Investigation of Myths and Realities of Studying Abroad

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Abstract

Students often cite a number of perceived barriers preventing them from studying abroad. These barriers are diverse and include: cost associated with study abroad, lack of knowledge of a foreign language, limited availability of courses causing a delay in graduation, difficulties transferring courses from a foreign institution, and negative impact on their GPA due to taking courses at a non-US university. In this study, these anticipated barriers were investigated to determine if they were myths for engineering students or if they represent real difficulties. Data were collected for students that participated in semester-long programs between 2010 and 2015. We examined cumulative GPA before and after their study abroad, the number of semesters it took for the students to graduate and compared to students that had not done a study abroad, and the pass rate for courses taken at a foreign institution. Furthermore, we subdivided students by the geographical location of their study abroad experience to determine if this had an impact, and by countries that were native and non-native English speakers.

Keywords

Study Abroad, Student Exchange, International Education, Globalization

Introduction

In today's global marketplace, the importance of gaining international experience for engineering students cannot be overstated. Although the popularity of studying abroad has increased over the past two decades, with participation of US students in study abroad programs more than tripling, the proportion of students participating in these programs is still low [1]. For example, only 4.6% of US engineering students participated in study abroad programs in 2013/14. This number can also vary considerably between different schools, and in some cases, it can be as low as 1% of engineering students.

Expanding students' perception of other cultures is critical to their success as engineers. Additionally, if students are to become leaders in the profession, they need to understand and appreciate the diversity of cultures in the world [2]. Informal discussions with students who have participated in study abroad opportunities have revealed that these students' outlook on the world was changed and their ability to be more accepting of different cultures was enhanced. We believe this also decreases a student's resistance to change and will therefore make them a more effective engineer in today's constantly changing world. In a recent study on the environmental awareness of engineering students and their resistance to change, Weber found that students who lived in or near urban areas had less resistance to change [3]. Given we are a rural state, it stands to reason that engineering students would tend to be more resistant to change than those from other, less rural states.

The objective of this paper was to examine perceived barriers to studying abroad, determine if they are myths and share our experience on enabling students to overcome real barriers that affect their decision to study abroad. Although the data analyzed in the paper are specific to our institution, the insights provided are transferable and can be used by academic advisors and study abroad coordinators at other universities to encourage students to participate in study abroad programs.

Study Participants

This study consisted of 32 students that had participated in a semester-long study abroad program between 2011 and 2015. The participants were 25% female (n=8) and 75% male (n=24) and represented each of the eight departments in the college of engineering, as shown in Figure 1. Nine students are still in school while the remaining students successfully graduated. Of the study participants, 7 had transferred from a community college and 25 had entered the university as first-time freshmen. Six of the students had participated in co-op or internships.

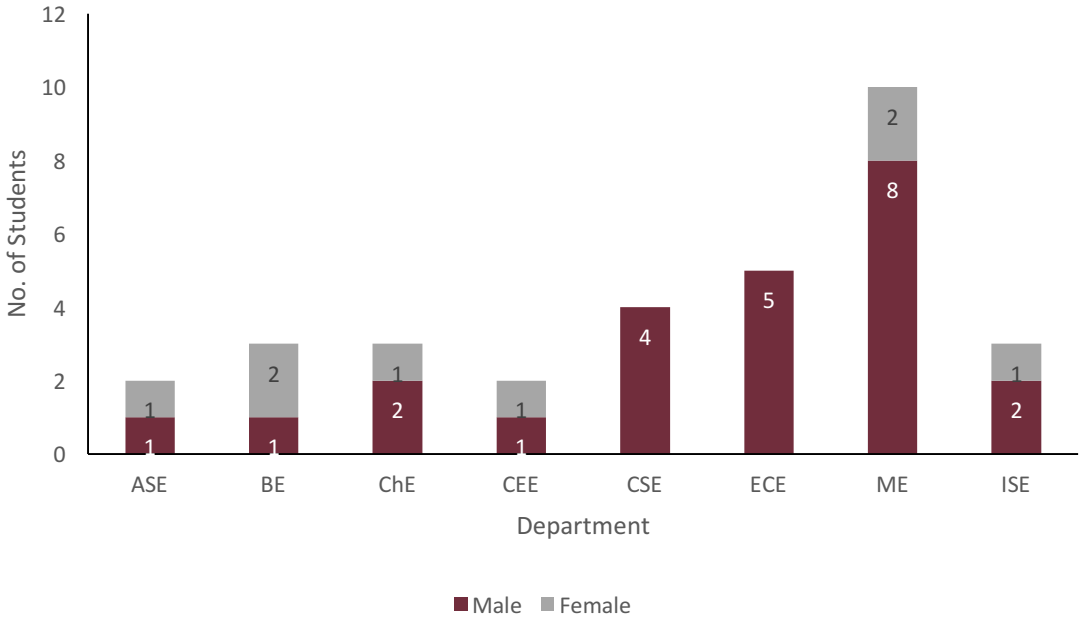

Figure 1: Number of male and female students that participated in a semester-long study abroad program between 2010 and 2015. ASE = Aerospace Engineering; BE = Biological Engineering; ChE = Chemical Engineering; CEE = Civil and Environmental Engineering; CSE = Computer Science and Engineering; ECE = Electrical and Computer Engineering; ME = Mechanical Engineering; ISE = Industrial and Systems Engineering

Results

Claim: The cost of study abroad is too expensive and students are not eligible for financial aid or university scholarships.

Airfare and increased living expenses are not the only costs that students consider when they are thinking of taking courses at a foreign university. Students also worry about losing scholarships

and financial aid that are conditional on their full-time enrollment at their home university. However, students that study abroad through programs approved by the university are considered to be enrolled full-time while taking courses abroad and keep their scholarships and financial aid. In addition, through bilateral tuition exchange agreements with foreign universities, students are able to take courses at international universities while paying regular tuition fees (no tuition is paid to a foreign university). Therefore, student concerns about losing scholarships and financial aid, and paying higher tuition fees can be considered to be myths.

In addition, a number of study abroad scholarships are available to students to offset the costs associated with studying abroad even further. At our institution, scholarships are offered through the Office of Study Abroad, the College of Engineering and the Honors College. During the past two years, the university has started including study abroad scholarships in the scholarship package offered to first-time freshmen students. The amount of the scholarship awarded is variable, depending on the funding source, academic performance, where the student will be going on their exchange and/or the student's financial needs. They vary between $500 to $6,000 and usually cover airfare and the expected increase in living expenses. Students can also apply for scholarships from external sources. The Institute for International Education (IIE) maintains a database on their website with listings of available scholarships for study abroad (http://www.studyabroadfunding.org/Index). Students can search the database by country, region and subject area.

Verdict: False

Claim: Students' GPA will be negatively affected if they participate in a semester student exchange program.

Students are often concerned that the grades they receive from a foreign institution will be lower than the grades they receive at their home institution and this will lower their overall GPA. It is natural for students to be apprehensive about things that are completely unknown. Therefore, not knowing the teaching styles and academic expectations at a foreign university could stop students from going abroad. The implications of having a lower GPA are far reaching and could result in the student losing scholarships as well as reducing their chances of getting their "dream job."

Teaching styles will differ between various international universities. For example, in the UK, universities focus on teaching subjects in depth, while the US higher education system is famous for emphasizing breadth of engineering education [4]. As a result, US students are required to perform during the duration of a semester. They might be required to turn-in homework, assigned writing or research projects, or give an oral presentation. All those assignments are usually assigned a portion of a final grade for a course. There may also be a small proportion of the final grade assigned to attendance or class participation. Additionally, it is common practice at US universities to test student learning process with quizzes during class time, or even give a few tests during the semester. All those assignments grades and a final exam grade are counted toward the grade a student will get for the course. In the UK, teaching engineering is more lecture-based, and assignments given during the semester are considered to be an exception not the rule. The final grade might be based entirely on your final exam grade [5]. In addition, grading systems in these two countries are different. 40% is considered to be a passing grade in the UK,

and 70% is considered to be an excellent grade[3]. In the US, 70% would give you a passing grade, but you need to get >90% to receive an "A."

To help students overcome differences in educational and grading systems, our university transfers grades received from foreign universities during study abroad experience as pass/fail. If an exchange student receives a passing grade at the host university, the grade is transferred as a "S" (satisfactory) grade. If the student fails the course at the host university, he/she receives a "U" (unsatisfactory) grade. Both "S" and "U" grades are shown on student's transcript, but are not included when calculating GPA.

Verdict: False

We also assessed the students' GPA for courses taken before study abroad and courses taken at the home university after returning from a study abroad. It should be noted that courses taken after completing the study abroad are typically upper level courses and will therefore be more difficult than lower level courses taken before the study abroad. We found that 46% of students had a higher GPA on courses taken after completing their study abroad vs. 54% who had a lower GPA. The average GPA for students before study abroad was 3.32 ± 0.59 and the average GPA for students after study abroad was 3.30 ± 0.59. We performed a paired T-test and determined that there was no statistically significant difference in GPA before and after study abroad.

Claim: It will be difficult to learn lecture material if studying in a country where English is not the native language.

In the century of globalization, universities around the world are developing programs taught in English, specifically to attract international and exchange students. Before initiating any student exchange agreements with international universities, our International Program Coordinator carefully examines the list of courses taught in English to ensure there are sufficient offerings for our students. Therefore, students can (and are encouraged to) take all courses in English when studying abroad. Despite this, a significant percentage of students still prefer to go to countries whose official language is English.

Out of 32 students that participated in semester-long programs between 2010 and 2015, nine students (28%) went to universities in English-speaking countries. Ironically, students were more successful in their studies at universities in non-English speaking countries. Students passed 89% of courses taken in English-speaking countries vs. 94% in non-English speaking countries (see Figure 2).

Verdict: False

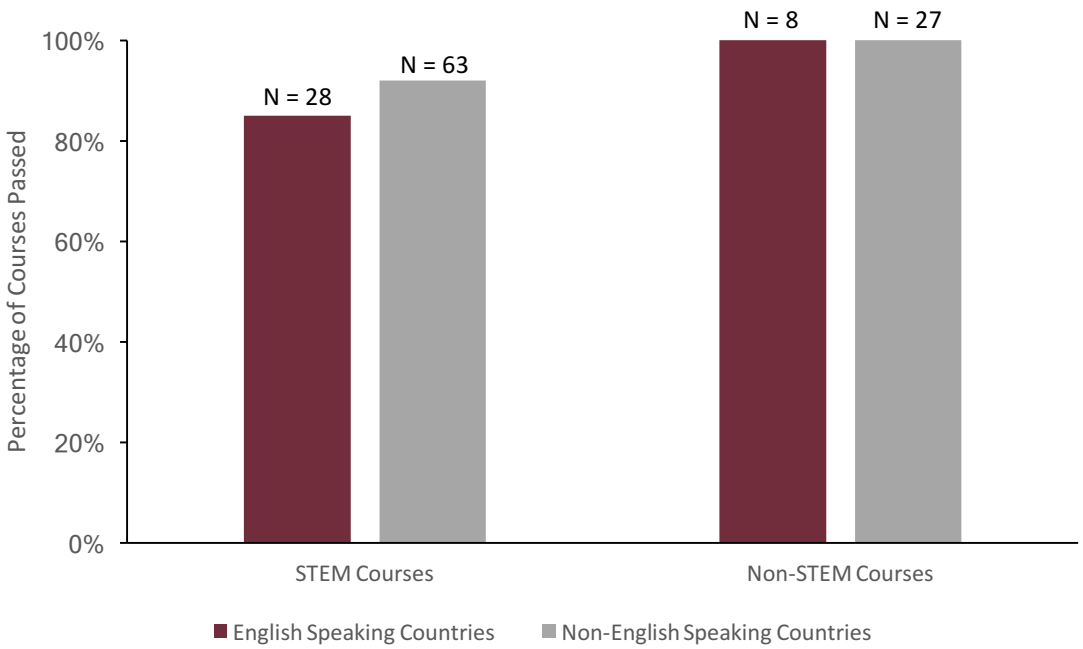

Figure 2: Percentage of courses passed by students during their study abroad. N shows the total number of courses attempted by all students. Of the 32 students included in the study, nine attended a university in a native English speaking country while 23 attended a university in a non-native English speaking country.

Claim: The time taken to graduate will be increased if one semester is spent studying at an international university.

Students often express concern about being able to complete their degree on schedule if they spend a semester studying at an international university. Although student understand that they will be taking courses from an approved engineering program of study, they are uncertain as to whether those courses can be substituted for courses in the curriculum from their home department. Additional concerns stem from the number of credit hours students take while studying abroad; an engineering degree requires students to complete 128-credit hours, which averages out to 16-credit hours per semester. However, students typically only take the equivalent of 12-credit hours during their study abroad.

Of the 32 students included in the study, nine students were still in school. Of the remaining students that had entered the university as first-time freshmen in engineering and had graduated with an engineering degree, the average number of semesters required to graduate was 9.14 ± 1.35 (n=14). It should be noted that five of those students (36%) also completed a minor. For students that transferred from a community college, the average number of semester taken to graduate with an engineering degree was 11 ± 2 (n=7), where 4.57 ± 1.99 semesters were spent an another institution and 6.43 ± 1.39 were spent at the home institution. It was not possible to make a direct comparison with students that did not participate in a semester-long study abroad program; however, institutional data show that 16.9% of students that enter an engineering program as freshmen graduate within 4 years, an additional 23.7% graduate within 5 years (40.6% cumulative) and a further 5.7% graduate within 6 years (46.3% cumulative).

Verdict: Partially false; there are a number of variables to consider in addition to study abroad that include factors such as whether the student transferred from a community college or if they pursued an additional minor. The number of semesters taken to graduate does not appear to be too dissimilar from college graduation rates.

Summary

In this paper we investigated a number of perceptions that students have that prevent them from participating in study abroad programs. Through careful analysis of the data, we were able to determine that the negative perceptions that students have are mostly false. Therefore, it is important that we communicate facts about study abroad to our students so they can be empowered to engage in global education and be better prepared as practicing engineers after graduation.

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