

International Opportunities in Engineering Technology – An Entrepreneurial Approach

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Abstract

The East Tennessee State University Department of Engineering Technology recognizes the crucial importance of international exposure and learning opportunities for our students; however, ETSU does not have an overseas campus or a permanent study abroad program center outside of the United States. Considering the fact that most of our students are from the East Tennessee and Southwest Virginia area, this need is critical in providing a comprehensive, broad-based education. Like most schools, our greatest challenge is funding. This challenge has led us to create an entrepreneurial approach to funding and delivery of international opportunities for Engineering Technology students. In short, we have established a program that has attracted private funding, created mentorships, job opportunities for students and a consistent study abroad program for ETSU students.

The entrepreneurial approach taken has three components which include funding, delivery and student recruitment. Certainly, funding is the major challenge in creating international opportunities. There are limited scholarship opportunities at ETSU and through other organizations. However, these funds are not enough for our students, and an entrepreneurial approach in seeking private funding is absolutely necessary. The first step to attain private funding is targeting the correct sources. The first consideration was to cultivate relationships with individuals and organizations that have an interest in engineering technology and have a link or tie with the university. Therefore, we started with architects, engineers and contractors that had been contracted and selected to do work at the university in the last three years. We cultivated this group and eventually asked them to sponsor a student in their field for a summer study in Rome, Italy with ETSU for the inaugural class in 2009. Overwhelmingly, these donors provided partial sponsorships for all 13 students in the first class. Other tools in the fundraising process that proved to be helpful were a rating system and matrix designed by the Center on Philanthropy at Indiana University. Various cultivation, solicitation and stewardship processes were employed as well.

The delivery of the program is entrepreneurial as well. Each student is sponsored by a president or CEO of an organization in their field, a political leader or a community leader in the area. The students and these leaders are provided numerous opportunities to interact. The result has been a form of mentorship and various positive results. Several students have attained internships and employment through this process. Others have established

relationships that have benefitted their research and career goals.

Another aspect of the program is the actual delivery of the academic and living component. A third-party vendor was used to provide housing, classroom space, computer labs, and other logistical support. However, the instruction and guides were provided by ETSU professors, and this amounted to a significant savings for the students. Through partnerships with other institutions, international workshops, interactions with foreign professors and other global opportunities have been provided.

The third component of the program is the student recruitment process. Students are informed through various mediums about the program and the exclusive benefits of the funding, mentorships and other perks. This has created a significant demand and many students have applied. After two years and 30 participants, students are recruiting students, professors and campus administrators are talking about the success of the program and numerous papers and media outlets have covered the project. This has and will result in our ability to attract the right kind of students who will represent the university in a fine manner and in turn, motivate the donors to continue providing private funding.

The *ETSU at Rome Program* has been underway for approximately two years. This entrepreneurial approach has provided additional private funds for our students, mentorships with community leaders, international opportunities and additional revenue to the university through added tuition dollars.

Vision

The *ETSU at Rome Program* has been a life-changing experience for many students. The initial idea for the program came about in late 2007. The vision for the program was to provide an international experience for Engineering Technology students. This program is currently the only study abroad program in the Technology Department.

The vision for the program has evolved since its inception. Our vision is to create a permanent presence abroad, to change the local culture's views on study abroad, and to create more courses that will be added into technology curriculums as opposed to being only electives.

Creating the first technology program abroad at ETSU, financing this operation, and dealing with the local mentality regarding study abroad programs are all major hurdles that have presented themselves throughout the course of the program. Most of ETSU's students are from the East Tennessee and Southwest Virginia regions. We have found that many of our local students have a mentality that study abroad is out of their reach. Most students have never traveled abroad, and some have never even flown. To these students, traveling to another continent seems too big, too incomprehensible, for them to accomplish.

Overcoming these hurdles requires an entrepreneurial approach. This paper describes how we face these obstacles and have created a successful program in Rome, Italy. We will

address the following:

- ◆ Funding
- ◆ Curriculum
- ◆ Mentorship Program
- ◆ Growth/ Future Plans

We are using this entrepreneurial approach to funding as a way to change the student culture. Raising funds to defray the cost, we believe, has helped change students' outlooks about the expense of traveling abroad.

Funding

Student funding to study abroad is the greatest obstacle for Engineering Technology students and most students at ETSU. The approximate costs for a student to study for three weeks in Rome for a three-hour course are:

Table 1: Approximate Costs per Student

\$2,475	Program costs (housing, side trips, etc.)
\$1,000	Air fare
\$ 795	Tuition
\$ 500	Food
\$ 300	Books, passport, entry fees, other
\$5,070	TOTAL

For the students at ETSU, this program cost presents a challenge for most. There are some scholarships at ETSU which assist in these expenses. Every student at ETSU pays a \$10 fee per semester for foreign travel. This money is made available in the form of scholarships to students who desire to travel abroad. For the *ETSU at Rome Program*, students can apply for up to \$1,500 (\$500 per week) if they have a 2.75 grade point average, possess financial need, and the course will directly meet their degree requirements. Most students have been getting the full amount, and this brings the cost down to \$3,570, which is still prohibitive for most.

Considering the financial challenges, an entrepreneurial approach to attaining private funding was necessary. We started by researching potential funding sources, using an approach designed by the University of Indiana School of Philanthropy. The approach scores and ranks potential giving prospects in three categories: (1) linkage, (2) ability, and (3) interest. Linkage is the relationship one has with ETSU. For example, are they an ETSU Foundation member, a staff member, or a member of the alumni? Ability refers to one's resources. Do they have significant personal wealth or influence over corporate giving? Finally, interest simply refers to one's interest. Are they an engineer, architect, contractor or just an individual who has traveled abroad and knows the importance of such an experience? All prospects were rated on a scale of 1 (being the lowest) to 3 (being the highest) in all three categories. A total score is given for each prospect and the scores of 9 are focused on first, then 8's and so forth. This allows fundraising members to prioritize and identify the best prospects.

Table 2: Potential Donor Evaluation Chart

Prospect	Linkage	Ability	Interest	Score
Loyal Donor & General Contractor	3	2	3	8
Tennessee Bank of Money	2	3	1	6
Federal Reserve	0	3	0	3

During the planning stages in 2008, the most beneficial and entrepreneurial idea in identifying prospects was to target architects, engineers and contractors who had been contracted for work on campus in the last five years. All of these individuals and organizations had the maximum ratings in linkage, ability, and interest. Also, we already had relationships with them, and some cultivation had already taken place. Essentially, we were asking organizations that had received contracts from ETSU to consider providing a \$1,000 sponsorship for a student in their field to study abroad. This approach was highly successful, and all 13 students for the 2009 summer course received a sponsorship, and most received the ETSU International Scholarship. In all, \$27,560 in sponsorships and scholarships were provided for the 2009 class.

Fundraising for the 2010 program implemented new strategies. With further deterioration in the economy and particular challenges in the construction industry, many of our 2009 sponsors were not in a position to provide additional funds. Therefore, we targeted individuals who had strong ties to the university, an interest in study abroad, and a previous history of support to the College of Business and Technology. News coverage of the 2009 program, word-of-mouth about the program, and strong university leadership helped attract new donors and provided good stewardship to the donors in place. For the 2010 class, 16 donors provided scholarships, and numerous ETSU scholarships were granted. Funding provided to the students for 2010 totaled approximately \$38,000.

Fundraising for the 2011 program is in the initial stages, and many of the same funding strategies for the previous years will continue. However, an effort to create larger gifts and an endowment will be added to the efforts. Currently, a \$24,000 endowment has been initiated to help fund the program. Also, a solicitation has been made to one of our major donors, and a proposal for a \$25,000 - \$50,000 endowment is under consideration. It is our goal to create major gifts and endowments to provide financial stability for future growth and efforts.

Other key factors in attaining funding for the *ETSU at Rome Program* have been partnerships and participation among university leaders. The President of ETSU, the Dean of the ETSU College of Business and Technology, and the instructors for the courses have personally sponsored students and made direct requests and appeals for funding. Additionally, other university staff members, including the provost, have taken a direct interest in the program and offered support to help all eligible students attain any available public funding.

Finally, there has been a concentrated effort to initiate and maintain a stewardship program. All students contact their sponsor with thank you cards and letters before departure. While in Rome, Italy, donors receive a postcard from their student and a short video, via email, thanking them for such an amazing experience. After returning to campus, a reception is held in the President's Conference Room with the donors, and a presentation is given by the students to share their experience. Each student personally thanks their sponsor and gives the donor a personalized gift. For 2010, each student picked out a handmade Italian wine stop. Additionally, donors are recognized in local newspapers, campus publications, and other marketing materials. Another stewardship opportunity is in the planning stages for 2011 in the form of a donor trip. All sponsors, donors and a few new prospects are being offered the opportunity to visit the ETSU at Rome Study Center and personally meet the student they are sponsoring. Other special experiences and excursions have been designed for them during their visit. Each donor who enrolls in the program will be asked to make a minimum \$1,000 donation to sponsor one student as part of their enrollment fee.

The funding efforts to date have provided over \$100,000 to support the *ETSU at Rome Program*. Cultivation, solicitation, partnerships, stewardship and strong support by university leaders have been essential to the success to date. Many, if not most, of the students who have participated in the program have never traveled abroad or even flown on an airplane. Their stories have been told, and they have touched the hearts of our donors. One girl related that she planned to withdraw from the program because of a lack of funding. She was working two jobs but still lacked the resources necessary for the course. She was able to thank her donor during the President's Reception, and she told him that because of his sponsorship and her family selling four cows, she was able to participate in the program. Other personal circumstances and her sincerity had an emotional impact on many. The story of this student and many other touching stories are shared with the donors as much as possible. This has resulted in the donors feeling good about their investment and feeling special to their student and ETSU. It is our hope that continual personal involvement by the donors will result in new, creative opportunities for students.

Marketing/Recruitment

The marketing and recruitment process is an aspect that requires much time and effort because without students, this program cannot exist. We believe that students need to feel comfortable with their professors, be well informed, and clearly communicate expectations for their experience to be successful. Much time and consideration is spent to make this take place for the students.

We have established numerous ways to spread the word regarding our *ETSU at Rome Program*. Posters have been created and placed on bulletin boards across campus in academic buildings, dormitories, and student centers. Going class-to-class presenting the program has proved to be a beneficial way to increase student enrollment. A Facebook group has also been created as a hub for discussion and information. The site is used for students to view pictures from Rome, new details regarding the trip and pre-departure meetings, and discussion aspects with current and former classmates. With each new class traveling to

Rome, the word will spread around campus. Numerous students have enrolled who were referred by a friend who attended a previous course in Rome.

Due to the efforts of one instructor and two students, we recently launched the website for the *ETSU at Rome Program*, www.etsurome.com. This website will incorporate photo galleries, program details, donor recognition, various forms, and previous work (i.e., sketches, projects, writings, etc.). It will also serve as a focal point of information for anyone interested in the program.

We believe that our best recruitment technique is the personal attention focused on each student throughout the entire process. Creating a comfortable environment for students is vital to the success of the program. The more comfortable each student is with the entire concept of studying abroad, before and during the trip, the better everyone's experience abroad will be. We believe that the key to a successful program is making it all about the students. Our "all about the student" approach has helped students feel more comfortable with pre-departure aspects, as well as what to expect once they arrive abroad. We personally meet with every potential student interested in studying in Rome for roughly 30 minutes. Listening to every student's concerns, and addressing these needs, provides a better overall experience for everyone involved.

Virtually every student is unfamiliar with all the details involved with preparing for a study abroad experience. We help the students complete everything involved to receive their visas and inform them regarding what to expect once they arrive.

We usually hold three or four group meetings prior to our departure. Our first meeting is a get-together, usually at a restaurant during the middle of the fall semester. This meeting is mainly for students get to know one another. We discuss a few things at this meeting regarding scholarships, visas, and passports. These are things that should be completed prior to the spring semester.

During our other pre-departure meetings, we discuss housing arrangements, flight information, emergency contact information, money exchange, and all other important details that should be examined prior to departure. Preparation is vital to the success of recruitment and the overall experience students have while studying abroad. It is important for students to be comfortable with one another. We will be a "family" while we are together abroad.

Curriculum

We want our students to gain knowledge, experience the culture, and grow as individuals during our stay abroad. Since our current course offerings last only three weeks during our Pre-Summer Session, we have designed the curriculum so that students will be able to gain as much as possible from their study abroad experience. A typical school day in Rome consists of a short lecture prior to a walking tour to complement the discussions. Generally, a one-hour lecture takes place in the classroom in the morning to discuss some details of the sites will we visit afterward. The walking tour is usually 3-4 hours visiting sites throughout Rome.

We have also incorporated side trips into the course. These excursions are not only learning experiences for students but a get-away from the bustling streets of a large city. Each year we have visited Pompeii and Tivoli, both of which can be easily completed as a day trip. We have partnered with a professor of archeology to accompany our group around the historic city of Pompeii. While in Tivoli, we include a visit to Villa d'Este to study its Renaissance architecture, gardens, fountains, and to spend a day outside the bustling city of Rome.

For the required coursework, students are divided into small groups and are assigned a time period. These groups, typically 3-4 students, are assigned Antiquity, Medieval, Renaissance, or Baroque. Each group is required to complete an introduction to the time period, a profile of a key figure, and six case studies. For the case studies, students depict information from lectures, observations and field studies of a building or site from their assigned time period. Along with this project, students are also required to complete a sketch/photo journal.

All students' work is compiled into a large project detailing time periods, key figures, and sites throughout historic Rome, and an on-campus presentation is made documenting the effort upon returning to the United States.

Mentorship

Another entrepreneurial aspect of the program is the relationship that can be created with the student and his or her sponsor. Sponsors are asked to mentor a student as a part of the *ETSU at Rome Program* and numerous opportunities for interaction are created. Students are encouraged to continue their relationship with their sponsor throughout their professional career as well.

After the students' experience in Rome, a non-formal gathering is scheduled for the students to meet their sponsors. This meeting provides an opportunity for the students to express their appreciation and to share their experiences. The first year's gathering was so successful that many sponsors expressed interest that day in contributing funds for the following year. Also, several students have attained employment and other benefits as a result of this arrangement.

When most donors contribute to a university, they are unable to witness the direct impact that they are making on students' lives. Typically when a donation is made to a university, a check is written, a receipt is provided, and a name is printed in a donation listing. However, the *ETSU at Rome Program* is different. Donors are considered as sponsors, and they are much more involved in the process because of the one-on-one communication with their student recipient. Students are encouraged to write a thank you card prior to the trip, send a postcard while in Vatican City, and present a gift at the post-trip gathering. We also email a short video clip to the sponsor of their student expressing gratitude while standing in front of a famous sculpture or building. Attending the post-trip gathering also allows sponsors the opportunity to witness the excitement and joy on the faces of their students. To many students, their Rome experience is life-changing, and the opportunity to express this to their sponsor is highly anticipated. This type of interaction between the donors and students has reinforced the strength of all contributors' investments.

Growth/Future Plans

Our plan for the *ETSU at Rome Program* is for students to be able to complete an entire semester's worth of classes during the summer. We hope that in the near future will be offering courses directly stated in students' curriculums. We hope to offer certain general education courses such as speech and language. Offering general education courses will help expand our range of students to incorporate more disciplines.

A technology endowment was started by an individual for use specifically in the Technology Department. This endowment was created with an initial gift of \$10,000, and through contributors, has grown to \$24,000 since the start of the *ETSU at Rome Program*. Without funding, this program would not be where it is today. Our plans to expand the program cannot happen without additional funding and scholarships. We are seeking involvement from specific individuals throughout the community and university for financial support.

The enrollment has reached 25 students for the 2011 session, and a waiting list for this session has also been created. Currently, progress is being made to allow students the opportunity to earn a certificate while studying in Rome.

For the 2012 summer session, another professor in the College of Business and Technology is planning to offer a course to 12 MBA students. Additionally, the director of the Roan Scholars Program, a leadership program at ETSU, is working to establish a permanent course offering for four students every year in Rome.

Conclusion

It is a challenge to create permanent study abroad courses at a regional university. The obstacle of cost and the common feeling among students that living and studying abroad is more of a dream than a reality can prevent many good intentions to fail. The *ETSU at Rome Program* provides a good case study on overcoming common challenges.

In short, the key to success starts with funding, and that is the most unique part of this program. Students receive significant scholarships from student fee money and sponsorships from donors in their field. Targeting companies and individuals with linkage to the department, interest in the field of study and the ability to access resources is paramount in attaining funding. The donors also feel good about this program. They are afforded the opportunity to meet their student and learn first-hand how they improved their learning experience. This is unique, and one should not underestimate the value of involving donors and clearly demonstrating how they have made a positive difference. Finally, long-lasting partnerships between the students, community leaders and the university are strengthened.

Certainly, there are numerous organizations that regional universities can partner with to create opportunities abroad for their students. However, much more can be gained from having a permanent study center abroad. Students, professors, community leaders and others will attain far more success when each is personally invested in a program that is their own. Many of our students who have completed a course with ETSU in Rome have been helped

financially to live abroad, be exposed to new learning opportunities, establish many new relationships, work with mentors, attain employment and many other unique benefits. The challenges to creating a permanent study abroad program are many, but the rewards are great. Be assured that a well thought out plan and a passion from department and university leaders will allow most any institution to achieve success.

Biography

JEREMY B. ROSS is an Assistant Professor in the Engineering Technology Program and an Associate Vice President at East Tennessee State University. He holds a Bachelor of Architecture degree from the University of Tennessee and a Master of Science in Engineering Technology degree from ETSU. In addition to serving as a principal in an architectural firm, he has studied and taught various courses in Rome numerous times.

DR. KEITH V. JOHNSON is Chairman and a full professor in the Department of Engineering Technology, Surveying and Digital Media at ETSU. He holds a Bachelor and Masters degree in Technology from North Carolina A&T State University and a Ph.D. in Technology from The Ohio State University. He has taught graduate and undergraduate courses in Rome, Italy for the ETSU College of Business and Technology.

KEVIN W. VARNEY is a graduate student in the Engineering Technology Program at East Tennessee State University. He holds a Bachelor of Science degree in Construction Engineering from ETSU. Kevin has spent two summers studying in Rome, Italy and currently serves as an assistant instructor for the *ETSU at Rome Program*. Additionally, he has been involved with numerous study abroad events and international workshops.