

CRCST SELF-STUDY LESSON PLAN

LESSON NO. CRCST 182 (TECHNICAL CONTINUING EDUCATION - TCE)



Preparing Education to Engage Adult Learners

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LEARNING OBJECTIVES

- 1. Explain the important aspects for delivering a captivating training session to adult learners
- 2. Describe how to effectively plan a training session
- 3. Discuss presentation methods for training sessions

s technicians become confident in their skills and begin looking for ways to grow and help others, training fellow staff members should be considered. This lesson discusses how technicians can effectively plan and present a training session.

Objective 1: Explain the important aspects for delivering a captivating training session to adult learners

Training sessions are typically based on standards, guidelines and recommendations. They can also be based on a new process or when adding a new piece of equipment, product, monitoring tool or other component into an existing process. The final deliverables of a new process design can be divided in two parts: documentation and training. Both are critical to success.

Supporting documentation for this new process design should be prepared in a way that can be understood by everyone. To achieve this, a crossfunctional team should be part of the content development and review. Training, the final deliverable, must be effective for the new process to be accurate and efficient.

A common mistake in preparing training is focusing only on the content to be delivered without taking into consideration who will be receiving the training. By not addressing the target audience when preparing the training, content comprehension will be significantly reduced and will subsequently create a higher demand for retraining on the same content.¹ There are rules and techniques for preparing training content for specific demographic groups, and this lesson addresses how to prepare training content to engage adult learners.

In adult education, it is important to use current content to immediately capture learners' attention. The training structure and materials used to deliver the content must be appropriate for all participants. Training is teaching, and since it is an art, where and how it is delivered will have a direct effect on the outcome.²

Establishing two-way communication between the trainer and audience will help maintain participants' motivation to learn.² This interaction must be controlled to prevent it from transforming the training into a debate between one participant and the trainer. The two-way communication allows real-time feedback from participants, permitting the trainer to continuously revisit and adapt the content as it is being delivered. It will also support active learning from the audience as participants get involved with the topic, bringing their experience and contributions to the content being delivered. Keep in mind that there is no such thing as a wrong question. Everything a participant voluntarily brings to the training has its importance. By addressing each question respectfully the trainer can create a general feeling of inclusiveness among the participants.3

Another tool used in adult learning is multisensory training. Vision and hearing can be easily included; touching and smelling aspects, however, are not always as easy to incorporate. The objective of this tool is to encourage the trainer to include sensory experiences beyond the common practice of a lecture with presentation slides.⁴

Each training session should include a competency exercise for participants, aimed at measuring how much the audience learned from the content delivered. This can be executed in intervals during the training or at once at the end. It is important for participants to be aware that an evaluation will be part of the process. This will help the trainer to clarify any misconceptions and measure participants' new knowledge of the subject and its impact on their work.⁵ At the end of the exercise, if the trainer discovers participants didn't learn effectively, it can be assumed that either the content was not delivered correctly or more training needs to be conducted.

Objective 2: Describe how to effectively plan a training session

Once a training topic has been determined by a new process design or items added to an existing process, the content needs to be planned. Effective adult training content is typically multidisciplinary, because as experience is acquired throughout participants' professional lives, they tend to become more knowledgeable of other disciplines. Their ability to use that knowledge effectively will help ensure greater attention to the content, thereby improving the outcome of the training.

When adult learners come to a training session, they have expectations, and the trainer needs to prepare the content in a way that focuses on what learners want and need to know as well as the broader value of that knowledge. Learning objectives must be aligned with the content, instructional strategy and activities but should also be sufficiently flexible to allow for minor adjustments as the content is presented. Again, open, two-way communication with the audience while presenting the learning objectives is the first step to getting the audience engaged and delivering a successful presentation.³

When preparing the instructional strategy and activities, trainers should determine the type of infrastructure (tools) available to them. For in-person training, these tools that can include: pointer, digital white board, audio, Wi-Fi for real-time interactions, and more. For in-person training, it is also important to ensure the presentation area is conducive to training. Seating should be comfortable for the duration of the program, and the room should be set up to facilitate the trainer/learner interactions.

Virtual training is another effective way to deliver education, allowing participants in different locations to join simultaneously or creating a learning opportunity that better fits into participants' daily schedules. During the COVID-19 pandemic, virtual training became an important way to safely gather participants for a training event. Unlike in-person training, virtual training may prevent trainers and learners from seeing one another, which can impact the success and outcome of the training. With online training, all participants should turn on their cameras, whenever possible, to help create a more meaningful, engaged learning experience.

The broadcasting system used for online training will determine how the presentation is going to be prepared. The most common presentation software used today is Microsoft PowerPoint, but others are also available and offer similar presentation animations to help improve audience comprehension and engagement. These animations may not work in some broadcasting systems and failing to know the limitations of these systems can mean the difference between a well-delivered presentation and a poorly delivered one.

If the training is prerecorded and made available online at a later date, it is prudent for the trainer to have his or her camera on at all times or at least during parts where "storytelling" is being delivered. In this type of virtual training, corrections to the recorded presentation can be done, allowing the trainer to revisit the presentation strategy and adapt as needed.

Knowing the audience is also important because it allows the trainer to better plan the content. A skilled trainer will have different approaches to the same content based on the knowledge of the participants. Preparing



a slide on a topic and structuring it in a way that can presented using two or three different approaches is an effective strategy.

To become familiar with the audience in advance, a survey can be sent to all participants before the training date or a questionnaire can be prepared and included in the registration process for the training. If it is a training for a single company, the company's Human Resources (HR) department can likely supply valuable information about the participants.

At the beginning of a training session, trainers can better understand their audience by asking for a verbal introduction from each participant and/ or conducting a real-time poll. For inperson training, the polling will likely require participants to use their mobile phones (it is strongly recommended to have a wireless network available). For virtual training, participants can use their computers. Many polling programs are available for this purpose.

When polling participants, multiplechoice questions offer the greatest advantage for gathering pertinent information that will aid training development and implementation. These questions should be prepared to allow the trainer to know participants' level of knowledge and determine if a topic needs to be delivered with a deeper approach.

Objective 3: Discuss presentation methods for training sessions

With information gathered on how the training will be delivered, which tools are available for use and a general knowledge of the participants, the trainer can then prepare educational slides most effectively. When a topic can be presented based on the trainer's knowledge or a previous event, it is best for the trainer to tell the audience about it, sharing their experience and avoiding presenting a slide with the same text that is being shared verbally. When trainers read from slides, learners can become disengaged. (See **Figure** 1) If the topic is based on a product or process, the trainer should take the approach of showing the content being presented, using pictures or video clips. (See **Figure 2**)

Bowie & Dick test

In 1963, a B&D test was developed to help users determine whether NCG were present during a cycle whose physical parameters were within recommended specifications. This international Organization for Standardization (SIC) created a specific document to standardize the construction and performance of tests for the ready-to use B&D type tests that are commercially available. Essentially, the original test was composed of a standardize the construction and performance of tests for the ready-to use B&D type entry the standardize the stack. For the B&D test to detect the presence of NCG, an empty chamber cycle, with the exposure phase set to 342 CG r5 3 min, is required. This configuration reflects resistance to steam penetration and air removal. If air is correctly removed and steam is able to penetrate the stack, the chemical indicator on the tape turns black, indicating a correct cycle. The currently commercially available B&D type tests are more compact and ready to use, than the original handmade towel pack, and they are developed and tested to mimic the original B&D test performance.

Figure 1: This slide has too much text and is likely to limit participant attention and engagement.



Figure 2: Using images to show the content being presented makes this slide more engaging.

Once the training content is prepared, it is good practice to have an outline of the content that will be presented. This serves as a reference to help the trainer remember all of the key points that need to be addressed during the presentation. It is important that the outline is brief and does not serve as a reading source during the presentation.

Today, there are many opinions about the appropriate duration for a training session. The duration should be based on the manner in which the training will be delivered and the trainer's ability to captivate the audience. In-person training with a hands-on component typically takes one to two hours. (See Figure 3) In-person training where the audience is sitting down during the entire presentation, even if the trainer moves around and interacts with participants, should take up to one hour (maximum) and should allow at least 10 minutes for participants' questions. (See Figure 4) For prerecorded presentations, even though participants can pause the video and play it at a later time, a better outcome will be had if the content is delivered in 15-minute (maximum) learning modules.



Figure 3: Hands-on training



Figure 4: An expositive presentation

The trainer's final action is to measure participants' comprehension of the content. Again, this can be done using polling tools. The results from this exercise will show the effectiveness of the training and help identify participants who may become future CRCST SELF-STUDY LESSON PLAN

experts on the topic(s). This type of evaluation has tremendous value for department leaders seeking to find their next five-star professionals.

Conclusion

Following these training approaches and implementing certain tools can set up trainers and learners for the greatest success. Trainers must make educated choices and be prepared to adapt their content and presentation strategies to keep participants engaged, increase their comprehension and navigate unplanned challenges that may arise during the training.

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CRCST Self-Study Lesson Plan Quiz Preparing Education to Engage Adult Learners

Lesson No. CRCST 182 (Technical Continuing Education - TCE) · Lesson expires January 2025

- 1. Documentation and training are critical for:
 - a. Providing initial instruction regarding a piece of equipment
 - b. Avoiding content redundancy c. Knowing participants' level of
 - education on the topic d. The successful implementation of
 - a new process
- 2. Training content should be:
 - a. Developed by the department's educator
 - b. Prepared by a cross-functional team
 - c. Delivered by the department's manager
 - d. All the above
- 3. Training content also should be:
 - a. Based on the number of people who will receive the training
 - b. Targeted to specific technicians c. Based on whomever is receiving the training
 - d. Brief, not exceeding an hour in duration
- 4. Adult education should:
 - a. Be current
 - b. Be appropriate for the entire audience
 - c. Be developed in a way that will immediately capture the audience's attention
 - d. All of the above
- 5. Two-way communication between the audience and trainer:
 - a. Is not important to the success of the program
 - b. Is necessary for at least half of the training program
 - c. Prevents boredom by allowing for casual discussion on topics beyond the scope of the training
 - d. Supports active learning

- 6. A multisensory training approach is more effective than a visual presentation.
 - a. True
 - b. False
- 7. Lesson/training exercises help participants learn the educational content and should be done:
 - a. At the beginning of the lesson only b. At the end of the lesson only
 - c. At the beginning and end of the
 - lesson d. Throughout the lesson
- 8. Adult education should be planned for multidisciplinary audiences:
 - a. True
 - b. False
- 9. When planning a training session, the trainer should:
 - a. Schedule the training after lunch b. Schedule the training at the beginning of the shift
 - c. Ensure the training area is conducive to learning
 - d. Allow one person from each shift to determine the time the education will be delivered
- 10. Audience motivation can be achieved and maintained by:
 - a. Using humor
 - b. Using two-way communication
 - c. Allowing debate between participants and the trainer
 - d. All of the above
- **11.** If training participants did not learn from the presentation:
 - a. More training needs to be conducted
 - b. The program was too lengthy
 - c. The learner did not want to be part of the training
 - d. The program was scheduled at the wrong time

- 12. Slides should be prepared:
 - a. By including as much information as possible on each slide
 - b. With images that support the program's content
 - c. With animation to require less content and heighten learner interest and engagement
 - d. All the above
- 13. During the presentation, the trainer should.
 - a. Read all the content from their notes
 - b. Focus entirely on the slides
 - c. Prevent participants from asking questions that disrupt the flow of learning
 - d. Use a content outline
- 14. When determining the length of a training session, which of the following should be considered?
 - a. The trainer's ability to captivate the audience
 - b. Whether a hands-on component will be part of the training
 - c. The manner in which the training will be delivered
 - d. All the above
- 15. Recorded training sessions are most effective:
 - a. When the presentation is at least two hours in duration
 - b. When participants can replay the information
 - c. When provided as learning modules that do not exceed 15 minutes each
 - d. When sessions are less than one hour in duration

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