Appendix 5.1:
Structured On-the-Job Training (OJT) vs. Unstructured OJT:

The EPA's Renovation, Repair and Painting (RRP) Rule allows for the certified renovator overseeing a renovation project to conduct on-the-job training (OJT) of workers instead of their becoming certified renovators. OJT is a traditional method of teaching workers how to perform tasks. (Gray, 1998; Campbell, 1990). In recent years, the training and education profession has made significant improvements in instructional design theories and few studies have led to industry acceptance of results that identify two distinct types of OJT, referred to as "structured OJT" (SOJT) and "unstructured OJT" (Levine, 1997). These types of training have different characteristics and levels of effectiveness. See figure A5.1.1, a conceptual flowchart of the SOJT process.

SOJT involves planning in which jobs are analyzed and broken down into their component tasks, and instructors are provided lesson plans and materials. (See Figure A5.1.1.) SOJT requires work up-front, but produces consistent training outcomes of predictable quality. Lacking structure, unstructured OJT produces inconsistent training outcomes, for example (Jacobs, 2003):

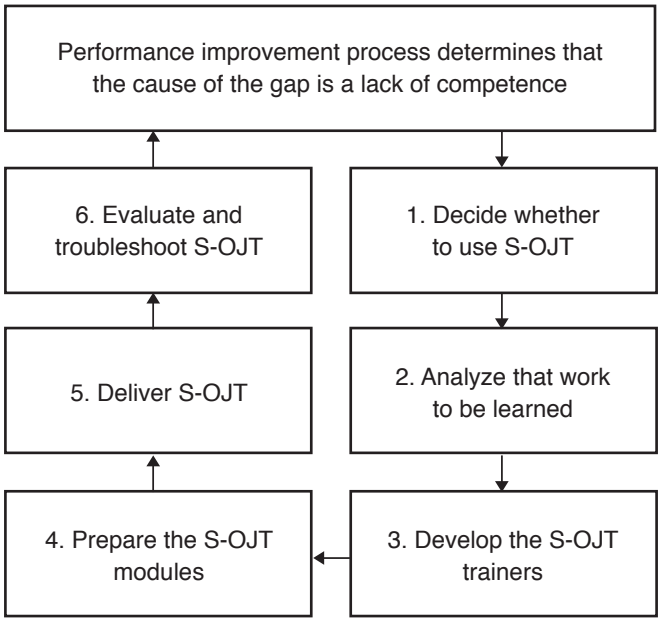

FIGURE A5.1.1 The S-OJT Process (Adapted from Jacobs, 2003, p. 36)

- The desired training outcome is rarely achieved, and when it is, trainees rarely achieve the same outcomes.
- The training content is often inaccurate or incomplete, and may represent an accumulation of bad habits, misinformation, and possibly unsafe shortcuts on which employees have come to rely over time.
- Experienced employees are seldom able to communicate what they know in a way that others can understand.
- Experienced employees use different methods each time they conduct the training, and not all of the methods are equally effective.
- Many employees fear that sharing their knowledge and skills will reduce their own status as experts and perhaps even threaten their job security, or they may not be given adequate time away from their duties to deliver the training to others.

- Unstructured OJT leads to increased error rates, lower productivity, and decreased training efficiency, compared to structured OJT, and is less effective at reaching the training objectives.

No regulatory criteria exist for successfully completing OJT in the conduct of renovation or other lead-based paint activities. Regarding the two broad categories of OJT, structured OJT (SOJT) and unstructured OJT, the RRP Rule allows either type. As described below, HUD recommends that OJT be structured.

Improper handling of lead-based painted components during renovation, remodeling or painting has been shown to create dust lead hazards (EPA, 1997). This possibility must be considered in the selection of a training solution. In order to achieve consistent, positive, training outcomes, HUD recommends that structured OJT be used when workers are not trained to become certified, and that all training be performed by qualified and experienced instructors to facilitate quality and consistency of instruction.

Small companies may not be able to offer OJT themselves. Such firms may not be able to develop or implement an OJT program on their own and may choose production over training. HUD recommends partnerships among lead professionals to provide OJT training to small firms and in other OJT settings.

A cost-benefit analysis is helpful when selecting a training method. Although many people believe that classroom training of large groups is very cost-effective because the training costs are spread over the group, this is not always true. If a training decision is made on cost alone, SOJT has been shown to be the preferred training method over unstructured OJT and in some cases, over classroom training (Jacobs, Jones and Neil, 1992; Jacobs, 1994). This is because the structure of the training allowed mastery of skills in one-fifth the time of UOJT; that is, training objectives were achieved five times faster than using UOJT. If they are unpaid during training, employees will lose fewer wages during the training period if SOJT is used.

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