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The Girl Scout Climbing Wall Multidisciplinary Service-Learning Project

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9.3 THE GIRL SCOUT CLIMBING WALL MULTIDISCIPLINARY SERVICE-LEARNING PROJECT

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Course Descriptions

The Girl Scout Wall (GS Wall) project was implemented in two classes at the University of Dayton (UD): a Mechanical and Aerospace Engineering (MAE) course, and a Health and Sports Science (HSS) course, and Sport Facility Management. The MAE course, Introduction to Materials, is a three-semester hour, third year required where students learn about the basic structure and properties of materials as well as the principles of material selection. The Sport Facility Management course is a three-semester hour, required HSS course where students are introduced to the processes of planning, constructing, equipping, maintaining, and managing sport facilities.

Project Description

The service-learning coordinator at UD and representatives from the Girl Scouts of Buckeye Trails Council (GSBTC) identified the need for the repair or replacement of a climbing wall at Camp Whip-Poor-Will that had been shut down for the past several years. This climbing wall was a major component of a challenge course which was designed to enhance the participants' self-esteem and confidence, encourage team building and cooperation, and improve physical fitness and skill.

To provide the students with a real world experience, the project was created with GSBTC as the client, the HSS class as the contractor, and the MAE class as the subcontractor. MAE student teams comprised a company owner (CEO), principal investigator (PI), and engineers. HSS teams consisted of a facility owner, project captain, and building committee members. The project began with a field trip to Camp Whip-Poor-Will. After the visit, the HSS student teams prepared Requests For Proposals (RFPs). The MAE student teams responded to an RFP selected by the HSS instructor in the form of team design proposal presentations. Once they had a final wall design, the HSS students designed sponsorship proposals to present to potential sponsors.

The GS Wall project culminated with the HSS and MAE students going to Camp Whip-Poor-Will to tear down the existing wall. Students were treated to a cookout where the service-learning coordinator facilitated a reflection session. Additional opportunities for structured reflection were facilitated by the individual instructors during class time. Construction of the wall took place the following semester by MAE student volunteers and is shown in Figures 9.4 and 9.5.

Community Partner

The GSBTC serves approximately 17,500 girls between the ages of five through seventeen and 4,500 adults in eight counties in southwest Ohio, and includes



Figure 9.4 Student Assembling the Climbing Wall

urban, suburban, and rural communities. GSBTC owns operates five camps in five counties totaling more than 700 acres. Camp Whip-Poor-Will is one of the largest facilities

Student Profile

UD is a small, Catholic, residential university in Dayton, Ohio. Approximately 60 students participated in the GS Wall project. About half of these students were third year MAE students and the other half were HSS students. A majority of the MAE and HSS students had some prior work experience through co-op, internships, or part-time jobs.

Challenges and Successes

The MAE students found some project aspects favorable, such as getting hands-on experience, having the opportunity to apply their engineering knowledge to a



Figure 9.5 Finishing Climbing Wall

real situation, and having the freedom to be creative in generating a practical and safe design. The students enjoyed the responsibility of managing the project and that this project was done for a good cause. They enjoyed working on a team, getting to know their teammates, developing leadership skills, and developing teamwork skills. A few students indicated that what they enjoyed most was tearing down the wall. Several of the students indicated they liked having the opportunity to work with people from other majors. The MAE students did not like the lack of organization and communication among the GSBTC, HSS, MAE classes, and the service-learning coordinator. Several students felt the project was too time consuming, and they did not like that most of their research and design had to be completed within the semester's first half. Some students felt that the design constraints did not allow enough creativity. Many students expressed disappointment in postponing wall construction until the spring semester.

The HSS students felt project participation helped them understand the various phases of facility planning and the complexity of working with facility designers and engineers, but they felt intimidated by the MAE students' technical knowledge and became frustrated by their inability to communicate safety and programming concerns regarding the climbing wall to the MAE students. The HSS students felt they gained valuable experience that will help them in their careers and be included on their résumés.

Both instructors felt that the students' frustration provided them with a greater understanding of the pitfalls when working as a professional. Many of the complications, deadlines, communication problems, and delays in this project occur in the real world.

Advice for Students

For students undertaking a collaborative service-learning project with students from another major, do not procrastinate. Student teams should meet as soon as possible to develop a list of objectives and action items and then delegate specific duties and due dates to team members. Ask many questions: All service-learning projects are different and involve a real client. Therefore, the course instructor cannot plan for every project aspect or problem. However, the course instructor should be willing to provide guidance, find answers, and help solve project problems. Communicate with teammates, instructor, students from the other course, and the client. Be responsive to questions and concerns of teammates and students from the other course. Many times the work of one student cannot begin without input from another student.