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Key to Successful Preoccupational Training Experiences

Abstract

Although most student employees who have participated in preoccupational training programs have reported satisfaction with their experiences, some have been disappointed due to lack of exposure to many facets relating to the training station. College supervisors can insure a variety of experiences and assist employers in their training responsibilities by stating training requirements in written objective format.

More and more institutions around the country are recognizing preoccupational training (cooperative education; internship) experience as a valuable component in the education and employability of their graduates (2). Some schools are trying elective variable credit training programs (1, 4, 5), while an increasing number of schools, especially at the technical and vocational levels, require students to enroll in one or more quarters of on-the-job training programs (3).

Most students enjoy their training programs, citing the practicality of training and worthwhile experiences. Not all are completely satisfied, however. Some complain about paying tuition for baling hay all summer or pushing the broom in the local elevator, questioning the relevance of such experiences in preparing them for midmanagement or professional positions. If and when the validity of such complaints are established, then the training program should be altered to avoid such situations.

As more schools require employment training prior to graduation, the search and competition for willing employers is increasing. "Willing" does not necessarily imply that the employer is capable of or interested in providing meaningful experiences for student trainees. Lacking proper input from the college supervisor as to the types and varieties of experiences the student should receive at the selected training station, employers may treat the new employee as another hired hand. The student may never observe office procedures, calibrate and operate the planter, or answer consumers' questions. Students employed under these circumstances might justifiably question the worthiness of such an employment station in preparing them for the employment opportunities they seek upon graduation.

Some students are premitted to work on the home farm as part of their college supervised training program. The son or daughter, in many cases, assumes the duties of plowing, cultivating, repairing fences, throwing hay bales, and completing chores, the same activities he or she has been perfecting for several years.

The student may not get the chance to operate the combine for the first time without the suggestions and encouragement of the college supervisor. The critical jobs of planting, spraying, and harvesting have always been Dad's responsibility and will continue to be until Dad retires or course objectives require such experiences. Course objectives should be what the college supervisor is ready to put in writing during the conversation with the student and parents.

How do we improve training programs?

Training stations and the experiences derived are only as valuable as the written objectives agreed upon by the student, employer, and college supervisor prior to the time that training begins. Putting objectives in writing is mandatory; if lacking, then chances are good that the student will miss some of the experiences he or she desires at the training site.

Techniques for writing objectives have been outlined by Mager (7). Benefits for using objectives have been discussed by Lewis (6) and Zubrick (9). Vogler, Curtis, and Wright (8) have written general objectives for many types of agricultural employment opportunities.

Let me illustrate by means of three separate examples how lists of objectives might appear. Research, agribusiness, and farm employment situations will be discussed.

Research

One of my former students with an interest in animal research was placed at an animal research center, and drove a truck loaded with chopped alfalfa to bunker silos twelve hours a day, six days a week, all summer. He soon lost interest in research. This situation might have been avoided had the student's supervisor taken the time to explain to the employer (preferably in the presence of the student) the purpose of the training program, and to suggest, or better yet, to ask the employer what types of experiences the student could gain at the research center.

When employers are asked to describe their operations and to suggest a variety of activities the student might sample, they assume the teacher's role. This is quite desirable, since college supervision is normally minimal. The more kinds of experiences you write down

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in objective form, the more the employer seems to suggest. Once you have accumulated a list of several objectives, which you can use to measure student performance, the employer feels obligated to give the student exposure and instructions. Instead of fearing that the student will destroy the weed research plots by improper chemical formulation or errors in reading plot plans, the employer turns the trainee into a valuable asset, an employee who can plan and carry out herbicide trials.

The following list might represent the objectives agreed upon for a student employed at a crop research facility:

1. Calibrate and operate a hand sprayer; demonstrate proper cleaning techniques.
2. Determine correct herbicide formulations and package wettable powders for use on small plot areas.
3. Describe the experimental design of the herbicide trial; assist in the plot layout.
4. Mention pesticide safety precautions; demonstrate use of safety equipment.
5. Assist in plot seeding, use and maintenance of equipment.
6. Evaluate herbicide performance in the treatment areas by noting weed presence prior to and after spraying and by comparing sprayed plots with control areas.
7. Be able to identify all weed species in the performance trials.
8. Recognize herbicide injury to the crops being treated.
9. Assist in plot harvesting, use of scales and data recording.

Other objectives not necessarily related to physical labor might include:

10. Discover who at this facility decides what topics to research; mention the sources of ideas.
11. Determine how researchers at this facility, who no longer attend college classes, keep current with new developments; find out what publications they subscribe to and why; tell what meetings and workshops they attend and where they travel.
12. Learn common research terminology, such as replication and statistical significance, and be able to use it appropriately.
13. Explain why plots are replicated and why most plots are so small; learn if plot results relate to large-scale production.

With objectives listed such as these, the college supervisor has a basis for evaluating student performance on the job. Rather than traveling to the employment site and discussing the weather, the supervisor has a written checklist to measure the achievements of the student and to remind the employer of experiences which have not yet been gained. With the above-mentioned objectives, it is doubtful that a student employed at this station will spend much time mowing field borders and hoeing alleyways.

Agribusiness

Selection of good agribusiness employment stations is not difficult, since many opportunities exist. Employers are often eager, not only to train students as a component of the college-supervised preoccupational training programs, but to mold them into capable employees after graduation. Again, the prospective employer can make many suggestions when the objectives list is prepared. Take advantage of this and the task becomes simple.

Suppose that a student accepts a job with a local co-op. His responsibilities are to assist the manager of the fertilizer division. Rather than assume that the student will get a variety of experiences, see how much better the training station becomes when you precede the student's training program with an objectives list similar to the one outlined below:

1. Assist in anhydrous delivery, equipment calibration, and maintenance.
2. Explain how to formulate dry mixtures; demonstrate the mixing procedures.
3. Collect soil samples, interpret soil test data, make calculations and recommendations based on the soil tests.
4. Set up a schedule for machinery use.
5. Complete orders.
6. Assist in record keeping.
7. Demonstrate good customer relations by determining customer satisfaction with the materials and services, and, on occasion, by handling complaints.
8. Assist in the development of a newsletter or newspaper advertisement.

With these written objectives, your first visit need not involve quizzing the employer and student as to the types of experiences encountered and whether or not the training station is providing the student with the education and activities needed; merely refer to the originally agreed-upon objective list and check them off, letting the employer evaluate the student's performance.

Also, during this first visit by the college supervisor, additional objectives may be added, now that the student has a better concept of the business and has noted other activities he would like to become involved with. Employers may be more willing at this time to suggest activities for the trainee, now that they recognize the student's maturity level, initiative, dependability, and technical competence.

Farm employment

Internship on the farm, whether it be at home or elsewhere, is often the most difficult situation for supervisors to handle. Propelling the student into the farmer's oftentimes sacred domain of planting, chemical application, harvesting, and record-keeping takes a special knack.

Many farmers are reluctant to let their sons and daughters or hired trainees take the responsibility for the tasks which can make or break a crop. A miscalibration of the sprayers or improper adjustment of a harvesting unit can turn the farmer's profitable farming operation into a community service project. Since few farmers enjoy producing their goods at no profit, they normally reserve the critical jobs for themselves, and let their labor keep busy on the plow, disk, cultivator, fixing fence, or doing chores. The successful supervisor will insure that the student samples those tasks formerly reserved for the owner-operator.

For example, in writing an objective list in the presence of the employer and trainee, the supervisor might make the following statement: "Stan, this student has recently completed a course at the college where the fundamentals of sprayer calibration were taught. I'd like to performance test him using your sprayer during our next visit. Would you be available to help evaluate him during the session?" The threat of improper calibration and re-

sulting crop loss from sprayer misuse will probably disappear from the operator's mind. He will view himself as a partner in the educational process, one who will train and advise, and make sure that the student is ready for the performance which is to be jointly evaluated by the college supervisor and himself. After this icebreaker, it is easier to add other meaningful tasks to the objectives list, which the employer will take great pride in teaching to his eager-to-learn trainee.

No longer is that $40,000 combine an investment to be protected; it is a tool, a training tool, to be used at the most practical classroom available for the student, his home farm. Adjusting the planter is now a duty that can be taught and assigned, not reserved. Recordkeeping can be taught and shared. The student will begin to develop confidence with understanding, and the owner-operator may begin to think in terms of a partnership.

A sample objective list might appear as follows:

1. Collect soil samples from fields "A" and "B" and send them to the soil testing laboratory.
2. Apply fertilizer to the fields based on soil test recommendations.
3. Calibrate and adjust the small grain drill.
4. Determine when to plant the oats and plant at least 10 acres without supervision.
5. Calibrate the sprayer.
6. Add correct amounts of herbicide and water to the sprayer tank so that recommended amounts per acre are followed.
7. Spray herbicides on at least 10 acres of oats without supervision.
8. Inspect the oats weekly to determine insect and disease problems and any suspected nutritional deficiencies.
9. Adjust the combine to minimize harvest losses.
10. Combine at least 10 acres of oats without aid.
11. Determine yield and profit per acre for the oat (grain and straw) crop, listing the cash flow costs and selling price per bushel.

Depending on the variety of crops and/or animals encountered in the farming operation, the list could be expanded in many ways. As discussed earlier, it is often useful to wait until the first visit during the employment period to review and add to the original list. Presenting the student and his employer with a list oi more than a dozen initial objectives may appear overwhelming and diminish the excitement of the trainee towards the new venture.

Summary

Since many institutions are now encouraging or requiring their students to engage in work experience prior to graduation, it is essential to assure that the student reap the full benefits from such opportunities. This cannot be ascertained by merely securing a training station for the student and assuming that the employer will take initiative in training the student to be competent in most facets of the business.

Providing meaningful internship requires a supervisor who can successfully outline measurable behavioral objectives which provide the student with the maximum exposure and practical understanding of the job undertaken. Writing objectives which are agreed upon by the student, employer, and supervisor provides not only guidelines by which the employer will direct the student's training, but provides assignments by which trainee performance may be evaluated. The training station becomes more than a place of employment; it develops into a practical classroom, which it should be.

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Methological Considerations In Grading

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Abstract

Philosophical, theoretical, and practical issues should be integrated to establish sound evaluation procedures. The five methods of grading most popular among college instructors differ in their philosophical bases and in their appropriateness from both educational and technical standpoints.

It is generally agreed among educators that course planning is essential to the success of instruction. What to teach, how to sequence the content, what materials to use for instructional aids, and what activities to have students accomplish must be considered. An instructor's plan for teaching is shaped by his/her philosophy of education and knowledge of theory and practice regarding instruction. Because evaluation is one component of the instructional process, it is obvious that philosophical, theoretical, and practical issues should contribute to the planning of evaluation procedures.

Once the major philosophical issues discussed in the preceding article have been resolved by the instructor, procedures for grading which are compatible with the philosophy adopted should be established. There is a body of theory and empirical research which should also

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