Introduction

Accelerated Learning principles, applied to safety training, can be very powerful tools - especially when you consider the topics that safety trainers often try to teach. These are often life and death issues and the absorption and retention of this information is extremely important. Traditional safety training usually involves showing a video and then discussing the video as it relates to the company’s program and policies or showing a PowerPoint presentation, reading the slides to the audience and then handing out a quiz. Accelerated learning is much different. Accelerated learning is focused on the results – not the methods. Whatever learning tools work to increase and enhance learning can be called accelerated learning methods. Many safety professionals spend a good amount of their work week training others. Accelerated learning principles can help you spend less time creating training and can help trainees learn faster (and remember more) so accelerated learning applied to safety training can be a win-win situation for everyone.

What is accelerated learning? Let’s first discuss what it is not. Accelerated learning, although it often involves games, imagery and sometimes even music, is not just a bunch of fluff passed off as training. Accelerated training is not a class or class activity that is clever, funny or cute for the sake of being clever, funny or cute. Everything in an accelerated learning class is focused on the results and not the materials or activities themselves. For example, a safety trainer announces that everyone is going to get up play twister with the goal of getting everyone relaxed and “ready to learn”. While this might seem like a fun icebreaker, the twister game is fun only for the sake of being fun. None of the information to be covered in this training is being reinforced by this activity. In an accelerated learning class, we might also play games but the games have a different focus – on the results, instead of the activity. For example, a BINGO game could be played where instead of a number and letter being called out, a clue is called. Instead of numbers being on the BINGO card, answers directly related to the training content are listed. This game is still fun, and gets everyone involved, but includes accelerated learning principles, especially when you have small teams work on each BINGO card instead of individually. A sample BINGO game (Exhibit 1) used in a safety leadership training class as well as the clue sheet (Exhibit 2) that the trainer used follow.
Exhibit 1 - Sample BINGO Game for a Safety Leadership Class
Exhibit 2 - Sample Clue Sheet for Safety Leadership BINGO Game

Instructions: Either pick randomly from the list or pull clues from a box. You can also go around the room and ask each person to give you a number between 1-25 and then read that clue.

Note: Do not reveal the answers until BINGO is called. Read only the clues. (The answers are shown in parentheses after the clue.)

1. Repeating back word for word what someone has said (Parroting)
2. One way to question groupthink (Curiosity)
3. One way to reset direction is to share this (Vision)
4. The acronym used with goal setting (S.M.A.R.T.)
5. Type of motivation that comes from within the person (Intrinsic)
6. Type of motivation that comes from outside, like from a boss (Extrinsic)
7. The best kind of questions to ask (Open Ended)
8. Poor listening skills can lead to (Wasted Time)
9. A way to show someone you listened by telling them what you heard, but in your own words (Paraphrasing)
10. A form of extrinsic motivation (Parties)
11. A way of note taking that allows you to see everything at once (Mind Map)
12. Great for problem solving (Creativity)
13. A way to question groupthink by doing things differently (Risk Taking)
14. The idea of being open to different people’s opinions (Diversity)
15. A way to remind people of your vision (Slogans)
16. A way to lead others to do what they need to do (Sales Skills)
17. A creative and memorable way to get a point across (Storytelling)
18. A leadership strategy that enables you to make changes (Reset Direction)
19. A way to show that you respect employees (Empowerment)
20. A way to guide cooperative action (think SMART) (Goal Setting)
21. A way to empower others (Ask Opinions)
22. An important part of coaching others (Verbal Feedback)
23. Feedback should have this characteristic (Specific)
24. Goals should ask you to do this – a little more than you think you can (Reaching)
25. Negative feedback should be conducted this way (Private)
Principles of Accelerated Learning

The major principles of accelerated learning are:

**Total Learner Involvement Enhances Learning**
Learning should involve the whole mind and body. Learning does not just take place in the head but involves the whole body with all its senses, emotions and receptors. Training should be “SAVI” which means it applies to the somatic, auditory, visual and intellectual parts of a learner. SAVI learning is explained later in this paper.

**Learning Is Not the Passive Storage of Information but the Active Creation of Knowledge**
Training needs to be created by the trainee and not necessarily given to them. When learners learn, they are creating new meanings, associations and neural networks within their existing self. One thing that good safety training always tries to accomplish is to get the trainee to understand how the training applies to him or her in a realistic way.

**Collaboration Among Learners Greatly Enhances Learning**
Good learning is social and we can learn much more by learning with our peers than we can by ourselves. Most of us probably learned in an environment that fostered a great amount of individual competition. When trainees work together in teams, learning can be greatly enhanced.

**Activity-Centered Learning Events Are Often Superior to Presentation-Centered Ones.**
Learning takes place by absorbing many things at once, not one fact at a time. The brain works as a parallel processor and is challenged when it is asked to do many things at the same time. If you ask someone to sit still and just look at a bunch of slides or listen to a speaker, learning will not be as great as if the same material was presented along with an activity that would relate to the material at hand. Activity, or doing the work itself, enhances learning. We have all heard the famous Confucius quote “I hear and I forget. I see and I remember. I do and I understand.” In almost every area of life, we learn by doing. For example, you can have someone read endless safety policies and manuals and watch videos about safely driving a forklift but until the person actually gets on and drives it, real learning will not take place.

Positive emotions are also very important in enhancing learning. If someone is sitting endlessly in a lecture, they probably won’t have positive emotions for very long. Activity can help with these positive emotions. If someone is stressed or bored or angry, their learning will be inhibited. If learning is positive, relaxed and engaging, learning will be increased. Activities can help to keep the trainee engaged.

Also related to activity-centered learning is the use of the “image brain”. Our nervous system is more of an image processor than a word processor so any time we can take concepts and make them visual, the brain is more likely to learn. Activities are a great way to turn the safety concepts we must teach into actual images that will help the trainee learn more and faster.

Finally, activity-centered learning events can be designed in a fraction of the time it takes to design presentation centered ones. When we put together a training class, we often spend a great deal of time on the PowerPoint presentation, the hand-outs and making copies of related materials like sections of OSHA standards. When you realize that people learn much more, and much faster from experiences with feedback, you will begin to see how accelerated training can save you a lot of time.
You may not be able to eliminate the PowerPoint format entirely but the written materials will not be
the focal point and the most important part of your training. The slides can help to initiate, guide and
support the experiences that are used in the class.

How Do People Learn?

There is a great deal of research into how the brain works and how we learn. When this research is
applied to learning, many of the ways we were taught to believe about learning is now no longer
correct. We were most likely taught to learn by sitting still and straight in our chairs all day,
memorizing information and working on our own. Learning was often stressful as we feared being
punished and was very often based on competition. As you will see in the discussion of “SAVI”
below, how we learned was probably not very effective. To include what we now know about how
the brain works and what we know about the physical, mental and emotional needs that must be met
in trainees in order for them to learn, keep the following ideas in mind:

Create a learning environment that reduces stress and creates positive feelings. You would not want
an environment will you single people out and possibly embarrass them. If your trainee is sitting in a
dingy dirty training room where they can hear the company intercom endlessly paging them, they are
not going to be relaxed enough to learn well.

Give your class attendees problem-posing and information accessing exercises that get them to think,
make connections and make meaning for themselves. As mentioned earlier, it is very important with
safety training that we help trainees learn to take the information that is presented to them and then
have them customize it for their specific needs. For example, in a hazard communication training
class, you would not just review a sample MSDS but you would have the trainee 1) locate the MSDS
for a product he or she actually uses on their daily job and 2) ask them to determine which types of
personal protective equipment are required when using that chemical and 3) where they would find
that personal protective equipment. Strive for total learner involvement, i.e., having the trainee totally
and actively involved with full responsibility for his or her own learning.

Design in opportunities for the attendees to collaborate with one another and be social. When your
trainees work together, they will use more of their total brain and learning will increase. If you
present the class with a problem, an exercise or even a game, have them complete it in teams so they
can work together on finding the solution.

Have plenty of opportunities for people to get up and out of their seats and move around. Activity can
increase the learning process, keep the attendees more involved and help chase away boredom.
Getting people physically active and using as many senses as possible will help awaken the body and
improve circulation. This will have a positive impact on learning. The part of the human brain
involved with movement is the motor cortex and it is located right next to the area used for problem
solving. If you restrict bodily movement, you restrict the total brain from functioning at its best.
Learning is hampered when we separate the body from the mind. Many people find it difficult to
concentrate when their bodies are not doing something physical. Think about the people you sit next
to in training classes that are constantly doodling, twirling their pen or bouncing their leg up and
down. These are probably people who learn better when they are active.
SAVI Learning

It is important to point out that people will not automatically learn more because they are standing up and moving, but if you combine physical movement with intellectual activity and use all of the senses, this can have a profound effect on learning. The learner does not need to be active 100% of the time but when periods of activity are interspersed with periods of passive learning, retention will increase. When intellectual activity is used along with all of the senses, this is called “SAVI” learning. “SAVI” stands for:

S – Somatic
A – Auditory
V – Visual
I – Intellectual

Since these 4 elements are all tied together, the best learning takes place when the 4 elements are all used at the same time. Each of these elements is discussed separately below with some ideas for use in an actual safety training class.

Somatic
Somatic refers to the body and includes what we can touch and feel such as hands-on learning activities. This is the activity-centered training discussed above. Obviously, this is not how most of us were taught. Some ways that people can get active in a safety training class include:

- Asking them to act out how something works (such as having them perform a LOTO procedure)
- Asking them to simulate how a structure or function in the human body works (In a respiratory protection class, you can give teams some basic tools and gadgets and ask them to show why particles of different sizes deposit in different parts of the respiratory system)
- Having them act out a communication process (ask them to act out giving feedback to a co-worker when an unsafe act was committed)
- Create large pictograms (this can easily be used with any safety and health topic)
- Have an experience then talk about it and reflect on it (ask the trainees to try a new procedure and then report back to the class at a future training class)
- Complete a project that requires physical activity (have the trainees go out into the workplace and perform an activity related to the class and then return)
- Do an active learning exercise such as a learning game (games such as crossword puzzles and BINGO can be great learning tools for any safety and health topic as long a they are intellectually challenging enough)
- Take a field trip out into the plant and then when you come back, have attendees write, draw or talk about what they learned (ask trainees to go out and inspect the workplace for a particular type of hazard)
- Interview people outside the class (have trainees complete interviews of coworkers on a particular safety topic and report back at the next class)

Auditory
Our ears are continually capturing all types of information and processing and storing it without us even realizing it. When we make our own sounds by talking about this information, it has even more staying power. All learners, especially auditory ones, learn by sounds, dialog, reading out loud, telling someone out loud what they experienced, heard, learned, or by talking to themselves, remembering jingles, listening to audio cassettes and repeating sounds in their head.
Some ways to incorporate more auditory aids into your safety training classes include:

- Having trainees talk about what they are learning (this will work for any safety training class)
- Ask them to talk about an experience (this is especially effective if someone had a close call (or actual incident) they can share with the class)
- Ask them to read out loud or even act something out while reading it (you can ask trainees to take turns reading slides or hand-outs)
- While they are doing some of the physical activities described out loud, make sure they are told to talk through the problem, think out loud, etc. (if they are sent out into the plant on an inspection, instruct them to “think out loud” about what they see good and what they see wrong during their tour)
- Ask them to read something and then paraphrase it for the class (this can be very effective when it is important to go over the actual wording of an OSHA standard)
- Tell the class stories that have the learning concepts imbedded in the material (you can tell stories of your own or that you heard from others as long as they relate to the topic you are teaching)
- Have the trainees pair up and tell each other what they just learned and how they are going to apply it (this works well for any topic area)
- Ask the trainees to create a rap, rhyme or auditory mnemonic out of what they are learning (this also works well for any topic area but remember to have the class work in teams)

**Visual Learning**

Visual acuity, or the amount of visual perception, is present in everyone. Like auditory sensitivity, visual acuity is more pronounced in some people than in others. Visual learners need to “see” what you are talking about. They learn best when they see real world examples, idea maps, pictures and images. Sometimes these people learn even better when they are asked to create their own images such as pictograms or mind maps. Some people also learn very well when they are told to observe a real world situation and then think and talk about it while drawing out the processes, principles or meanings.

To incorporate visual elements into your safety training, you can include:

- Vivid presentation graphics (look for some real photos of your workplace – forget the boring clipart)
- Picturesque language such as metaphors and analogies (think of something that is directly related to your training that will help trainees remember)
- 3-D objects (bring actual objects into the class and if they are too big or heavy, have the class travel to the object)
- Tell vivid stories (as described above, stories can be your own or others but make sure you describe details and a very clear picture in order to capture the attention of the visual learner)
- Ask the class to form groups and develop their own pictograms (this works well with any safety topic)
- Ask the class to go out into the plant to do observations and then report back to the class (you can provide a digital camera to the teams and have them take photos of what they see or you can ask them to sketch it)
- Include colorful decorations and peripherals around the training room (boring training rooms often lead to boring classes – try to make the room fun)
- Incorporate mental exercises, such as visualization, into the class (ask the class to close their eyes and imagine themselves doing something they just learned about).
Intellectual Learning

Intellectual in this case does not mean academic. It refers to the internal intellectual process that is taking place in the trainee’s head when he or she makes connections with the material just learned with experiences that occurred in the past, or when they make plans for using the information just learned. Basically, it is the process the learner uses to make sense of their new knowledge. Learning exercises must sufficiently challenge this intellectual side of the learner. It is extremely important not to leave this part of learning out when you are including the somatic (activity), auditory (hearing), and visual (what they see) elements. Without the intellectual portion, the training may seem frivolous and silly and even a waste of time. To include intellectual learning in your safety training class, consider:

- Problem solving exercises
- Ask the class to analyze experiences
- Ask the class to plan an activity
- Ask the class to distill information
- Ask the class to make up questions (perhaps even make up their own test questions)

Summary

Accelerated learning principles used in safety training classes can make training more effective. It can also decrease the amount of time necessary to create training materials as well as decrease the amount of times that attendees must be in class in order to learn and retain the information. Although accelerated learning principles may be very different from the way we usually learn as adults, these principles can greatly improve your safety training efforts.

Bibliography


