It’s no big secret that people learn best and are more productive when they are in pleasant and satisfying surroundings, particularly where they are motivated. In addition, our high-tech, multimedia world has conditioned us to expect excitement and variety at nearly every turn. So what have you done lately to make your training lively, fast-paced, innovative, participative, and imaginative?

Introducing games into your learning and business environments could be just what the doctor ordered! Yes, of course, learning and business are serious endeavors, but that doesn’t mean they can’t include a little fun too!

What Is a Game?

Games are often confused with ice-breakers, energizers, simulations, puzzles, and other exercises designed to involve the audience in the activity. (See the sidebar “When is a Game Not a Game” on page 8 for more information about these activities.) But a true game requires competition. In a 1968 essay titled “Games for Learning,” C. Apt defines a game as “any contest among adversaries operating under constraints for an objective.” Said another way, a game is an organized, active competition or contest engaged in by players who act individually or collectively as a team. The objective of a game is winning, victory, or payoff. Rules define the method of play and the criteria for winning. An additional requirement of instructional games is the use of a body of knowledge or set of skills that must be drawn on as resources.

Although used for education and enjoyment for centuries, games did not become an important part of classroom teaching strategies until the 1960s. Since that time, the value and popularity of games as teaching tools have grown, and educators have taken the opportunity to generate their own games to meet specific instructional strategies. Games can help students to learn content and develop the ability to work together. Students enjoy the format and are motivated in their learning.

Games are a particular type of play. As play, they should be pleasurable,
light, and fun. Games usually have a defined beginning and an end with a payoff that lets the players know the end has been achieved. In educational games, this end should be reached by skill, knowledge, and/or teamwork, not by luck. There is competition, either against another player or team or against some variable, like the environment. Effective games contain elements of drama, suspense, competition, or cooperation. Games have to make a point, especially if they are being used in training. Their primary function is to provide interactive feedback.

Academic games require specific knowledge in a defined subject area and use intellectual skills that apply beyond the game to course content.

Why Use a Game?

Games challenge our curiosity, invention, and creativity, and they often bring intense enjoyment and laughter. Laughter is tied to strong positive emotions that allow the brain to make better perceptual maps. Motivation operates in all the domains of learning—cognitive, affective, and psychomotor. Using a game motivates and reinforces learning by reducing or eliminating negative emotions, especially those involved in test taking. When games are used as a “test” or review, they can foster teamwork and collaboration that would be absent from a formal testing or review situation. Students who are having fun generate positive emotions, exhibit reduced stress levels, and are more willing to pay attention and participate. Used as an exam, a game can reduce stress, especially in a team setting.

Helping learners to become knowledge constructors is an important part of preparing them for a learning process that will last a lifetime. Classes, however, often focus on facts and figures rather than the development of higher-order mental skills such as problem solving, application, classification, and knowledge construction. Games provide an opportunity for the students to organize material, test their own knowledge, and interact with course content at the concept and rule-learning level. The game format provides a self-testing environment that (a) places the student in a situation where the response “counts,” (b) is non-threatening, and (c) is fun. Using more than one type of media—that is, using a mix of audiovisual components—helps to meet differing learning styles.

Games can help to build teams through collaboration. Players can share and develop alternative viewpoints through collaboration in a non-threatening environment. Games are especially good for teaching people about other cultures and diversity.

When to Use a Game

Games provide a pleasurable structure for testing the level and application of skills and knowledge. They are most effectively used during a training program to:

- Practice and check knowledge
- Identify gaps in knowledge or skills
- Provide opportunity for review and refinement
- Develop new mental relationships and avenues for application of information

Attributes of Training Games

To be effective as a training tool, a game must have several attributes.

A goal—Including a game as part of an instructional sequence should be a planned event. Especially with adult learners, the game should never be used as “time filler.” To understand why they are spending time on the game, the audience must know the goal of the game—what they will learn and how they are going to win. Adult learners need to understand why they are playing the game and to see a clear relationship to the learning. Treat your audience with respect.

An objective—Effective training proceeds from a clear set of learning objectives. A game should fit into the learning objective(s) of the course and have clear objectives of its own. The audience may or may not be informed of the objective or objectives, just as is the case with any learning objectives. Remember that a game must always be relevant to the learning objective(s).

A clear start and finish—Most of us have, at one time in our lives, played a game of Monopoly that seemed like it was never going to end. If so, perhaps you remember feeling frustrated, and maybe you even cheated a little bit to hurry things along. Frustration, cheating, loss of interest, and boredom should not be part of the learning experience. Planning for a game’s insertion at the appropriate place in the instructional sequence and determining a finish time are important to the game’s effectiveness.

Challenges or obstacles—Players should encounter one or more challenges that either mirror the real world or are metaphorical. This encourages the player to apply the learned material and to solve problems, thus developing higher-order thinking skills.

A way to win—The outcomes of a game are not predetermined, and may be based on player decisions and actions. While various outcomes may occur, winning should not be based solely on luck or reliance on random strategies. Relying on luck devalues the work the players put in. Players who lose may experience frustration and disappointment, especially if they worked hard and played by the rules. So the emphasis should be on learning, rather than on winning or losing. Reward player performance. Provide for team wins, or reward additional actions, such as fastest completion or fewest errors.

Rules—Players must know how to operate within the game environment, how to use game pieces, and understand any assigned roles or responsibilities, as well as their relationships to other players. Rules establish appropriate and inappropriate conduct. Outcomes and
directions for winning are set in the rules. When setting rules for scoring, keep in mind that while winning is part of the game, students should not be penalized to the point that they are out of the game. This can lead to hurt feelings and frustration, and it’s not much of a learning experience to be sitting on the sidelines while others are still playing. Team competition is a good way to avoid this. Slower or less vocal students can participate fully without having to face a spotlight. Avoid using zero-sum games in which there is only one winner and everyone else loses. In zero-sum games, losing students may vent their negative feelings by using random strategies, crashing the game, or cheating.

And last, but certainly not least, training games must be...

FUN! There is a clear relationship between learning and fun. When audience members are laughing, they tend to trust and identify with the presenter and one another. They share a common experience, have more energy, and are positive, alert, and responsive; they experience a reduction in fear and build teams and share experiences willingly.

Why Not Use a Game?
Games are not appropriate for all circumstances and audiences. For example, it is difficult, if not impossible, to use a game to impart new information. In addition, beware of students who would crash the system to win, prevent others from winning, or exhibit other inappropriate behaviors. While this type of behavior may be somewhat acceptable in your living room, it is completely inappropriate in an educational setting. The design of the game can mitigate this problem if the designer keeps the core goal of the game and the need for a win/win situation in mind during development.

Developing a Game
Games can be developed from scratch, that is, from the developer’s imagination, or you can recycle a game using a frame (also called a shell). In a frame or shell game, the designer uses an existing game format and adapts it for a specific learning experience. The rules, compo-

When Is a Game Not a Game?

Icebreakers, energizers, simulations, puzzles, exercises, and games—these words are often used interchangeably. Indeed, these activities share many characteristics, but not all are “games” in the true sense of the word. All are, or should be, fun. All involve the audience and are designed to make them part of the activity. Most encourage teamwork and make a learning point. There are, however, some differences.

Icebreakers and Energizers
Icebreakers and energizers are short, quick, participatory exercises. Icebreakers force participants to interact with each other and a facilitator or trainer. Noncompetitive exercises, they are designed to eliminate the anxiety and tension that are sometimes associated with bringing new people together and to kick-start a meeting or event. Energizers can force interaction or not, depending on the boost a group may need. They are designed to provide a brief mental and/or physical break from the core work of the group and reinvigorate them so that they can continue with their work refreshed. Both types of activities are highly creative, and usually very interesting and fun!

Simulations
Simulations are dynamic, evolving exercises that create or recreate some significant aspect of a real situation. Participants are required to accept a role and/or responsibilities and to interact with people, the prescribed environment, or specified tasks. Simulations demonstrate cause-and-effect relationships and usually contain at least two variables. Thus, there may be a variety of outcomes based on participant decisions and actions. The purpose of a simulation is to motivate the learner to become involved and take action. The student has the opportunity to develop and practice new skills in a non-threatening environment. Feedback for success and failure is instantaneous. For example, students learning cardiopulmonary resuscitation using a simulation dummy can receive immediate feedback as to whether they are performing the procedure correctly.

Simulations are commonly employed when the task being learned is dangerous or difficult to perform in a real-world setting. For example, using a flight simulator provides opportunities for practice that, if they occurred on an in-flight airplane, could result in a crash.

Puzzles
Puzzles are devices or problems for testing cleverness, skill, or ingenuity. A puzzle presents a problem or enigma that must be solved. Many puzzles stem from serious mathematical or logistical problems. Some are derived from board games. Others have been designed for the sole purpose of being brainteasers. While there are many types of puzzles, jigsaw puzzles, crossword puzzles, and logic puzzles may come to mind quickly. All three of these types of puzzles include “pieces” (physical pieces, words, and items of information, respectively) that are designed to fit together in a specific way. Putting the “pieces” together accurately will give participants the correct answer. Doing this with speed can provide another level of accomplishment and can add competitiveness to the exercise. Participants can work individually or together to solve puzzles. Puzzles make very good team-building exercises.

Exercises
Exercises are activities planned to motivate and involve the audience; they may include icebreakers, energizers, puzzles, or games. Books of educational “games” typically contain many more participatory exercises than true games. In one publication, for example, a list of fifty games contained only five that met the author’s definition of a “game”; the rest were participatory exercises. These may have been great fun and motivational for the audience, but they were not games.
nents, and player actions and interactions may be similar to those of the original game but are usually not identical. For example, games like Jeopardy, Bingo, and Who Wants to be a Millionaire? can be adapted for use in the classroom. One popular frame game is the TV show Wheel of Fortune, which is a modified version of the children’s game Hangman. Whether you are designing from scratch or using a frame, two steps are required.

1. First, identify the goals and objectives of the game, its place in the overall instruction, and the age and skill level of the players. (Know your audience!) What is the point of the game? Perhaps the goal is directly related to a course and designed to reinforce or expand upon the information covered. In other cases, the objective may be to teach diversity, culture, empathy, or communication skills. In many cases, the outward face of the game is different from its “deep structure” or core objective. The deep structure identifies the skill(s) to be learned. Are these skills intellectual, verbal, motor, or some combination? For example, if the skill to be reinforced is recall, a game based on Bingo or Tic-Tac-Toe may be appropriate. However, if problem solving is the objective, a game that requires students to select and apply rules would be in order. It’s tempting to select the format first, but this may lead to a failure to teach the desired skills.

2. The next step is to determine the “surface structure,” that is, the events permitted by the game structure—the format. Surface structure determines the way the game is actually played and includes the length of play, the roles of participants (single player, team, team composition, etc.), the rules, and components—the materials and supplies, including “hardware” such as game pieces, game board, money, and draw cards. It dictates how the game is played and what it looks like. Consider, for example, the surface structure for the game Scrabble. On the surface, Scrabble is a board game in which individual players take turns using lettered tiles to build words, for which they receive points. In most card games, the surface structure involves building sets or groups of like items. The format of the game may be quite elaborate, requiring the design or modification of a board or the creation of special game pieces, or a simple pencil and paper may be sufficient. In either case, planning is involved.

Surface structure also includes instructions on how to play the game and how the game flows. Do the players take turns, spin a wheel, roll dice, answer questions, or take other prescribed actions? In what order do events occur? How do players know they have won or that the game is over? Remember that instructional games should not be based entirely on luck or cause players to be eliminated. Then, check the surface structure against the deep structure to make sure the method of play supports your educational objectives.

Debriefing After a Game

It’s important to spend time debriefing with participants after a game. It bears repeating that most adults do not want to spend time “just playing.” They need to see the relevance of the activity. To meet this requirement, the activity should have one or more clear connections to the workplace. Debriefing helps participants to clarify these connections. You can help participants to extend their learning by asking, “What can you take from this and apply to your job?” Some very interesting and insightful answers are likely to follow. The instructor benefits from the debriefing process every bit as much as the students. In some cases, the debriefing is actually part of the objective of the game play, allowing for an analysis of student knowledge and an assessment of the class instruction.

There should be an element of “aha!” Participants will see the relevance of a game—they’ll “get it”—at different points during the game or during the debriefing session. If one or more participants are lagging behind the others here, reinforce the main points of the game. Make sure that all participants understand the key points and can connect them with the learning objectives.

Consider that participants are likely to have certain feelings about a game, so be sure to allow time to elicit these feelings. If there were any conflicts between teams or team members or with the rules, clarify and resolve these issues. And finally, close and move on.

Conclusion

We hope you’re now starting to think seriously about incorporating games (and other participatory activities) into your business environment to enhance participant engagement and motivation, to bolster creativity and innovation, and to make learning or work more fun. We’re convinced that the use of games could contribute significantly to the success of your learning and business programs. People might actually look forward to attending these events. Imagine that!

Resources


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