

Getting Results

MODULE 4:

Moving Beyond the Classroom

Discover how industry and community connections provide students firsthand experiences of how to apply their learning.

Getting Results

Table of Contents

MODULE 4: Moving Beyond the Classroom




Section 1: Introduction and Intended Outcome

- I. Preface
- II. Module Overview  (video)

Section 2: Learning in the Community

- I. Creating Learning Opportunities
- II. Examining Course Outcomes
- III. Developing Learning Experiences
- IV. Service Learning
- V. Making Internship Connections  (video)
- VI. Developing Expertise Through Internships  (video)
- VII. Uncovering Community Resources
- VIII. Evaluating Learning Opportunities
- IX. Contacting Potential Community Resources

Section 3: Working in the Community

- I. Pursuing Related Work Experience  (video)
- II. Evaluating Community-Based Learning
- III. Preparing for Work
- IV. Using Job-Shadowing Experiences  (video)
- V. Résumé Writing and Mock Interviews
- VI. Experiencing Industry Interviews  (video)

Section 4: Self-Assessment and Resources

- I. Looking Back at Your Notebook
- II. Resources and Readings
- III. Summary of Module 4

Section 1: Introduction and Intended Outcome

I. Preface

The traditional venue for learning has always been the classroom. While the classroom may be a great place to learn theory, it's not always the best place to learn workplace skills and the knowledge necessary for a career in science and technology. In this session, you'll learn many ways to incorporate community and industry resources into your course: guest speakers, site visits, internships, and other potential student activities.

Intended Outcome for This Module

As a result of this learning experience, you should be able to create learning opportunities that integrate industry and community resources and better prepare students for jobs in the workplace.

II. Module Overview **V I D E O**

Watch this video to see how a guest speaker and a field trip reinforce concepts covered in an Aquarium Studies course.

V Video Note

At this point in the module, please view the **Moving Beyond the Classroom** video. This video is available on the *Getting Results* course Web site at www.league.org/gettingresults or on the CD-ROM, available from the League (www.league.org).

Think About

How do the guest lecturer and field trip complement what students are learning in their course?

V More about the class in the video

Bruce Koike and Dave Beran team-teach a Life Support and Operations course in the Aquarium Science program at Oregon Coast Community College. Students in the program are training to become aquatic animal care specialists, or aquarists, and will likely pursue jobs at public aquariums and aquaculture facilities upon graduation.

Now think about your own practice.

Notebook

Describe how you currently incorporate community-based or workplace-based learning into your course. If you don't currently do so, describe how you might. Now think of some of the challenges you might face in using outside resources. How might you overcome them?

Section 2: Learning in the Community

I. Creating Learning Opportunities

More and more instructors in community colleges are expanding learning beyond the classroom walls, incorporating field trips, internships, and community-based projects as part of college curricula. Experiential learning can be highly rewarding and motivational, providing opportunities to reinforce concepts learned in class while allowing students to test-drive different careers and build contacts. Industry connections also reinforce topics studied in class and help reach students with different learning styles, while giving employers access to a pool of potential job candidates.

Like any aspect of effective teaching, involving industry and community resources requires careful planning to make the experience as successful as possible. Creating and managing community-based learning opportunities involves:

- Examining your course outcomes
- Developing and managing learning experiences
- Connecting them to the academic curriculum
- Evaluating those experiences

II. Examining Course Outcomes

The first step in involving the community in your classroom is to think about the outcomes you would like your students to achieve. The challenge is to plan each experience to support course outcomes, not just to have a fun day away from the classroom.

For example, if one of your intended course outcomes is for students to install and maintain automated machinery, you might consider it important for your class to visit a modern manufacturing facility. If a field trip is not feasible, consider showing a video in class.

Brain Fact

Rich, stimulating environments promote greater learning. The brain absorbs much that goes on at different levels, often picking up subtle bits of information that complete a larger picture. By varying content, presenters, or learning environments for your students, they will learn more.

If you find it difficult to see how involving industry or community resources can help your students reach your course outcomes, you may want to take a closer look at those outcomes. Ideally, outcomes should describe not only what students will learn as a result of your course, but what they will be able to do in the outside world. In this light, it's hard to imagine that students wouldn't benefit from seeing the concepts they are learning in class put into practice. A guest lecturer or site visit can help students visualize the skills and behaviors they will need to succeed in industry or as a citizen in a complex technological society.

Moving beyond the classroom helps you stay fresh as an instructor. Everything you teach must have value outside the classroom. (For more information on developing course outcomes, see Module 2.)

III. Developing Learning Experiences

After determining your outcomes, the next step is brainstorming how to involve the community in your classroom. Here are some of the most common ways of doing so:

Guest Speakers

Inviting a guest into your class is one of the simplest ways of bringing in the outside world. Guest speakers can describe how theories learned in class are used in other settings, offer firsthand advice on how to troubleshoot difficult problems, or describe for students the kinds of jobs they might expect to get after graduating.

Field Trips

Site visits or field trips can show students how concepts, equipment, and processes are used in context. Field trips can sometimes offer students a venue for trying out these concepts themselves. A visit to a power plant could illustrate how security systems are installed and maintained, and a field trip to a park site could provide an opportunity for students to practice GPS mapping techniques.

Consider the following checklist when planning a field trip:

Field Trip Checklist

Think about what you want to accomplish by going outside the classroom.

Develop a lesson plan that outlines what you will be doing, what students will be doing, and what will be the outcome of the trip.

Select a location that will address your educational goals and will be accessible given time, transportation, and cost constraints.

Dry-run the trip. On your own, visit the site or locations you plan to visit with your class. Go through what you will say and do at each stop. Note the travel times between destinations.

Take care of logistics by calling or visiting ahead of time. Secure money for admission fees, get a fee waiver, or let the students know ahead of time what they will be expected to pay for. Make transportation arrangements as soon as you've decided on a destination.

Do the paperwork in plenty of time to meet the requirements of your institution.

Inform the students, orally and in writing, regarding the details of the trip. Include important information such as where to meet, how to dress, what to bring and what not to bring, how much the trip is going to cost them, what to do if it's raining, and what will be expected of them while on the trip. Have students fill out any forms required by your institution ahead of time so you can maximize the time spent in the field.

Make a checklist of any equipment, gear, or teaching materials you will need to bring on the trip. Look over your checklist after the trip to see what you forgot, or what you might add for next time.

Aim to start on time. Let students know that punctuality is important. Also, do your best to get back on time—students will appreciate it. Develop a backup plan in case something goes wrong.

Field trips are especially appealing to visual and physically active learners. However, physical activity does not necessarily equal mental engagement. On field trips, students can write, sketch, use maps, and take notes while listening to lectures and working out problems in the field. In most cases, cleverly designed problems and curriculum materials, such as field guides and worksheets, usually provide something for all types of learners.

Adapted from Douglass, 4Faculty.org.

Internships

Student internships are work experiences, supervised by the instructor and an industry contact, in which the student spends an extended period of time in the workplace. Many programs have well-established internship opportunities for students, and you, as an individual instructor, may not be expected to create internships specific to your course. You should determine whether any students have internship experience and relate that to the course. Usually, as part of the internship experience, students are assigned a project to complete over time; for example, an IT student might conduct a needs assessment to determine if a library needs a new computer system.

IV. Service Learning

In service learning, students actively participate in projects that meet community needs; for example, designing a drainage system for a community park or monitoring water quality in a river. Such projects allow students to apply skills and knowledge they've learned in class to critical issues. Students may work in groups or independently, often serving several hours a week for several weeks. Some service learning projects may be just a one-day experience.

Students can also benefit from short, informal learning experiences outside the classroom. Read an example of such an opportunity as described by Elaine Craft:

A local retirement home with a drainage problem called our Civil Engineering Technology Department for help. Several Civil Engineering Technology students were assigned the project of making an inspection and developing a recommended solution. The students became so interested in the challenge and in the people they were helping that they volunteered their time on a Saturday to help install a system to permanently eliminate the problem.



—Elaine Craft, Director, South Carolina ATE Center

Summary

As you consider these learning possibilities and your own ideas, think about the time and effort you are willing to put into the project. For a beginning teacher, setting up a guest speaker may be a good way to start; it can be as simple as calling a friend in the industry and scheduling a day for her to visit the classroom. Field trips require a little more planning, but can still be straightforward if you are visiting a facility on or near campus and can schedule the visit to coincide with your usual class meeting. For more ambitious trips, you may need to obtain the permission of your department.

Incorporating internships or service learning into your course requires extensive planning. Generally, you need to set up a contract with the student outlining goals and objectives for the project, the amount of time to be spent on the project, and any papers or presentations that will come out of the experience. Check with your department head before you attempt to implement internships or service learning as a part of your class to ensure that you address the necessary requirements.

Selecting Students

Tips on deciding which students will participate in field trips and/or internships:

In some instances, it makes sense for community-based learning to be a mandatory part of the curriculum. All of your students should be able to attend a field trip that takes place during normal class hours. But some activities might not be available when the class meets (e.g., evening classes and a day site visit), or you may not have enough placements for everyone in the class. In such cases, you might ask students to write an essay applying for an internship. This generally limits your choices to students who have the time and motivation to complete extra work outside of class. The internship could then be substituted for a paper, project, or presentation.

When offering extra credit for internships, the result may be that students focus more on the internship than on required projects, leading to incomplete work. Yet this on-the-job learning may be the most effective type of learning experience for some students who are not fully engaged in classroom learning. Deciding who can participate might require consideration of any one or a combination of these variables.

V. Making Internship Connections **V I D E O**

Watch this video to see how an internship in mapping technology helped a student reinforce his understanding of GPS in agricultural settings.

V Video Note

At this point in the module, please view the **Making Internship Connections** video. This video is available on the *Getting Results* course Web site at www.league.org/gettingresults or on the CD-ROM, available from the League (www.league.org).

Think About

How is this internship well suited to the student and the community? What kind of preparatory work do you think the instructor had to do to make this internship happen?

V More about the class in the video

Terry Brase teaches a Geospatial Data Collection course at Kirkwood Community College in Iowa. Students in the class work at computers to transfer GPS data collected in the field to GPS/GIS software applications.

Now think about internship possibilities in your community.

Notebook

Which of the learning opportunities described in this section are you most interested in trying out in your course? What are some community resources that might be available to you?

Some technical programs have created on-campus labs that simulate a job situation and give students valuable expertise in solving actual problems, such as computer troubleshooting. Find out if any of your students are eligible for or involved in such activities. They themselves could lead a class site visit.

Identifying Resources

Many teachers would like to plan field trips or guest lectures, but don't know where to begin. Finding experts and opportunities may take some creativity, but every community has resources that can be tapped for classroom learning. Here are some ideas for where to start:

Talk with other teachers in your program. Where have they taken field trips in the past? Who would they recommend for a guest lecturer? Whenever possible, rely on colleagues who have been there already.

Find out if your technical program or department has a community partner. If partnerships exist, they are guaranteed to offer relevant work experience. Check with your department head for suggestions before contacting the industry directly.

Look to your own experience. Most instructors work full time or part time in addition to teaching. You most likely already incorporate anecdotes describing your experiences into your lectures. Try taking this one step further by having students visit your workplace to see processes or equipment in action or set up internships with some of your colleagues.

Keep in touch with alumni. As students graduate and accept jobs, they become good contacts. Because they have gone through the program already, your current students will be especially interested in alumni experiences.

Look to schools, libraries, park systems, and hospitals. They all have people and projects that could help expand classroom learning.

Don't forget the college itself. Even small colleges have many resources, such as computer labs and "clean" rooms, which may be relevant to your studies. Talk to administrators to arrange a visit.

Ask students to do their own research. As a part of the community in which they live, work, and study, your students are probably already familiar with a range of industry and community resources. Allow more independent students to design their own internships or field experience, with input from you.

VI. Developing Expertise Through Internships

VIDEO

Watch this video about an internship in the IT field.

V Video Note

At this point in the module, please view the **Developing Expertise Through Internships** video. This video is available on the *Getting Results* course Web site at www.league.org/gettingresults or on the CD-ROM, available from the League (www.league.org).

Think About

How is this internship preparing the student for a career in the field of information technology? How do the instructor's actions support the student's learning?

V More about the class in the video

Rudy Helm teaches a PC Configuration and Analysis class at Bellevue Community College in Washington. The students learn to repair PCs and will become PC service technicians.

VII. Uncovering Community Resources

This activity is designed to provide faculty guidelines for uncovering community resources to support student experiences and curriculum planning. Through online and local searches, faculty can identify potential community resources for:

- Field trips
- Student internships
- Service learning projects
- Other curriculum-related activities

Before beginning this activity, please print the Community Resource Worksheet at the end of this document. At a minimum, use this sheet to keep track of contacts and learning goals.

The following pages describe each section of the worksheet and how they can contribute to uncovering community resources.

Desired Course Outcomes

Begin filling in this Community Resources Worksheet by listing the desired *course outcomes* in the appropriate spaces at the top of the page.

Categories of Resources

Then begin to *identify resources*, first focusing on categories of resources. Categories should include general groups of employers, industries, and organizations. *Check off the categories* applicable to your course content. Add any others that apply.

Community Resource/Type of Resource

Next, find resources within these categories. Research industry Web sites, phone books, local newspapers, trade directories, union listings, college alumni/ae directories, libraries, etc. Ask colleagues, deans, and department assistants at your community college for ideas and contact information for relationships or resources that already exist within the community. Don't forget current and former employers.

VIII. Evaluating Learning Opportunities

Activity/Curriculum Support

This section is designed to help you evaluate the learning opportunities each community resource presents. It also will help you clarify whether and how these opportunities are connected to the key course outcomes you previously compiled.

Review your key learning outcomes in the context of each community resource. Apply the outcomes to each potential resource on the worksheet so that you have a focus to speak about when you contact the resource. Identify the opportunities for each resource. Some entities may be able to offer generalized support, such as mock interviews or Science Day judging. Faculty can also look at local resources to find specific, place-based applications of what students are expected to know and do.

Ask yourself how the students' experience in this activity relates to the curriculum and outcomes. This will help you to formulate questions that pertain to each resource, and thus receive helpful answers to your inquiry. Remember, you can also ask each resource to suggest more resources to add to your list.

Prioritize Potential Community Resources

Before you contact any community resources, you need to establish criteria for prioritizing them. High-priority resources would be contacted before resources with less value to the curriculum/learning outcomes. On the worksheet, rank them from 1 to 5 (where 1 is low and 5 is high).

More Criteria for Prioritizing Community Resources

- What will the students learn from this experience?
- How does that learning relate to the curriculum, the outcomes, and their eventual work in this field?
- How much support will the resource provide for your students? Will it be broad support—a general tour of a facility; targeted support—a hands-on internship; or little support—a pamphlet?
- Does the resource already have educational outreach programs?
- Does the resource have an established internship program?
- What are the logistics in using this resource—cost, location, language?
- What is the fun factor? Would the students be excited to use these community resources?

In most cases, resources not clearly aligned with course or program outcome objectives would not be appropriate.

IX. Contacting Potential Community Resources

There are three ways to contact your potential community resources: in person, by phone, or in writing—by e-mail or regular mail. Whichever method you choose, remember that you are representing your community college and must convey a confident, professional, dedicated manner.

- Get the correct name and spelling of the contact
- Identify yourself and your institution
- Come up with a one-liner, a one-sentence explanation of what you are looking for

When you make contact with the resource, you need to prepare for your conversation. List questions to ask and topics to raise before you pick up the phone or write your letter. (Refer to the worksheet for guidance.) You need to have a conversation with the contact about what you are really hoping the students get out of the experience, so that the resource knows what you are looking for and what you would expect from them.

For instance, if it's a tour of an aquarium, as part of the planning, make sure you and the tour guide know what will be covered on the tour and how it fits into your goals. If you don't communicate your objectives to the resource, there's no reason to believe the experiences will be aligned with the course. If it's a mock interview opportunity that you are seeking, find out whether the resource has experience in asking the kinds of questions that are asked in this field. Does this person really hire employees of this kind for jobs? If not, your goal of creating a mock interview situation will not meet the goals.

Remember to keep track of your contacts as you build resources. You might not be able to secure an opportunity for this year's class, but perhaps a contact might be able to commit to a future collaboration. Your contact list is your lifeline to the community. Build relationships with these contacts. For instance, invite them for coffee. Invite them to student events. Send them thank-you notes. After the opportunity or program occurs, encourage your students to write thank-you notes as well.

Incidental Teaching

Instructors often find they learn more than expected when they go off site. Joan DeYoung, a faculty member from Mt. Hood Community College, writes:

A lot of our classes have field labs, so we rent a van and drive to the field. You wouldn't believe what goes on in the van drive. Not always are we talking about the subject at hand, but in a discussion of food or music, we can tie it into the class somehow, and you can utilize the experiences that the students have and make it work. It's amazing.

– Joan DeYoung, Instructor, Natural Resources Technology

Still another unintended outcome could be a part-time or summer job related to a student's program. Encouraging students to be aware of this potential opens up more possibilities.

Section 3: Working in the Community

I. Pursuing Related Work Experience **V I D E O**

Watch this video to see how one student took advantage of contacts made at school to create his own learning experience.

V Video Note

At this point in the module, please view the **Pursuing Related Work Experience** video. This video is available on the *Getting Results* course Web site at www.league.org/gettingresults or on the CD-ROM, available from the League (www.league.org).

Think About

How does this student's job build on and reinforce what he has learned in class?

V More about the class in the video

Dennis Glaze is a student in Bruce Koike and Dave Beran's Life Support and Operations course, in the Aquarium Science program at Oregon Coast Community College. Students in the program are training to become aquatic animal care specialists, or aquarists, and will likely pursue jobs at public aquariums and aquaculture facilities.

II. Evaluating Community-Based Learning

After the learning experience is over, it's time for assessment of student learning. It will most likely be immediately apparent whether your students enjoyed the experience. It will take a little more work to find out whether it helped them meet the learning objectives you established.

There are many different methods you can use for evaluation.

Exams

Exam questions test students on factual information covered through guest speakers and field trips. Open-ended essay questions offer students an opportunity to include experiences from independent internships or service learning projects.

Papers

Papers require more in-depth thinking and will reveal more about whether students were able to connect the outside experience with concepts and skills learned in the classroom. For example, you may ask them to describe consistencies and inconsistencies between classroom learning and workplace practice.

Journals

Ask students to document their work and reflect on what they've learned. Journals are a good fit for internships or service learning projects, as the instructor can check in and monitor the students' progress over time.

Presentations

Presentations require students to synthesize their experiences and explain their learning to other students. Subjects for presentations might include summarizing steps in a manufacturing process, describing factors affecting the success of an engineering design, or demonstrating statistical analysis of data collected in the field.

Whichever way you choose to structure reflection and assessment, it is important to let students know prior to the experience what type of reflection/assessment will be linked to it. This enables students to focus their effort effectively while engaging in the learning experience.

(For more information on assessment, see Module 6.)

III. Preparing for Work

Technical programs exist in part to help prepare students for work in high-technology fields. Coaching students in how to apply for and obtain these jobs deserves a place in the technical curriculum. Key strategies for obtaining a job are targeting the right kind of opportunity, developing a résumé, and honing interview skills.

Job Shadows

Until students have experience in industry, many are unaware of what jobs are out there and which are best suited to their skills, knowledge, and personality. Job shadowing is a low-commitment, low-risk way to find out more about different jobs available in technology fields. While shadowing, a student visits a work site and spends a day or more observing an individual employee as she goes about her daily business.

The most successful job shadows are those in which students are allowed to play an active role, participating in meetings, collecting and manipulating data, or helping to write reports. Although the actual job shadow is conducted off campus, instructors play a large role in setting them up and helping students process the experience by structuring reflective activities afterwards.

IV. Using Job-Shadowing Experiences **V I D E O**

Watch this video in which a student shadows a microbiologist for a day.

V Video Note

At this point in the module, please view the **Using Job-Shadowing Experiences** video. This video is available on the *Getting Results* course Web site at www.league.org/gettingresults or on the CD-ROM, available from the League (www.league.org).

Think About

What did the student learn in her job shadow that she would not have been able to learn in class? How might other students benefit from job shadowing?

V More about the video

This video highlights the job-shadowing experience of a student enrolled in the biotechnology program at Middlesex Community College in Massachusetts. Working alongside a certified microbiologist allows the student to see firsthand some of the aspects of a career in biotechnology.

V. Résumé Writing and Mock Interviews

Résumé Writing

Very few people have ever gotten a job without some kind of a résumé and cover letter. A résumé is the most basic job-hunting tool a student can have. Many colleges have special courses or advisers to help students with preparing résumés. Consider adding this topic to your course if this skill is not being taught or help is not available in another area of the college, such as a career center.

Many students in community college programs are in transition: just starting careers, looking to change careers, or perhaps reentering the job market after a long absence. They may need extra help preparing effective résumés. Some ways you can help students improve their résumé writing skills include:

- Inviting faculty from your school's career office to work with students in groups or individually to craft effective résumés
- Sharing examples of effective résumés in class and asking students to work on their own as homework
- Requiring those participating in internships or service learning to update their résumés as part of their grade

Even if you devote little class time to résumé building, students should leave your class knowing where they can go for help.

Mock Interviews

Interviewing is one of the most crucial—and most anxiety-provoking—parts of a job search. Mock interviews provide students with an opportunity to practice interview skills in a realistic, non-threatening situation. Your school’s industry partners, your own work contacts, and fellow instructors are all good examples of individuals who might be willing to spend an afternoon or two giving mock interviews to prospective students. Not only does the practice benefit students, it allows employers to meet prospective employees and sharpen their own interviewing skills.

VI. Experiencing Industry Interviews **V I D E O**

Watch this video to see how one instructor set up mock interviews for Aquarium Science students.

V Video Note

At this point in the module, please view the **Experiencing Industry Interviews** video. This video is available on the *Getting Results* course Web site at www.league.org/gettingresults or on the CD-ROM, available from the League (www.league.org).

Think About

What are these students learning from their mock interview experience?

V More about the class in the video

Bruce Koike and Dave Beran team-teach a Life Support and Operations course in the Aquarium Science program at Oregon Coast Community College. Students in the program are training to become aquatic animal care specialists, or aquarists, and will likely pursue jobs at public aquariums and aquaculture facilities.

Now that you’ve seen the video, consider your own practice.

Notebook

How can instructors prepare students for unexpected questions in interviews and help them steer discussion towards their knowledge and problem-solving experience?

Section 4: Self-Assessment and Resources

I. Looking Back at Your Notebook

Think about what you wrote at the beginning of this module regarding your current use of community-based and workplace-based learning in your course and the related challenges and benefits. What new strategies have you learned to help you overcome the challenges you wrote about earlier? Record your thoughts in your notebook. Be sure to list any specific changes you'd like to make in your teaching practice or new ideas you'd like to implement.

II. Resources and Readings

See the following resources for more information on planning learning experiences beyond the classroom walls:

The Out-of-Classroom Experience:

<http://4faculty.org/includes/digdeeper/Outside/outside.htm>

Service learning tools and resources:

<http://www.aacc.nche.edu/servicelearning>

Monster.com Interviewing Center:

<http://content.monster.com/basics>

III. Summary of Module 4

Involving industry and community resources in science, math, engineering, and technology courses is an effective way for students to learn necessary workplace skills. It also gives students a better idea about what to expect as they look for jobs in their chosen fields.

When helping students move beyond the classroom, you need to:

- *Create and manage community-based learning opportunities* that reflect course outcomes and connect to the academic curriculum.
- *Build learning experiences* by seeking out opportunities for students to become involved in industry, including field trips, guest speakers, and service learning. Then *evaluate the experiences* to determine whether they met the learning objectives you set forth.
- *Help students improve their résumé-writing and interviewing skills*, and *use job-shadowing experiences* to expose them to the variety of jobs available in their field.

COMMUNITY RESOURCE WORKSHEET

Desired Course Outcomes

- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____

Categories of Resources (check all that apply)

- corporations
- federal agencies
- course-related businesses
- Web sites, books, journals, etc.
- parks and preserves
- hospitals
- small businesses and entrepreneurs
- professional organizations
- universities
- other _____
- other _____

Priority 1 – 5 1 = low priority 5 = high priority	Community Resource/ Type of Resource <i>(e.g., Smith & Smith, Engineering firm)</i>	Contact Notes	Activity / Curriculum-Support										Learning Outcome(s)					
			Interships	Shadow Days	Guest Speaker	Mock Interview	Job/Career/ Science Fair(s)	Service Learning	Community Service	Students as Teachers	Students as Volunteers							
	Name/Contact Info	Potential resource for: Contacted on: Booked: Completed:																
Notes:																		
	Name/Contact Info	Potential resource for: Contacted on: Booked: Completed:																
Notes:																		

