Short Term International Student / Faculty Exchange Programs

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ABSTRACT: We can all accept the premise that our students will benefit from their involvement in an international exchange program. When this premise is treated as a given the concern becomes one of implementation. Although the semester long exchange programs are very effective at providing this benefit, the number of engineering and engineering technology students involved Is typically limited. A short term exchange effort will meet the needs of more students.

With twelve years of direct personal involvement in developing and maintaining short duration international exchange programs with Engineering and Engineering Technology programs, there have been learned lessons, which may help others develop the positive aspects of the international exchange experience for many students and faculty.

There are three specific concerns, which must be addressed to insure continued student involvement in an exchange program. One, the exchange program needs to be of a short duration. Initially, no more than two weeks at a time. The majority of engineering and engineering technology students are not available for semester long exchange programs. Failing to recognize this will result in severely limiting the number of students gaining an international exchange experience during their academic careers.

Two, the program must be low cost. The lower the cost of the program, obviously, the more student involvement will develop. This means that it is necessary to remove "tuition" as a cost associated with the exchange program. This also means that faculty will not be paid for their involvement in the exchange effort.

Three, the students must receive academic credit for the exchange experience that will apply to their degree. This means that the students will be able to use the experience to meet a general education requirement in their respective programs. At the very least the experience must meet an open elective in their degree.

1 INTRODUCTION

With our increasing involvement in the world economy, it is becoming obvious that part of the preparation of the new generation of engineers and engineering technologists will require a greater awareness of the international community. The normal means to this end is to require a Humanities, Social Science, or Language course with a Cultural Diversity component. Although this meets core curricular requirement it often falls far short of meeting the intent. Acquiring an international awareness is best gained by directly experiencing another culture within the context of a technical discipline and not by setting in a classroom. It is indeed a rare traditional lecture based course in which a student will experience "Culture Shock".

There is a significant challenge involved with bringing more students into an environment where they will directly experience another culture. Semester long exchanges have a positive side in that they are relatively easy to establish and do not require a large amount of faculty maintenance. The down side to the more traditional approach of semester long exchange programs with universities in other countries is that they are able to meet the needs of only a very limited number of students. Most engineering and engineering technology students do not see the benefit of a full semester at another university but do see the extra cost and the potential for extended program length due to missed classes.

Even with these issues covered, there is, from the student's perspective, the nagging question of "Why would I want to do this?" Granted, the "Why?" becomes readily apparent after the experience, this insight is usually missing prior to the experience. It is rare for a student to return from a semester aboard and not proclaim, to all who are willing to listen, that the experience was "life changing" and one of the

most rewarding things they have ever done. The key to involving more engineering and engineering technology students in an international experience is to provide the "Why" in terms and ways they can internalize and understand. This is best met with short term exchange programs. The short term exchange greatly reduces the sense of risk for the students and still gives them the "Why" they may use later for a semester long experience. Even if they do not subsequently participate in a semester long activity; when they return home, they will view themselves, their profession, and the rest of the world from a new perspective, and this is the intended outcome.

Taking the value of an international experience for an engineering or engineering technology student as a given, there are several items which must be included in such a program to better insure its success.

An exchange program is defined here as a linkage between your educational institution and an educational institution in another country with the intent to provide cultural awareness opportunities for students and faculty of the respective institutions. This awareness is facilitated by physically visiting the respective campuses, their surrounding communities, and industrial/manufacturing systems within the context of their professional discipline of study.

A short term exchange is an exchange having a duration of less then two weeks. This allows for scheduling of the activities during the least disruptive time in a student's schedule. The short term exchange also means that you serve alternately as a guest in another country and then as a host for students and faculty from that country when they come to your campus. The focus of the short term exchange is to expose students and faculty to aspects of another culture within the contexts of an educational environment, which recognize the participant's technical perspective. It is not to gain technical skills. The short term exchange is not focused on attending traditional classes at the host institution but rather to provide an opportunity for your students to interact with peer students and faculty in another country, to see first hand how technology is utilized within their culture, and how technology shapes their culture.

2 THE SHORT TERM EXCHANGE STRUCTURE

The short term exchange has two basic parts. The students and faculty from your campus will visit and take part in a program administered by a host university in another country and in return you will host that university's students and faculty when they visit your campus and you provide a short duration program of activities. This affords your students and faculty not only the opportunity of seeing another culture but also the opportunity of showing aspects of your culture to others. Students not only have the experience of exploring another culture, they have the opportunity to see their own culture through the eyes of others.

In a typical short term exchange model, when you visit another university, you will need to pay for the transportation of your students and faculty to that country while the "in-country" expenses of the visit will be covered by the hosting institution. In return, you will pay for the in-country expenses when they visit your campus and community. It is the responsibility of the hosting university to develop the itinerary of activities, room and board, in-country transportation, industrial tours, and cultural activities. This structure allows the hosting institution to better match the activities and costs to their respective economies.

Faculty plays a critical role in this type of exchange effort. Faculty must be identified who have or wish to develop contacts with counterparts in universities in other countries. It is optimum that the faculty develops both a professional and personal relationship with the faculty on the other campuses. The hosting institution's faculty has to share in the willingness to dedicate the resources of time, energy and money necessary to initiate and maintain such an exchange effort. This does not mean that the exchange efforts need to be limited to only one faculty on each side, but rather that there must be at least one faculty on each side who is willing to make sure that things get done and always provide a channel for communications. Once the caretakers are established, it is relatively easy and desirable to bring other faculty into the project. The more faculty there are, who can share in the exchange experience, the more faculty there will be available to help with the demands of the returning group on the "flip" side of the exchange program. It is a reality that many faculties have limited international experience and part of the program is to enhance the faculties experience as well.

It is necessary that the short term exchange program activities meet a degree requirement for the participating students. Credit for there involvement is a powerful incentive that is obvious to students. This incentive goes a long way toward answering the "Why?" question for them. The students who complete exchange requirements must be able to earn credits applicable to their degree in the general education portion of their program or at the least, be able to use the experience to meet an "open elective". By earning credits, the students have more incentive to become involved with the effort. It helps to sell the short term exchange program when you can ask the students the question, "Do you want to spend eight days in (fill in the country) or 16 weeks in a lecture class to meet this degree requirement?"

There is frequently a challenge moving such a program through the curricular process but the outcome is worth the effort. A key concern encountered is that the short term exchange concept is new and unusual to many curriculum committee members. A strong rational is required to gain approve for the course. It is most helpful to involve as many of the "General Education" faculty in the development process as early as possible. Their early involvement in the development helps them gain an understanding of the intended goals and outcomes of the short term exchange program, an opportunity to provide their input to the process, and helps minimize the "turf" issues sometimes associated with technical faculty assuming responsibility for what is often viewed as non-engineering courses. Of most help from the general education faculty is their involvement in the pre-travel orientation sessions and defining the content to be included in the journals the students are required to keep during the exchange program. A sample syllabus for the course, including the journal requirements, can be obtained by contacting me directly at my e-mail address.

The next consideration for attracting students into the program is to keep the cost as low as possible. The benefit of this is obvious, the implementation is more challenging. The short term exchange effort I am advocating use a "zero sum" approach for the university. The university does not expend funds to maintain the program but it also does not gain revenue from the exchange. The students pay the full cost of supporting the program but they do not pay tuition for the credit on top of the program cost. Since it is a zero sum program, the faculties are not paid for their involvement in the exchange efforts. The faculty's travel expenses are covered by the participating students but the faculties do not draw extra salary for their involvement.

As can be expected, there are many unique expenses associated with a short term exchange program, which may not be readily apparent. There are the obvious expenses of transporting the students and faculty to the other country and the less obvious costs of hosting the returning students and faculty when they return to your institution on the flip side of the exchange. These expenses need to be budgeted for and the students need to pay the full bill. A sample budget spreadsheet with items to be considered in developing such a budget can be gained by contacting me directly via e-mail.

The first point at which to start in the cost reduction is the removal of the "tuition" expense from the student's involvement in the program. Two successful models have been used to meet this requirement. In both models, there is no tuition charged to the students for their involvement in the program. In the first model the students pay an "international fee" effectively equal to the cost of the tuition. This fee is placed in a fund and used to help defray the costs of the exchange trip. The students will also be charged an additional amount if the actual costs of the exchange program is not completely covered by the international fee fund.

In the second model, the students pay all of the direct costs for the project (without tuition) and they gain academic credit by paying a nominal fee for "Life Experience" credit when they complete the project. The life experience credit can be used to meet an open elective within the student's degree program. This approach is typically the easiest to implement as the approval process for accepting an open elective is kept within the student's department. The life experience model is also applicable to gain general education credit but this most often must be approved by someone outside the department.

Some short term exchange programs, will cost only slightly more than the tuition for a single course. In other programs, the cost to each student can be several thousands of dollars. With proper planning, the students will be able to qualify for financial aid for the project just as they could for a more traditional course. Tuition costs can not be added to the exchange costs. If this is not done, it will severely limit the number of students able to participate.

3 FACULTY INVOLVEMENT

The responsibilities placed on the faculty members involved with an exchange are great but the potential rewards are also great. Of particular benefit to the involved faculty is the opportunity to cultivate international collaboration on research, publications and teaching. Only after working closely with counterparts in another university for several years does the understanding of the collaborating potential become obvious. The first sign of growth in this area is a short guest lecturer invitation, usually to be followed by a joint publication, and finally with a funded grant project. It is surprising to learn of the opportunities which present themselves when you work, literally, at the borders of two countries. The marked difference in perspectives can prove to be fertile ground for new growth when the trust and experience of working together has been established.

The faculty also gains the opportunity to work closely with their students in a less formal learning environment. The opportunity to know those involved in a relationship outside of the more formal Professor/Student relationship has benefits for both when returning back to campus. Having a shared experience with students makes it much easier to encourage them to stretch their limits in other areas as well. The students tend to be more willing to move beyond the more traditional learning experiences and are more willing to try new things.

Of final note is the opportunity to see another culture through the new eyes of the first time students and to share in their enthusiasm of the experience. It is worth the effort of the exchange just to watch the students express their excitement about what they see and experience and the faculty can help the students align the experience with their technical perspective.

4 ASSESSMENT

As with all good programs, it is necessary and desirable to incorporate assessment into the process early on. This includes not only collection of feedback from your own students; it includes the feedback from the international students as well. It is equally important that your students meet the goals and objectives of the program as well as that your program meet the needs and expectations of the international students. As is the original intent for program assessment, the intent here is to continually improve the program for all involved. Of particular importance to improving (or in some cases retaining) the exchange program, is the necessity to find out what works and what does not. It is more beneficial to receive negative feedback, indicating that a particular aspect of the itinerary was not viewed as beneficial, than to not have the feedback and put the program in jeopardy by not being aware of the need for change. My experience in working with students in this environment indicates that they are more than willing to tell you what does not work for them, particularly when you provide a list of written leading questions for them to react to. A sample assessment questionnaire can be obtained by contacting me at my e-mail address.

5 CONCLUSIONS

The desirability of having engineering and engineering technology students and faculty involved in an international experience is both desirable and necessary. Our students need to develop a comfort level in working with other cultures. This comfort level has to be developed within the context of their technical discipline. Utilizing only the more traditional exchange program, of a semester in length, severely limits the number of student involved in these opportunities. The short term exchange offers the best opportunity for the most number of students.

The short term exchange opportunities have to be two weeks or less in duration, there can not be a tuition fee on top of the exchange expenses, and the students must receive academic credit for their involvement. When this criteria is implemented, the maximum number of students will benefit from the international experience and be better prepared for their careers.

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