

Making Annual Safety Training Fun

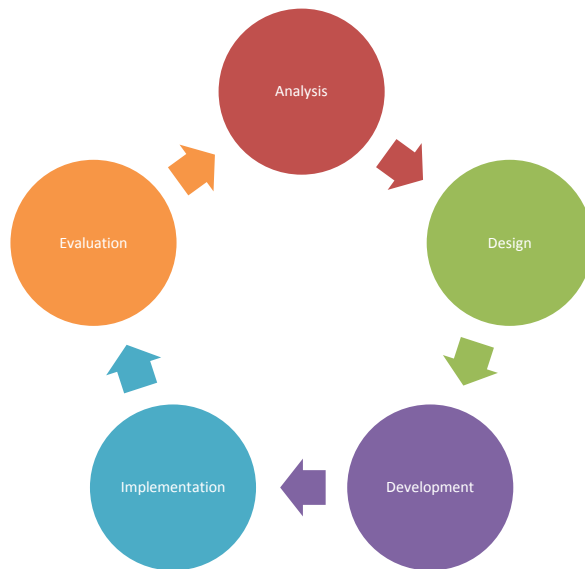
By Julie Quinn, Minnesota Department of Commerce

Do you provide annual safety training to your employees and are looking for ways to make it more engaging?

For the last couple of years at the Minnesota Department of Commerce Weights and Measures Division, we have used a game show format to make the safety review memorable. Last year, our field staff played “Employee Right to Know (ERTK) Jeopardy” at their annual training. This year they played “ERTK Family Feud.” Both years, I think employees were engaged and had fun. This year I tried to consciously apply the Addie Model to our ERTK review so that we could judge the game format on its effectiveness as a safety review technique.

ADDIE stands for Analyze, Design, Develop, Implement and Evaluate

The Addie Model is a guideline for building effective training by breaking the process into five phases – analysis, design, development, implementation and evaluation. When training is ongoing, the process becomes circular. The evaluation of past training informs the analysis of current training needs, which then influences the design of the next training cycle.



Analyzing Training Needs

The Weights & Measures Division’s Safety Committee is responsible for developing the annual safety review. The subjects covered are dictated by the Employee Right to Know (ERTK) Act. ERTK is a Minnesota State OSHA requirement. Most states have similar OSHA requirements although their states’ programs may call them by different names.

ERTK requires that employees receive initial training on the risks, prevention and treatment for injuries related to harmful chemical agents, physical hazards, and infectious agents they may encounter on the job. An inventory of hazardous chemicals must be provided and employees must be trained in how to read chemical labels and Safety Data Sheets (SDS’s). If an employee assumes new responsibilities, the

employee must receive additional training about hazards associated with the new duties. All employees must also receive annual refresher training. A game format is not suitable for the initial training which must cover all of the required topics completely. The committee has more discretion in deciding which topics are covered in the annual review.

In 2013, the safety committee did not consciously use the Addie model to develop the safety review although they did set goals. They knew that they wanted to make the training fun and interesting while covering the most important topics required by ERTK. Once they decided upon a Jeopardy game format, their analysis consisted of picking the five most important points to cover under the headings: physical hazards, chemical hazards, infectious agents, ionizing radiation and general safety (wild card).

When it came time to plan the 2014 safety training, the committee knew from training evaluations that the game format had been very popular, but they did not know how effective it had been. This year's training game was going to be "Family Feud-style" so we decided to use the pre-game survey to accomplish three things:

- Serve as an initial review of safety material;
- Identify gaps where safety materials and training need to be bolstered; and
- Create the answers for the Family Feud game.

Anyone who has ever watched the TV game show Family Feud knows that teams compete by naming answers to categories of items. They score points by matching the answers created in a pre-game survey. The higher the percentage an answer received in the survey, the greater the number of points a team receives when they pick that answer.

Although time limits meant that our game needed to be limited to about 20 questions, the survey itself could be considerably longer. The committee wrote questions covering the fifty most important points we thought our ERTK covered. Although it made tabulating the answers more difficult, the questions were written in a fill-in the blank format. Some examples of questions were:

- Name one stage of heat stress
- Name one piece of personal protective equipment you can use to reduce your chance of a harmful chemical exposure.
- Name one way you can identify potential hazards at an inspection site

The survey was sent out to employees along with copies of past ERTK training materials. They were instructed to review the materials and then answer the questions.

Designing the Review

When the survey answers were tabulated it was easy to see where past training had been ineffective and confusion reigned. The committee now chose questions for the game based on the following criteria:

- **Many employees gave the same incorrect answer.** For example, twenty-three percent of our employees said that the way to know you need hearing protection is to note whether you can

hear someone shouting at three feet. The correct procedure is to note whether you can hear normal conversation at three feet.

- **Employees gave only correct answers, but the best answer was picked by a minority of people.** Only three percent of our employees mentioned the safety program at the inspection site as a resource for identifying potential hazards even though it is a policy that investigators should ask about the safety program at every inspection site.
- **Employees predominantly gave one answer out of a range of equally valid answers.** Fifty-nine percent named shock-absorbing gloves as a way to prevent vibration syndrome, but the committee wanted to remind them that they should also take a ten minute break every hour when using vibrating tools, switch hands often, and maintain equipment properly, paying particular attention to their vehicle suspension and proper tire inflation when driving vehicle scale inspection trucks for long periods.
- **The majority of the employees gave the best answer and the committee wanted to reinforce that they were correct.** Fifty-four percent of our employees knew that slips/trips/falls caused the greatest number of lost and restricted time injuries at the Minnesota Weights & Measures Division. The committee wanted to reinforce that correct answer so that staff would know to be extra vigilant for tripping hazards when they work in the field.

Once the questions were selected, the committee redesigned the game rules to increase the player participation and involvement. In television's Family Feud, teams take turns answering questions. To involve all the field staff in the training, the committee decided to divide the investigators into four teams. Each team had 30 seconds to come up with an answer to each question. All teams revealed their answers before the survey results were displayed. On the TV show, there is no such thing as an incorrect survey answer—if an answer appears on the survey, the team gets the points. In ERTK Family Feud, teams earned points only for answers which were on the survey *and correct*. Incorrect answers were still reported along with their corresponding percentage points but the points were crossed out.

Implementing the Review

The committee expected that denying points for incorrect answers would ignite debate when the answers were revealed, and it did. Players were surprised when their answers were incorrect or had low scores. That led to them asking questions and challenging the safety committee on the answers. People argued pros and cons and referred back to their training materials. The discussions provided the opportunity for active learning to occur because all participants were fully engaged.

Evaluating the Review

There were a number of different levels on which the game could be evaluated. It was easy to assess the game's fun factor. Staff participation was animated and there were positive responses on the employees' training evaluation forms. From an operational standpoint there was room for improvement. Not enough time was allocated for discussion during the game and the group was not

able to get through all twenty questions. Next year the meeting planners will know to allocate more time to the ERTK training. The last and most important evaluation has yet to be completed. In the next few weeks, the employees will be re-surveyed on the questions which were covered in the game to see if the training had any long term effect on how they answered the questions.

Starting the Cycle Over Again

Depending on what the survey shows, the committee may decide to use a Family Feud format again for next year's ERTK review. However, if this game did not have the impact they hoped, they could experiment with a different method. If new safety hazards are identified, or new rules and regulations are promulgated, they may need to design more traditional classroom type training to teach the new material. The important thing is that ERTK training is not static. It is reinvented each year in response to analysis of what material needs to be taught, and the identified knowledge gaps in the target audience.