

Work in Progress - International Conference Participation for Undergraduate Scholars through the University of Texas System Louis Stokes Alliance for Minority Participation

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Abstract - Since 1992 the National Science Foundation (NSF) has funded a state-wide Alliance with the University of Texas (UT) System under the auspices of the Louis Stokes Alliance for Minority Participation (LSAMP). Currently in its fourth phase, the UT LSAMP maintains its vision of producing high-quality STEM researchers from underrepresented backgrounds through the proven method of intensive undergraduate research and an international travel component. This component was implemented based on our belief that all STEM graduates should be competitive in a global economy. To date, nineteen students have participated in these international activities. The expectation is that each student involved will understand that effective STEM research is truly an international collaboration. All STEM students should think “globally” whether preparing to enter academia or industry. This paper discusses our experiences with international travel coordination, strategies for conference and student selection, faculty observations, and student perceptions before and after the international experience.

Index Terms - global, international, research, underrepresented students

PROJECT DESCRIPTION

Based on its goal of preparing underrepresented minority students for international STEM collaboration, the UT LSAMP has organized a series of international activities that primarily involve international conference participation for undergraduate students who participate in the annual UT LSAMP Summer Research Academy (SRA). The Alliance’s leadership team meets annually to select the international conference that the group will attend. One international activity is planned per year and a total of two have been completed. Three more will be held by the completion of the UT LSAMP’s fourth phase in 2012. Each campus in the Alliance selects one student to participate in the international experience and each student is accompanied by their UT LSAMP campus director, and occasionally, by their research mentor. To date, eighteen students have

participated in the international group experience. In total, eight females (4 Hispanic and 4 White) as well as ten males (2 Black, 7 Hispanic, and 1 White) have attended. In addition, one female student (White) attended a week-long visit to *La Universidad de Concepcion* in Concepcion, Chile in 2007.

LOGISTICS

After implementing a student selection process, eighteen students have participated in our international experiences. The student selection process consists of an essay competition in which each interested student composes a detailed essay discussing several topics: 1) the importance that undergraduate research has had in their academic career, 2) their motivation to attend an international conference, and 3) how this international experience will positively affect their future plans as STEM researchers. Each student submits their essay to their SRA campus director and the director selects the best essay during a blind review that takes place in August of each year. The student who is selected is the official representative for their campus and is contacted immediately regarding their selection and preparation for international travel.

The selection of the international conference is made by the Alliance’s leadership team and conferences that are considered must meet the following criteria: 1) take place during the fall semester, 2) have a comprehensive theme that includes disciplines in science and engineering, 3) have a focus on international collaboration and benefit to society, and 4) be an English-speaking conference. To pilot this experience, one student attended a week-long visit to *La Universidad de Concepcion* in Concepcion, Chile in 2007. The first, official group experience took place in October of 2008 when eight students attended the Futuropolis 2058 Conference in Singapore. The second event took place in November of 2009 when ten students attended the World Science Forum in Budapest, Hungary.

RESULTS

After two group excursions, several observations have been made by the leadership team. For 77% of student

participants, this was their first international trip. In fact, it was the first out-of-state trip for two of our students. Consequently, 61% of students did not have a passport and needed to acquire one before the official departure date. Since students are selected to participate in August of each year, they must apply for their U.S. passport immediately in order to receive it by the selected travel date. The second observation was that most students who participated in the SRA did not want to attend the international conference for various reasons. Each campus hosted between 7-12 students each summer but no more than 4-5 competitive essays were received for international travel consideration. Anecdotally, the most common reason was the consequence of missing one week's worth of classes. The second was a fear of being in a foreign country and not knowing the language. The third was lack of funds to support travel costs beyond conference registration, hotel, airfare, and per diem, all of which were covered by the UT LSAMP.

Thirty-nine percent of students who have attended expressed a new-found interest in studying abroad either through an on-campus exchange program or for their graduate studies. These students' particular essays literally state that working in a foreign country had never been an option to them until they participated in their LSAMP international experience. Three student essays also state that these students were not aware of how many resources were available to them to perform research at their home campus. Although they admit that there were many similarities in the research work that was being done both locally and abroad, they noticed that many of the labs they visited on their international trip were ill-equipped to handle the intensity of the research. One interesting point that was noted from all the reflective essays was the amount of research that each student put into the trip before their departure. Each student expressed that many hours were spent researching the conference they would be attending, the workshops it would offer, the country they would be visiting, the history of the city they would be visiting, and the language and currency that would be used. In researching all of these points, the students also indicated that they had a preconceived notion of what their international experience would entail. One hundred percent of the students admitted that they had underestimated the importance of their trip and that the experience had a profound impact on them once they returned home.

From the administrative point of view, a total of 18 campus directors and/or faculty members have participated in the UT LSAMP international experiences as guides. All guides have expressed their support and gratitude for the experience that these activities provided to them and their students. As expected, most guides used these conferences as networking opportunities for their research and campus-

based programs. Additionally, each guide has expressed how positively each experience has affected their student. This activity also allowed the guides to mentor their students in a way that could not be achieved through on-campus activities or laboratory experiences. For example, students were advised on how to socially interact in a conference setting and how to network with individuals who could provide future opportunities to them. They also learned to be culturally sensitive based on their guides' past experiences at international conferences. In terms of travel coordination, the Alliance has noted that in addition to official conference activities, 100% of the students also enjoyed touring local universities and visiting several cultural sites. Based on past experiences, the Alliance has observed that it is best if these extracurricular excursions occur before the start of the conference so that the students are focused and engaged during conference sessions.

CONCLUDING REMARKS

After three international experiences, it is clear that more conferences and group activities are needed to determine the impact these experiences are having on our students. So far, the student feedback has been very positive. The simple fact that some of them have changed their mindset to think globally about working and studying abroad encourages the Alliance to continue with our work of planning these one-week activities and we look forward to more opportunities to gather more information. In terms of organizing these excursions, it is essential to have a strong team of patient and dedicated guides in place to assist with the planning, execution, and maintenance of an international experience involving inexperienced undergraduates. The ultimate goal of our activity is to encourage our students to expand their horizons and to understand that science and engineering are universal themes, have a universal language and a worldwide impact on our society. By the end of this grant phase, we hope that our data will support our goal and demonstrate the importance of international opportunities for STEM undergraduates.

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