part of students and parents that studying abroad may delay graduation.

Data show that the Grade-Point Average (GPA) at graduation of study abroad participants is, on average, higher than that of non-participants. This does not mean that those who study abroad graduate with higher GPAs *because* they learned more while studying abroad than they would have if they had stayed home. While there is no firm confirmation as yet, those who choose to study abroad probably have higher GPAs *before they study abroad* than do those who do not study abroad.

Further data explain the basis for this conclusion. MSU, in an effort to identify students who may be at special academic risk, classifies its entering students into seven groups intended to reflect the likelihood of their successfully graduating from MSU. In every cohort examined, the higher the likelihood of a student's success upon entry (as measured by the criteria used to sort the students into these seven categories), the higher the likelihood is that that student will study abroad. In other words, the stronger entering students are more likely to study abroad. Therefore the higher average GPA at graduation may well be a reflection of the academic abilities of those who choose to study abroad, rather than the effect of study abroad.

We include this not to make the case that students do not learn a great deal while studying abroad, but to emphasize that considering only so simple a measure of academic performance as the GPA belies the truth. Aside from the clear indication that stronger students are more apt to choose to study abroad, there are other possible influences during the study abroad term on GPA that have nothing to do with learning, such as a possibility that grading on study abroad programs may be less rigorous than grading in courses on the home campus.

### **Suggestions for Future Research**

As the project continues, the student surveys will be amended in two ways: (1) by introducing a post/then methodology where subjects are asked to assess beliefs and skills by judging what they think now and what they thought before engaging in the study abroad experience and (2) by redesigning the surveys to assess only beliefs and skills at the predeparture and post-sojourn stages rather than eliciting responses about expectations. One final caveat with paired t-tests is that, even when a large number of pre- and post-responses are elicited, one ends up with a small number of participants who have provided both. For example, seventeen subjects completed the winter break 01-02 post-survey, but only five of those had completed the pre-survey. The Winter Break 01-02, Fall Semester 2001, and Spring Semester 2002 only had five, eight, and eleven pairs, respectively. There were no pairs for academic-year program participants. The post/then methodology avoids this problem.

## **C o n c l u s i o n**

In these ways the project has used a variety of approaches and a variety of sources from within Michigan State University to understand the type and amount of learning that takes place in study abroad. While the project has only just begun to understand the possibilities and problems associated with obtaining reliable and meaningful data on student learning abroad, we are convinced that the results provide an accurate and sometimes eloquent description of the often extraordinary effect study abroad has on those who undertake it.