CONSIDERATIONS IN TRAINING ON-THE-JOB TRAINERS

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ABSTRACT

On-the-job training (OJT) is a very common method of teaching job skills. Much of the training is done by experienced workers. This paper discusses small investments that can help improve the effectiveness of OJT. Effective OJT involves some structure and planning in the transfer of responsibility for task performance from the trainer to the novice. Assisting the OJT trainer could involve helping develop up-to-date job analyses and offering strategies for teaching and evaluating job skills.

The scope of this paper addresses (1) organizational considerations supporting structured OJT, (2) general strategies for structuring OJT, (3) a typical approach for conducting OJT, (4) characteristics and duties of OJT trainers, and (5) limitations of OJT as a teaching method. Health, safety, and operational skills can be connected through training. Haul truck operator training is used to illustrate some of the concepts discussed in this paper.

BACKGROUND AND SCOPE

On-the-job training (OJT) is a very common method of teaching workers essential skills so they can perform a job safely and productively. OJT is often considered informal training, and across industries, organizations invest significantly more money in informal training than they do in formal training. Some researchers (Carnevale and Gainer, 1989) estimate the ratio to be from 1:3 to 1:6. That is, for every dollar invested in the classroom, 3 to 6 dollars are invested in informal training in the workplace.

There is a range of activities defining what people refer to as on-the-job training. OJT might be a situation where workers essentially train themselves, that is, they watch someone do a job and rely on co-workers to show them the ropes. This is sometimes referred to as "following Joe around." We call this type of training on-the-job experience, or "unplanned OJT." This training has little structure (that is, no written plan or job analysis) and is almost always done by someone who has experience in the task. Sometimes it works well.

Success in using unplanned OJT is usually dependent on the luck of the draw, that is, whether the informal trainer is competent at the task he or she is teaching, is motivated to teach, can organize the job into logical components, and knows something about good practices in teaching and evaluating.

At the other end of the spectrum are more structured OJT strategies (Rothwell and Kazanas, 1990). Structured OJT is useful if organizations want to increase the odds of workers learning to perform new jobs more effectively and quickly. This form of training involves a plan[5] and is useful when the following considerations are present.

- Because mining technology is increasingly expensive and complex, decision makers may give more thought to how workers use and should use the technology. Training can work to enhance the fit between technology and how it is used.
- The riskier the job, the more training should be considered as a way to reduce risk or accelerate experience. Risk involves not only injury, but production downtime and unexpected maintenance.
- When hiring new workers or when workers rotate through several jobs, organizations may want to consider ways of accelerating the learning curve and bringing new task performers up to speed quickly, as opposed to letting workers learn as they go (Rothwell and Kazanas, 1990).
- Organizations notice large, obvious levels of variability in task performance, and they are generally not happy with the consequences of that variability. Variability in procedures and

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[5]Without a plan or structure, OJT is ***very*** informal and is often referred to as trial and error, learning by osmosis, or learning by experience. Informal OJT *appears* to save money early on in that (1) a plan does not have to be developed, (2) no time is invested in a job analysis, and (3) the trainer (or an experienced worker or supervisor) is doing other things. If an experienced worker or supervisor is instructing informally, they are teaching from memory and individual experience. For many mining jobs, the downstream costs of informal OJT can be quite high. Added costs can involve a greater risk of injury, additional downtime, and higher levels of property damage and machine maintenance. Money saved early can very likely result in greater risk and more money spent down the road.

how decisions are made on a job may affect an individual worker, a work crew, and/or the organization itself. It can affect the amount of time it takes to complete a task, the risk of injury, and product quality, and can likely affect costs (extra downtime, maintenance) connected with the job. Planned OJT can help reduce variability[6] in how a task is *initially* performed. It gets workers on the same page for critical tasks. For tasks that are less critical, variability is less important (see Wiehagen et al., 1996; Lineberry and Wiehagen, 1996).

ON-THE-JOB TRAINING IS PRACTICAL

OJT is practical as productive work is accomplished while a worker is learning.[7] With OJT, managers do not have to be concerned with training transfer. Transfer is the application of skills acquired in training to the worksite.

[6]Obviously, other factors outside of initial job training can affect long-term performance of tasks and quality output by individuals and work teams.

[7]Supervisors should understand that learning is the goal, not production.

Why is this so? With OJT, the jobsite and the task being learned and performed are 100% real. Learning is doing. The results are evidenced by the work itself. Accomplishments are visible.

PLANNED ON-THE-JOB TRAINING ACCELERATES LEARNING

How organizations plan and conduct OJT is essential. A worker can take a long time to learn a task by trial and error. To reduce this time, decision-makers can examine ways of accelerating the learning curve, especially for those who are new to a task. Accelerated learning means less risk and fewer costly mistakes that result in serious injury, production downtime, or increased levels of maintenance. Structured jobsite training accelerates the learning curve better and faster than traditional, more casual OJT approaches (see figure 1). Figure 1 shows time and proficiency as key variables—how to reduce the time it takes to learn a set of skills to an acceptable level. Also

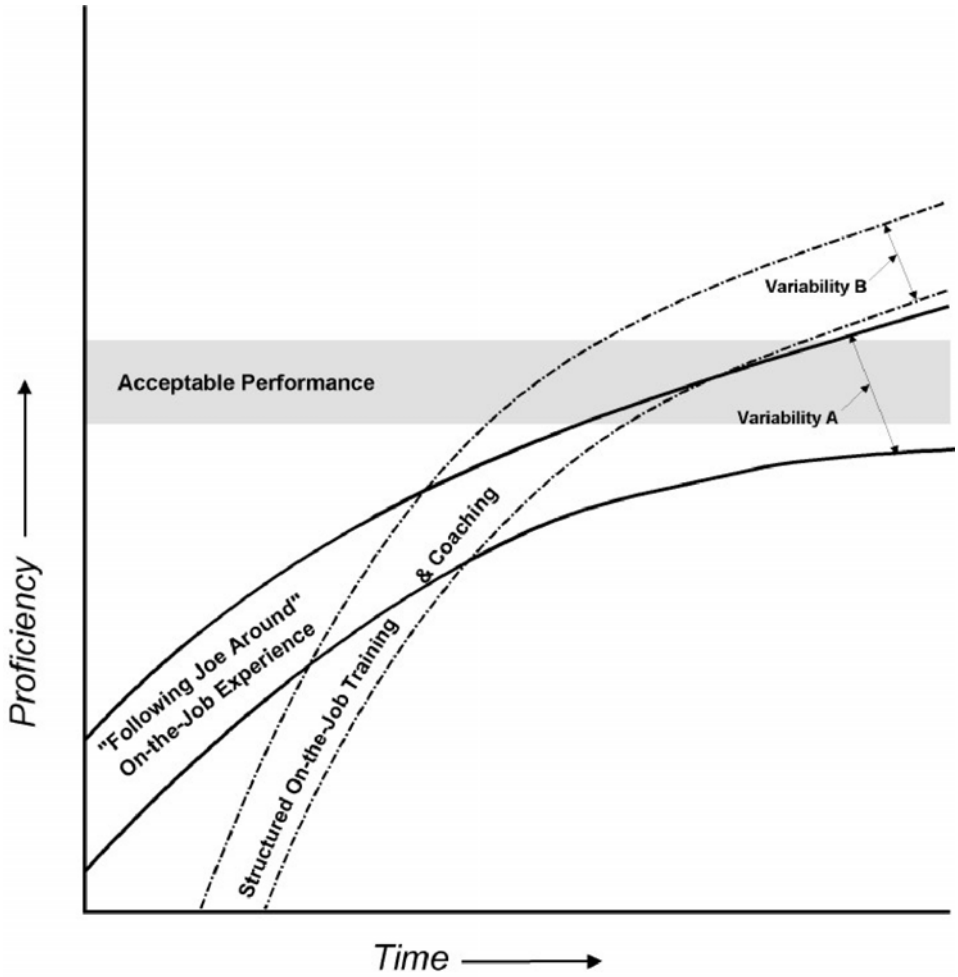

Figure 1.–Learning curves show proficiency versus time for structured on-the-job training versus on-the-job experience.

addressed is the value of examining *the variability in the performance of critical tasks* that comprise the job.[8]

Structured OJT does not necessarily require a large investment of time and money, but it does take some careful thinking—that is, a plan. OJT does not require volumes of paper, but it does require (1) that a trainer be present, (2) that someone needs to learn a task, and (3) that something is written down, whether it is a guide or a checklist, to help organize what is taught and how skills will be assessed. Teaching with evaluation is a key component of structured OJT as feedback can be offered and questions addressed as the trainee is performing the task.

If experienced workers are trained as OJT trainers, structured OJT can make good use of their knowledge and experience to help accelerate skills of those new to a task. Accelerated learning via structured OJT should reduce business risks and the unplanned costs associated with injuries, maintenance, and production downtime as more experienced miners retire and new employees are hired. The key issues are skill development, how to accelerate learning, and the amount of time it takes a worker to develop a skill to an acceptable level.[9]

This paper offers some considerations on making OJT more effective. Models are offered to provide considerations in the structure of OJT programs. The appendix highlights definitions of common terms (for example, on-the-job training, on-the-job-experience), while the table provides critiques of OJT, military OJT, and formal apprenticeship programs.

ORGANIZATIONAL CONSIDERATIONS

OJT involves structure—a plan. Providing quality training is a way of developing and keeping good people. At the management level, structured OJT only involves three steps.

1. Some thought should be paid as to who would be a good OJT trainer or coach for a particular job or task and how these people might be identified or selected to teach.
2. The selected person should be given some help. That help should come in two forms:
   - A job analysis or written guide of what the task entails and
   - Information about good practices in teaching and evaluating in an OJT environment.
3. Time should be allocated for the OJT trainer to teach and evaluate safe production skills for the specific task.

In short, OJT provides the opportunity to accomplish objectives important to organizations, whether the skill involves operating a haul truck, maintaining a conveyor belt, or supervising a work crew. In some organizations, OJT can become so ingrained that it is difficult, over time, to pick out the trainees from the trainers. Both teach and learn from each other. They solve problems that benefit the organization, their work crews, and themselves. Good teachers learn from their students and become better performers and teachers. The transfer of knowledge is not one way.

STRUCTURED ON-THE-JOB TRAINING: A GENERAL STRATEGY

Implementing structured OJT involves three basic steps: assessment–training–evaluation.

1. *Assessment:* Finding out what employees already know about the job.
   - ✓ Decide how much of the job content is already known by the trainee.[10]
   - ✓ Decide what needs to be taught.
2. *Training:* Providing the knowledge and procedural and motor skills for the job.
   - ✓ Teach the employee and fill in his or her gaps of knowledge and skills. *Training should be based on a job analysis*. The analysis should include aspects of safety, health, and production and address relevant aspects of maintenance and crew coordination.
3. *Evaluation:* Assuring that employees can perform the task.
   - ✓ Find out if the skills taught have been learned. Evaluation is follow-up[11] to check if an individual's performance is inside or outside the performance envelope. "Envelopes" can differ in size; some are more open and flexible, others are more rigid. Often, this depends on conditions and decisions at the worksite.

[8]Reduced variability provides a tighter envelope of performance. Structured OJT coupled with coaching, or peer discussions, can allow workers to reduce variability in performing tasks, thus move well beyond minimum levels of acceptable job performance. High levels of variability in the performance of critical tasks can increase the risk of injury, production downtime, and maintenance. Variability is natural within a work system, that is, it will seldom equal zero. Unstructured OJT encourages large levels of variability in performing tasks.

[9]Trainee and employee learning should continue well after training has been completed. The organization may want to allocate time for follow-up or coaching after the initial OJT is completed.

[10]As new technology is introduced, it is important to reassess what experienced workers know.

[11]Some skills are easily taught, others take more time and practice. Some consider training evaluation to be a progress or final test. However, in OJT, evaluation often involves continuous and casual observation. This is normal—evaluation is not necessarily a separate event.

CHARACTERISTICS AND PROCEDURES FOR STRUCTURED ON-THE-JOB TRAINING

OJT is finite.[12] It has a beginning and an end. It is task or job specific. It deals with minimum acceptable levels of performance that are often based on the expert judgment of an OJT trainer.

Structured OJT requires the presence of a trainer to teach and assess skills. It also involves a written guide that breaks the job into tasks. This is typically called a job analysis, and it is an important prerequisite for structured training. A job analysis provides an orderly framework for teaching, learning, and evaluating. Some refer to a job analysis as an operating procedure, a job safety analysis, or a standard operating procedure. Many supervisors and production planners already do job analyses. Without a job analysis, OJT would be very limited because trainers[13] would be teaching from memory and their own experience of how a job should be done. A job analysis offers a common framework for both the trainer and trainee.

The job analysis should make sense to experienced task performers and others that have a stake in the task. In a haul truck operation, experienced operators, production supervisors, and mechanics and repairmen who service the trucks could offer key input to a job analysis. They see the job from different perspectives and can offer insights.

Job analyses are not all alike. Some are very meticulous and detailed (see Morris et al., 1982), and some are less analytic (see Hartley, 1999; Krupp and Applegate, 1983). The level of detail is normally related to the sophistication of training decisions.[14] Regardless of the level of analysis, all job analyses should make the job of teaching accurate, logical, and easy. They provide a road map for teaching and evaluating. Because of the importance of job analyses in conducting quality job-specific training, the Mine Safety and Health Administration (MSHA) is leading an effort to develop and test a practical procedure for conducting on-site job analyses. The model, adapted from the Navy, addresses the duties and responsibilities of off-road haul truck operation.

The assessment–training–evaluation model is intuitive and has been applied to OJT for some time, evolving into a generic training model with four steps: Preparation, Presentation, Application, and Follow-up (Wilson et al., 1980).

1. *Prepare:* Put the learner at ease, find out what he or she already knows, and get the them interested in the job. Assessment is assumed to be part of preparation, that is, to determine if training is warranted and why. In other words, Is training necessary? Is it important? (See Mager, 1999.)
2. *Present:* Tell, show, and illustrate one step at a time. Stress each key point, instruct clearly, completely, and patiently.
3. *Apply:* Have the learner do the job and make observations. Allow time for practice and look for opportunities to have the trainee explain key points. Have the person do the job until you know it has been learned.
4. *Follow-up:* Put the trainee on his or her own, check frequently, praise good work, re-instruct to correct poor work.

This four-step OJT method is common and TRADITIONAL. It seems to fit pretty well into the three-step (assess-train-evaluate) general training model discussed above.

CHARACTERISTICS OF GOOD TRAINERS

OJT trainers must have competence in the task they are teaching. They also must like to teach or want to learn how. In the literature on peer training (also called tutoring), Fitch and Semb (1993) developed a simple model: ASK, which stands for attitude, skill, and knowledge.

- *Attitude:* Friendliness and desire to help others. Approachable trainers know how to encourage and invite questions and have good interpersonal skills. Some believe that, at the lowest level, teachers must prefer teaching to not teaching (see Fitch and Semb, 1993). Beyond that, they assert that a positive attitude can be trained.
- *Skills:* Good communication skills. An effective teacher coaches students to learn the material for themselves. Good communication skills begin with listening. An OJT trainer does not do all the talking, but often listens and observes. This demonstrates patience.

Early in the interaction, it is useful to assess what is known by asking questions and observing. Semb and his colleagues suggest that a common mistake made by tutors is that they are too quick to jump in; they lecture students before they listen. Peer trainers need to reinforce appropriate performance by providing knowledge of results and reinforcing key issues. Positive feedback is almost always better than negative.

- *Knowledge:* Peer trainers must know quite a bit about the task or job they are teaching. For many jobs, acceptable performance includes an array of skills—cognitive, perceptual, procedural, and motor.

DUTIES OF TRAINERS

One plan for training OJT trainers would be based on an analysis of the training task—to assess, train, and evaluate.

[12]However, on-the-job *learning* is continuous.

[13]The experienced person, now a trainer, may know the job so well that he or she will skip steps or miss presenting important information.

[14]If simulators are to be built, it is important to perform a thorough task analysis, that is, document duties, tasks, and elements and identify specific cues (for example, visual, audio, tactile, proprioceptive) used by workers to perform the task. See Morris et al., 1982.

• *Assess:* Assessment is typically done in the form of questions to be asked of the trainee or observations to see what the trainee can do. It is a good idea to put the trainee at ease by having a relaxed atmosphere that helps the person feel comfortable. Training is not a big deal. If you want training to be accepted and valued, make it commonplace—just another day at the job.

Asking questions is a way of engaging the trainee as an active participant in the training. It also gives the trainee the chance to verbalize responses. Not only does the trainer derive some idea of what that person knows, but the trainee learns that he or she is expected to participate. Asking questions also indicates to the trainee that the *trainer is interested in teaching* (Semb et al., 2000).

Assessment concludes with some notion of a gap. Is there a gap in the safe, productive performance of the task or job for which the trainee is being trained? Will training help? Will further assessment help?[15]

• *Train*: The notion of training in OJT is to shift task performance from the trainer to the trainee. The key word is performance. There are a couple of different approaches discussed in the literature. The first is trainer-centered; the other is learner-centered.

A trainer-centered approach is what most of us experienced in school where the teacher takes on the responsibility for learning and does most of the talking. The student takes a more passive role. The trainee has little experience; the teacher is the specialist who must convey a body of knowledge via lectures, books, and videos. Students are motivated to learn externally because they have to pass a test. The teacher covers the content to be learned so the student gets the required information in some logical order. Motivation is controlled by the teacher via grades or other types of feedback (see Lawson, 1997).

A learner-centered approach is one in which the trainee accepts responsibility for learning, that is, responsibility for learning is shifted from the teacher to the trainee. The trainee is an active participant in the training, asking questions and verbalizing responses to questions asked by the instructor (see Semb et al., 2000). The trainer, however, might listen more than he or she talks.

The goal for OJT is the eventual transfer of responsibility for task performance from the trainer to the novice. It is a dynamic process where evaluation is continuous. This on-going evaluation results in some final assessment of the trainee's performance, either inside or outside the envelope.

It is possible and likely for training to encompass both of these general processes. However, the learner-centered approach is thought to be more suitable for OJT (Lawson, 1997; Semb et al., 2000), since it requires active participation. With OJT, the work itself, not a grade, provides motivation.[16] Many believe that the abilities and motivation of the teacher/trainer makes a considerable difference in learning.

• *Evaluate:* When we think of evaluation under traditional teacher-centered training, we often think of a test—The final exam. This is not the sole purpose of evaluation. However, tests that are well designed can help teach; they can provide motivation for learning and can trigger questions and discussion. They help provide feedback to the employee.

In OJT, the idea is to develop knowledge *and* skills, thus written or oral tests measure only part of the learning. As the trainee performs the task—operating a truck, for example—he or she is putting themselves to the test under the guidance of an instructor. In a very practical sense, evaluation becomes continuous.[17]

Consider a trainer giving the trainee the chance to talk his way through a task as the person performs it, such as a walk-around inspection of a haul truck. This technique can help the task performer learn by reinforcing procedures and considerations about how to perform the task, much like a pilot's preflight procedure. However, it also serves as an evaluation tool for the trainer because it offers an indication of how the trainee understands the task.

Such a procedure gives the trainee the option to engage in the training process (Semb et al., 2000). The trainer asks the trainee questions at different steps in the process, which is a good way to embed evaluations with teaching.[18] This implies continuous evaluation. The trainer updates his or her opinion of the trainee's competence.

At one level, competence is either inside or outside the accepted envelope. Logically, some envelopes are larger or smaller than others. *All items in the job analysis are not necessarily equal*. Some may be conditional, such as "Perform this check if the temperature is below 10°," "What are the factors that affect the uphill and downhill spacing of haul trucks?," and "Dumping over an edge is more risky under certain conditions and less risky under other conditions. What are those conditions? And why are they important?"

Researchers suggest that evaluation should be incremental, continuous, and not beyond the capability of the trainee (Palinscar and Brown, 1984). This is one more reason why a job analysis is useful: It helps segment instruction so that competence can be assessed at the duty and task levels within the job. For example, a trainer would not be evaluating how a person operates a haul truck; he or she would be evaluating components, such as how the individual performs the walk-around inspection, approaches the loader, or mounts and dismounts; how they decide where to dump; and how they would make use of back-up steering systems and brake systems. The trainer learns what the trainee can do by asking questions and making observations.

[15]Ergonomics is the science of designing the work to fit the worker. Some jobs are so difficult and physically demanding that training will be of little help in reducing injury risk, improving product quality, or reducing downtime. Ergonomics and training can blend together to enhance the work process.

[16]Other motivators include achieving higher skill levels and higher pay.

[17]Even though this three-step model makes evaluation appear as a separate entity, in reality, it is on-going.

[18]At the same time, the trainee should know that the "real" job is to learn, and good peer trainers learn from their trainees (see Semb et al., 2000).

All of these items would be identified in the practical job analysis. If the task is not practical nor desired, it should not be in the job analysis or operating procedure.[19] Fortunately, job analyses do not live forever. One size does not fit all. As technology changes, job analyses need to be updated, so they have to be done reasonably quickly (see Hartley, 1999). Health, safety, maintenance, and other risks associated with performing the job, as well as what might be done to reduce risks, should be pointed out.[20]

Fitch and Semb (1993) suggest that effective teachers constantly compare the task goal with their diagnosis of the learner's ability and judgments about the *type and amount of coaching* needed. It makes sense that effective trainers also aim at a level of assistance slightly ahead of the trainee's level of achievement. Thus, effective trainers motivate and teach.

ON-THE-JOB TRAINING AND COACHING

OJT and coaching go hand-in-hand, but OJT is considered finite while coaching is continuous. OJT combined with informal approaches such as coaching can blend the two approaches. Employee interaction, sharing ideas and knowledge, coaching, observing fellow workers, supervisor guidance, and personal growth all have value and contribute to informal training (Brown, 1989). This is a key as organizational investments in informal training often exceed investments in formal or classroom training.

According to Lawson (1996), skills and characteristics of good coaches include patience, enthusiasm, honesty, friendliness, concern for others, self-confidence, fairness, consistency, flexibility, resourcefulness, and empathy. The ability to motivate, teach, and offer feedback is the essence of coaching. Feedback is a form of evaluation.

LIMITATIONS OF ON-THE-JOB TRAINING

As a teaching method, structured OJT has limitations. These include—

- *Limitations for teaching nonroutine skills.* For example, if the task is to teach truck operators how to operate on slippery haul roads, it would require drivers driving on slippery haul roads to teach and assess those skills. If the training is done on flat and dry surfaces, skills of operating the truck under those dry and flat conditions will be the only skills taught and assessed. Unusual operating conditions must appear at the worksite before these skills (operating contingencies) can be taught or learned. Thus, some unusual or nonroutine events are often difficult or too risky to replicate using OJT.[21] Thus, if OJT is finite, then it is reasonable to assume that *all* skills cannot be taught during OJT.
- *Limitations for teaching cognitive skills.* For example, the work environment is not often conducive to teaching skills requiring recall because these skills require memorization and can often be learned only by drill and practice. Examples might involve important specifications and components of a haul truck, stopping distances when loaded and unloaded, etc. Other forms of instruction, such as classroom, self-study, computer-based training, or the use of job aids are considered better for developing these cognitive skills. The OJT trainer should have an understanding of both the cognitive and procedural skills that comprise job performance. However, many of these cognitive skills can be introduced in the classroom and reinforced on the job. It is important to consider the training environment. The workplace (for example, via OJT) is one environment, the classroom is another.

SUMMARY

OJT, which is often called "informal training," is a common and useful method for teaching and evaluating skills. Investments in OJT are quite significant, although difficult to estimate. Across all industries, estimates for training are quite large, from $60 to $210 billion (Carnevale and Gainer, 1989). The large gap is due to the difficulty of arriving at estimates of the amount of informal training for both large and small organizations. Organizations spend significantly more on informal training than they do on formal training.

Skilled performance involves the integration of hazard awareness, recognition, and response with operational skills for a work task. Allen and Nawrocki (2000) suggest that there is a movement back to training via apprenticeship and OJT experience across industries. They suggest that targeted skills and knowledge will be tied to specific business objectives, that technologies (for example, multimedia) are available to assist

[19] It's not a bad idea to bench-test the job analysis to see if it is possible to perform the task the way it is laid out on paper. OJT trainers can do this as they are teaching just to make sure the job analysis makes sense. A practical job analysis saves time in teaching because it provides a road map.

[20] Risk will never equal zero, and down the road, workers may not perform the job as trained.

[21] That is why simulation (synthetic training) is considered by training professionals to be very useful—it addresses routine and nonroutine events, and skills that are difficult or too risky to teach at the workplace can be practiced.

the learner, and that increasingly, larger share of the responsibility for learning will be placed on the learner.

These same technologies *may be very useful in assisting safety and skills trainers*. Assisting the OJT trainer could involve helping provide up-to-date job analyses and offering strategies for teaching and evaluating. It is also one way to capture the expertise of experienced workers, especially those who have a desire to teach.

One approach supporting a focus on the skills of the OJT trainer is offered by Semb et al. (2000).

> While advances in technology may result in more sophisticated tools for conducting OJT, the *knowledge and skills of the individual trainer* will always be the *most critical component of OJT. These* include both knowledge of the job and the ability to communicate that job effectively to the on-the-job trainees.

This paper lays out a few considerations and references for planning OJT. We suggest that planned OJT could be a very practical way of accelerating the development of skills to benefit both safety and production. Opportunities exist for applied research in examining concepts and practical strategies for OJT, peer training, coaching, and training OJT trainers. These prospects will require worker involvement in the development and structure of both formal and informal training.

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APPENDIX: DEFINITIONS AND CRITIQUES OF ON-THE-JOB TRAINING AND APPRENTICESHIP PROGRAMS IN THE UNITED STATES

OJT is very common. It has a long history in which a tradesman learned his job from a master craftsman via apprenticeship. We reviewed two studies (Wilson et al., 1980; Semb et al., 1995) that critiqued OJT training and apprentice-type training programs. These studies are valuable because the participating organizations were interested in learning more about how training methods or systems might be improved.

OJT has several definitions. Some use it to describe any training at a worksite, either in a classroom or in the work location. Others use OJT to differentiate between structured and unstructured approaches. Still others use the term to differentiate between site training and classroom (off-site) training.

For this paper, the following definitions apply.

On-the-job training (OJT): A method of training conducted at a worksite. It is finite. It may be scheduled (planned) or unscheduled (unplanned). It involves the interaction of a trainer and trainee, and often involves one-on-one instruction and discussion, so the trainer-to-trainee ratio is very small. Some refer to OJT as interaction between a journeyman (perhaps a supervisor) and an apprentice. It could include classroom components that are very closely related to a specific task or job.

Formal classroom training: The trainer-to-trainee ratio is rather large, and many students or trainees are taught by one teacher. Training is formal, scheduled, and time-limited. Skills obtained require application and transfer to the job.

On-the-job experience: An informal method of learning that does not involve a trainer. Thus, there is no opportunity for instruction or evaluation (feedback) other than self-assessment. It is continuous, and it could include the use of job aids. On-the-job experience is useful for those who are knowledgeable about the work but need practice in performing a task.

Job analysis: A method for breaking a job down into components or steps. A fairly common hierarchy involves the following: A *job* is composed of several *duties*. The *duties* involve the completion of *tasks.* Practical job analyses provide a tree of responsibilities that connect the job with duties with tasks.

Coaching: Considered to be an informal (one-on-one) training method. It involves observations, questions, dialog, and feedback.

Peer training: Considered to be a formal or informal (one-on-one) training method. Most research relates to the subject of tutoring for the development and transfer of knowledge and cognitive skills. Tutors are often viewed as coaches. Thus, peer training has direct relevance to OJT.

Obviously, there are no perfect programs or training methods. Table A-1 summarizes the findings and results from these few studies. OJT and apprenticeship programs have a lot of strengths and are valued, and an examination of the difficulties can provide an opportunity for improvement.

Table A-1.—Common difficulties with OJT and apprentice-type training programs (adapted from Wilson et al., 1980; Semb et al., 1995)

OJT programs	Apprentice programs	Military OJT
Lack a trainer (closely resembles on-the-job experience).	Trainee is sometimes treated as a helper or semi-skilled labor.	Written materials may be written above level trainee or trainer can understand.
Lack a training plan (e.g., no job analysis).	Trainees may fail to rotate through all job tasks.	Inspection teams put too much emphasis on keeping training records and not enough on end results.
Unscheduled (this may or may not be a problem).	Classroom instruction may be poorly correlated with OJT.	Trainees may feel they are mis-assigned to tasks, that is, not working in the area trained. This can affect their motivation to learn.
Coordination of off-jobsite training and OJT can be difficult and/or poor.	Production demands get most attention, and training is secondary.	Training can be short-circuited. Proficiency tests can be passed without trainee demonstrating performance in some tasks.
Structured OJT is most often found with very large employers.	Trainers may lack knowledge and skill regarding instructional methods.	Always a problem keeping the materials up to date.
	Training material can be easily outdated or inappropriate.	Difficult and sometimes poor coordination between job knowledge and job proficiency training.
	Completion of training is often based on hours, not competency.	Many front-line supervisors not trained in OJT methods. Poor coordination between training and follow-up.
	The training plan may not be based on actual job analysis.	Trainee counseling sessions are either not held or may not be very meaningful when they are held.