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ABSTRACT

The scientist-practitioner model indicates graduate education must focus on application in addition to theory. Although a number of approaches may be utilized to gain applied experience for students, this paper focuses on applied projects completed as a requirement of a graduate course. Finding host organizations for class projects presents unique challenges in addition to the challenges present in any on-site student experience. Finding projects that can be completed within a short time frame and that provide appropriate experiences for graduate students is critical. In this article, the author provides a checklist that will help ensure successful applied projects. The checklist includes characteristics of the host organization, project characteristics, student responsibilities and outcomes, red flags or warning of potential problems, sources for locating host organizations, and compensation. Supervisor responsibility is required throughout the applied experience. (Author)

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Abstract

The scientist-practitioner model indicates graduate education must focus on application in addition to theory. Although a number of approaches may be utilized to gain applied experience for students, I focus on applied projects completed as a requirement of a graduate course. Finding host organizations for class projects presents unique challenges in addition to the challenges present in any on-site student experience. Finding projects that can be completed within a short time frame and that provide appropriate experiences for graduate students is critical. In this article, I provide a checklist that will help ensure successful applied projects. The checklist includes characteristics of the host organization, project characteristics, student responsibilities and outcomes, red flags or warnings of potential problems, sources for locating host organizations, and compensation. Supervisory responsibility is required throughout the applied experience.

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The scientist-practitioner model indicates graduate education must focus on application in addition to theory. Although a number of approaches may be utilized to gain applied experience for students, I focus on applied projects completed as a requirement of a graduate course. Finding host organizations for class projects presents unique challenges in addition to the challenges present in any on-site student experience. Finding projects that can be completed within a short time frame and that provide appropriate experiences for graduate students is critical. In this article, I provide a checklist that will help ensure successful applied projects. The checklist includes characteristics of the host organization, project characteristics, student responsibilities and outcomes, red flags or warnings of potential problems, sources for locating host organizations, and compensation. Supervisory responsibility is required throughout the applied experience.

The scientist-practitioner model supported by the Society for Industrial/Organizational Psychology (SIOP) in their Guidelines for Education and Training at the Doctoral Level in Industrial/Organizational Psychology (SIOP, 1999) and their Guidelines for Education and Training at the Master's Level in Industrial/Organizational Psychology (SIOP, 1995) indicates graduate education must focus on applications associated with content areas in addition to theory. There are a number of approaches that may be utilized to gain applied experience. These include case study analysis, practicuum experience, internship experience, assisting on faculty consultation, and applied projects within a course. This article focuses on the latter, that is, applied projects that are completed as a required component of a graduate course. Finding appropriate host organizations for this requirement presents some unique challenges in addition to the challenges that are present in any on-site student experience. Finding projects that can be completed within a short time frame and that provide appropriate experiences for graduate students is critical.

In this article I share some of the experiences we have developed for our graduate program at Western Kentucky University. Projects have ranged from job analyses, training needs assessment, and behavioral safety programs to test validation and organizational assessment. In addition to completing the project, students typically are required to prepare a written proposal prior to the project and a technical report and oral presentation following the completion of the project. The following discussion addresses locating host sites for projects, faculty and on-site supervision of projects, and incorporating project performance into the course grading system. Furthermore, the discussion includes "red flags" that serve as warning signs to steer clear of certain projects or sites. Finally, the discussion addresses the competencies developed by graduate students through the process of completing applied projects. Applied projects have proven to be a very useful tool in providing graduate students with experiential learning opportunities and bringing to life the theories and technologies of the discipline.

A Checklist for Applied Projects

I have organized into six categories the issues we have found to be relevant to applied projects completed as a component of a graduate course in our program. These issues are summarized in Table 1. In virtually every project our students have undertaken, they have worked in project teams. In some classes there may be multiple teams of students working on different projects. Close faculty supervision is provided for each project. Faculty responsibility is not identified as a separate category of issues because faculty responsibility is required across each set of issues.

I. Host Organization Characteristics

The first category deals with characteristics of the organization that will host the students.

Understanding of I/O and/or the nature of appropriate projects. It is important that individuals in the host organization understand the nature of industrial/organizational (I/O) psychology. Recently SIOP has acknowledged that many human resource professionals are not familiar with the knowledge, skills, and abilities I/O psychologists bring to the workplace and the tasks we are capable of performing. A working knowledge of the I/O discipline is much less of a problem when we are able to locate hosts who employ I/O psychologists, including our own graduates.

Understanding of the scope of the project (reasonable for completion within one semester). It is important that our organizational host recognizes that the project is part of a semester-long course and should be one that reasonably can be completed in a satisfactory manner within the time frame of the course. This necessarily precludes some projects. However, a patient host organization may have a larger project initiated by one class of students and completed by another class of students in a subsequent semester.

Understanding of student capabilities and competencies. Students in our classes are just that, students. While they have developed some valuable capabilities in our graduate program, they typically lack experience (that is, of course, one of the reasons they are working on the project as a class requirement). The host organization must recognize what the graduate students are capable of accomplishing and what may be beyond (or in some cases, beneath) their capabilities.

Table 1. Checklist to Help Ensure Successful Experiences in Applied I/O Projects

I. Host Organization Characteristics
• Understanding of I/O Psychology
• Understanding of the scope of the project
• Understanding of student capabilities
• Understanding of student time constraints
• Previous experience with student projects
• Willingness to provide on-site support
• Willingness to provide resources
II. Project Characteristics
• Time frame
• Within student capabilities
• Required supervision
• Written proposal
• Technical report
III. Student Responsibilities and Outcomes
• Commitment to complete the project
• Self-managed work teams
• Competencies developed:
Technical writing skills
Oral presentation skills
Data management skills
Organizational skills
IV. Red Flags – Proceed with Caution
• Time frame to complete the project
• Resources provided by the organization
• Capabilities of the student
• Amount of student time required
V. Sources for Host Organizations
• Graduates of our program
• Organizations who have hosted an intern
• Organizations with history with us
• Organizations requesting "free" consulting
• Word of mouth
• Faculty interaction
VI. Pay and Compensation
• Tax-deductible donations to graduate program
• Meal at restaurant
• Internship placements
• Job offers
• Applied learning experiences

Understanding of student time constraints. The students in our program are required to be full-time students and each student has a 20-hour-a-week assistantship. Thus, this project is just one of many undertakings placing demands on the student's time. The student is not expected to put in the hours on the project that would be expected of a full-time or even a part-time employee of the organization. The faculty supervisor should ensure that the project can be completed given an appropriate amount of student effort.

Previous experience with student projects. It has proven extremely helpful to work with organizations that have previously hosted student projects. This ensures realistic expectations regarding the identified "host" issues. This, of course, is a Catch-22 in that for an organization to have experience hosting projects, they must first host a project. Our experience has been that organizations are pleased with the product they receive and typically are glad to host additional projects. We have a lot of repeat business.

Willingness to provide on-site supervision and support. The amount and type of support needed from the organization will vary dependent upon the project. As a minimum, the organization must be willing to provide the communication (e.g., introductions, announcements, memos) needed to support the project. For projects that involve different organizational units, it is helpful to have an organizational liaison. Some organizations prefer to have an on-site project supervisor. One of our graduates who has first-hand knowledge of the course requirements and student capabilities easily fills this role.

Willingness to provide resources (e.g., employee time, copying, etc.). The amount and type of resources needed from the organization will likewise vary dependent upon the project. In some instances, employee time is needed to complete interviews and/or instruments. Some hosts have provided office space and computer support for the students. The organization is expected to cover any copying or other similar needs required by the project.

II. Project Characteristics

Identifying projects that provide appropriate experiences for graduate students is a key to a successful project experience.

Time frame. Here the critical question is "Can the project be completed within the course time frame (semester)?" If the answer is "no," then the project is not suitable as a course project. There are, however, some projects that can be divided into components that may be completed within the appropriate time frame. For this approach to be successful, the organization must agree to spacing out the project components across multiple semesters.

Is the project within capabilities of students? The demands of the project must match the competencies of the students. Obviously, it is important for the students to be challenged and to learn as they complete the project. If, however, the project is beyond the skill level of the students, either the product delivered to the organization will fall short or the faculty supervisor will end up making substantial contributions to the project. Likewise, a project that is not challenging to the students will fail to provide the targeted learning experience.

How much supervision will be required by faculty? By host organization? Students like to work independently on these projects. However, it is important that the faculty supervisor actively oversees the project. This does not mean the faculty member is doing the work. It does mean that the faculty supervisor has reviewed the project proposal (see below) and any interview protocols or instruments the students develop or plan to use. Some organizations review and participate in instrument refinement, while others decline participation.

Written proposal. Prior to beginning work on any project, students are required to develop a written proposal with deadlines and benchmarks. The proposal also identifies resources required from the host organization (this includes employee time to complete instruments or interviews). The proposal becomes an informal contract between the faculty member and the

students as it relates to student obligations, as well as an informal contract between the organization and the students regarding the product the organization can expect.

Technical report. A technical report is required at the completion of the project. The report describes the rationale for the project, the methodology followed to complete the project, and the results of the project. The report serves as a tangible product for the host organization, the faculty supervisor, and the students. Appendices to the report typically contain instruments used in the project and data aggregated in various ways to suit the needs of the organization. At the organization's request, students make an oral presentation of the project to interested organizational personnel.

III. Student Responsibilities and Outcomes
The student has certain responsibilities when he or she accepts the opportunity of gaining organizational experience. In addition, certain targeted competencies are expected as student outcomes from participation in the project.

Commitment to complete the project. It is important the student understands the commitment to the organization to complete the project. This is important not only for the immediate impact of the current project for the organization, but also because of the long-term impact this has on our graduate program's relationship with the organization. We have on-going relationships with certain organizations because we reliably deliver a product as promised. Students need to learn the importance of fulfilling organizational commitments in a timely manner.

Self-managed work teams. Students divide responsibilities among team members for various tasks involved in the projects. As a faculty member, I do not want to be involved in deciding who will type up questionnaires, collate papers, interview subject matter experts, etc. The student team members make those decisions. This allows the students to capitalize on individual strengths and to maximize learning through new experiences.

I have developed a system for grading the projects that takes each team member's contribution into consideration. Each team member is given (100*N) points (where N = number of team members) to allocate among team members to proportionately reflect each member's contribution to the project. An equal contribution by each team member would indicate an allocation of 100 points to each student. The grade for each student is determined by [project grade*(total points allocated to student/N)]. This allows someone who failed to contribute their share to earn a lower grade than the project grade, as well as allowing someone who greatly contributed to earn a score higher than the project grade. If all contributed equally, then all receive the project grade.

Competencies Developed. Students learn through a variety of experiences. Targeted competencies include the following:

Technical writing skills. Students are required to write a proposal and final report. Both of these are written as a technical report, which may vary from APA style typically required in psychology course assignments. These reports also serve as a product students may add to their portfolio for applying for internships and jobs.

Oral presentation skills. Students are required to offer to make an oral presentation to the host organization. Some organizations are pleased to have the presentation; others decline the offer.

Data management skills. Students typically collect, analyze, and interpret data as part of the project. Throughout the project, students practice creating data sets, cleaning data, and working to appropriately analyze and interpret the data.

Organizational skills. Working in the "real world" teaches the students the logistics of data collection and interaction with busy managers and workers. They are introduced to office politics and the realities of implementing techniques they have learned in the classroom. They develop interpersonal and team skills via working on a project team.

IV. Red Flags – Proceed with Caution.
This category contains issues that may serve as a warning signal of potential problems for the project. Many problems can be avoided by providing both the students and the host organization with realistic expectations regarding the project and the responsibilities of each constituent. Students or the organization may have unrealistic project expectations as identified by any of the following "red flags."

Time frame to complete the project.
Organizations and students sometimes lack an appreciation of how long it takes to complete some projects. For example, it would be difficult, if not impossible, for students to go from job analysis to validation study in a single semester. In fact, in some cases a job analysis alone may take more than a semester. Yet, I have had organizations request that students complete a thorough validation study in a semester's time.

Resources to be provided by the organization.
Organizations need to make a commitment up front to provide the needed resources. If an organization is going to balk at employees spending 45 minutes of company time to complete an instrument, this lack of commitment to the project needs to be known before the project is started. Likewise, students need to have realistic expectations. One class of students was shocked to learn that clerical support was not provided to collate the copies of the questionnaire they had developed. The students actually had to collate the papers themselves!

Student capabilities. The demands of the project should match the capabilities of the student. Placing students in a situation that is beyond their capabilities will not be a good experience for them. Likewise, placing them in a situation that underutilizes their skills will fail to provide a positive experience.

Amount of work /time required from students.
The project should be one that can be completed with a reasonable amount of effort from the students given the other demands on their time from courses, research, and assistantship duties.

V. Sources for Host Organizations
Finding appropriate host organizations can be a challenge. I have found this to be an ongoing task. The following are potential sources for locating host organizations.

Graduates of our program. Graduates of our program are one of our best sources for host organizations. These former students know exactly the type of project the students can complete and the competencies the students will bring to the organization. (After all, they have been there.)

Organizations who have hosted an intern for us. Frequently organizations that have been pleased with one of our students as an intern are willing to open their doors to a class project. If the intern is a member of the class, it further facilitates the relationship as the intern has important knowledge of the organization.

Organizations who have had successful interactions with us in the past. Organizations where faculty have completed consulting projects or for whom other graduate courses have completed projects are another good source of host organizations.

Organizations requesting "free" consulting.
Graduate students completing projects for organizations can be a good response to the ubiquitous request for I/O services that is followed by "We don't really have any money for that." The organization receives a project supervised by an I/O psychologist, but at a much more economical rate for graduate student labor. However, be certain of the organization's commitment to a project they are "not willing to pay for."

Word of mouth. As our students complete projects in various organizations, we receive requests from other organizations that have "heard" of the work we did for XYZ company. It facilitates finding host organizations when they come to you.

Faculty interactions. It is something of a constant search to find placements for our graduate students, whether for internships, class projects, or employment. Thus, the search can be carried out at a party, on the golf course, vacationing, etc., etc.

VI. Pay/Compensation for Grad Student Projects

We wish! Although our students are seldom monetarily compensated, we have received other forms of compensation. We have had organizations make tax-deductible donations to the university assigned to I/O graduate student travel to the SIOP conference. We have had lunch at a nice restaurant for the project team with the site manager and faculty supervisor. We have found subsequent internship placements and job offers for graduate students. Last, and certainly not least, our graduate students have had very good learning experiences in applied organizational settings.

Examples of Applied Grad Student Projects

A brief list of some of the applied projects includes:

1. Training Needs Analysis – interview SMEs; develop task questionnaire; collect, analyze and interpret data
2. Develop Training Modules – interview SMEs; work with Training Manager to develop course content for technical training
3. Job Analysis – observations; interview SMEs; develop Job Analysis Questionnaire; collect, analyze, and interpret data
4. Criterion Development – inspect job descriptions; interview SMEs; SME workshops, develop instrument
5. Test Validation – (may already have criterion and/or predictor data) statistically determine relationship between potential predictors and measures of job performance

In sum, applied projects have proven to be effective teaching tools in our graduate program. This checklist of considerations has helped us ensure that our graduate students have very positive learning experiences working on projects in organizational settings. It may prove useful to others supervising I/O graduate students.

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