

CREATIVE PROBLEM SOLVING



INSTRUCTOR GUIDE

1-DAY COURSE

CREATIVE PROBLEM SOLVING

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Instructional design and learning philosophy

We are committed to providing the best core-skills content possible for Instructor-Led Training (ILT). The following principles are applied in the development of programs:

Sound Instructional Design

All course content is developed using a variety of research techniques. These include:

- Brainstorming sessions with target audience
- Library research
- Online research
- Customer research (focus groups, surveys, etc.)
- Subject Matter Experts (SME)
- Interviews with trainers

Expert instructional designers create imaginative and innovative solutions for your training needs through the development of powerful instructional elements. These include:





- Learning objectives — effective tools for managing, monitoring and evaluating training
- Meaningfulness — connects the topic to the students' past, present, and future
- Appropriate organization of essential ideas — helps students focus on what they need to know in order to learn
- Modeling techniques — demonstrate to students how to act and solve problems
- Active application — the cornerstone to learning — helps students immediately apply what they have learned to a real-life situation
- Consistency — creates consistent instructions and design to help students learn and retain new information
- Accelerated learning techniques — create interactive, hands-on involvement to accommodate different learning styles

Application of Adult Learning Styles

Adults learn best by incorporating their personal experiences with training and by applying what they learn to real-life situations. Our experienced instructional designers incorporate a variety of accelerated learning techniques, role-plays, simulations, discussions, and lectures within each course. This ensures that the learning will appeal to all learning styles and will be retained.

Course timing

Chapter One: Creative Problem Solving






Type of Activity	Segment	Time
	Defining creativity	20
	Overcoming common misperceptions	15
	Exposing creativity myths	15
	Managing creativity and time constraints	10

Chapter Two: Developing Rough Ideas




	Presenting ideas	20
	Recognizing the political game	15
	Overcoming criticism and negativity	20
	Recognizing creative individuals	15
	Promoting the ideas of others	15
	Getting serious about humor	15

Course timing

Chapter Three: Strengthening Your Problem Solving Skills

Type of Activity	Segment	Time
	Defining problem solving	10
	Following the laws of problem solving	20
	Learning from failure	15
	Taking risks	10
	Assessing your creative style	30

Chapter Four: Making Creative Ideas Practical

	Inspiring creativity	30
	Mind mapping	20
	Using forced connection	10

Course timing

Chapter Five: Identifying Potential Solutions

Type of Activity	Segment	Time
	Generating ideas	20
	Teaming and ideas	15
	Using brainstorming to identify solutions	10
	Looking at different perceptions	20
	Evaluating ideas	20

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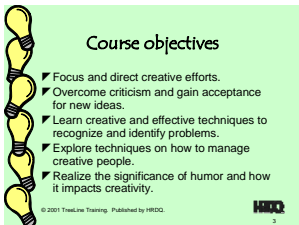
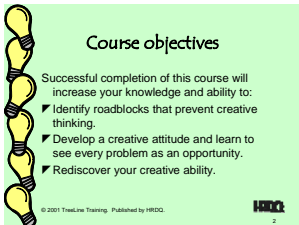
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Course objectives

Successful completion of this course will increase your knowledge of and ability to:

- Identify roadblocks that prevent creative thinking
- Develop creative attitudes and learn to see that all problems have opportunities
- Rediscover your creative ability
- Focus and direct creative efforts
- Overcome criticism and gain acceptance for new ideas
- Learn creative and effective techniques to recognize and identify problems
- Explore techniques for managing creative people
- Realize the significance of humor and how it impacts creativity



Chapter One

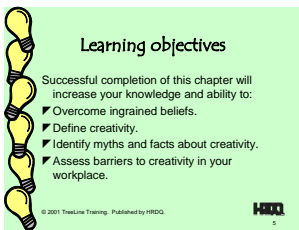
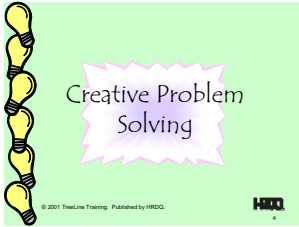


CREATIVE PROBLEM SOLVING

Learning objectives

Successful completion of this chapter will increase your knowledge of and ability to:

- Define creativity
- Overcome ingrained beliefs
- Identify myths and facts about creativity
- Assess barriers to creativity in your workplace



Defining creativity

Creativity is coming up with new ideas and making them practical.

"Creativity is the skills to originate the new and to make the new valuable."
 — John G. Young, "What is Creativity?" Journal of Creative Behavior, 1985.

Creativity vs. innovation

Creativity is a process of generating something new that has value. There are many original ideas and concepts, but some may not have value and may not be considered creative.

Innovation is the process of creating something new that has significant value to an individual, a group, an organization, an industry, or a society. An innovation is a creation that has significant value.

Consider examples of new ideas. Based on the definitions of creativity and innovation above, determine if the new idea is creative or innovative. Compare and contrast the characteristics of creativity and innovation.

Creativity	Innovation
Example: Rock climbing marathon with proceeds that benefit a charitable cause. Winners earn points for professional status.	Example: Rock climbing marathon

"Imagination is more important than knowledge."
 —Albert Einstein

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Which group is most creative?

- ✔ NASA Engineers
- ✔ First graders
- ✔ Modern painters
- ✔ Homemakers
- ✔ Journalists
- ✔ Auto mechanics
- ✔ Architects
- ✔ College students
- ✔ Movie producers

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Evaluate your answer

- ✔ Age 40 – 2% creative
- ✔ Age 30 – 2% creative
- ✔ Age 25 – 2% creative
- ✔ Age 17 – 10% creative
- ✔ AGE 5 – OVER 90% CREATIVE

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Activity: Facilitate a discussion comparing and contrasting creativity and innovation. Tell participants to write more comparisons in the table on this page. Ask for examples of new ideas and categorize them as either creative or innovative.

Which is it?

<p>Creativity</p> <ul style="list-style-type: none"> ✔ The process of generating something new that has value ✔ There are many new ideas, but some may not have value 	<p>Innovation</p> <ul style="list-style-type: none"> ✔ The process of creating something new ✔ It has significant value to an individual, group, an organization, society, or an industry.
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Participants need to understand how much creativity impacts the bottom line. Discuss bullet points as examples of how creativity and innovation are essential for businesses to survive as the global market and economy stand today.

Defining creativity

Maintaining innovation and creativity

Both creativity and innovation are necessary to stay alive in today's business world. Organizations will continue to be confronted by strategic challenges unmatched in business history. Listed below are statements that reiterate the need for innovation, change and constant improvements. To successfully withstand these challenges, businesses must draw upon creativity and innovation regularly.

New technologies are being introduced every day.
Global markets dominate the basis of our production cycles.
A diverse workforce is changing values and expectations.
Companies that can bring out a new product three times faster than their competitors enjoy huge advantages.
The world is changing from an industrial-based to a knowledge- and information-based economy.
As our population increases, competition increases as well.
Not only is the business environment changing rapidly, but it is becoming more complex.
Shareholders and other constituents are making greater demands on organizations.


Overcoming common misperceptions

There are many myths and ingrained beliefs about creativity. Let's compare facts and myths. First, check only the boxes in front of the true statements below.

- Creativity generates too many options.
- I can either be creative or get work done.
- There are too many risks involved with creativity and I may make a mistake.
- Creative people are weird and flaky.
- I feel more comfortable with black and white; gray makes me nervous.
- Creativity wastes time and money.
- I do not work in a creative environment.
- Creativity is too disruptive.
- I am not a creative person.
- You are either born creative or you are not; you cannot learn to be creative.
- Only people with high IQs can be creative.
- People over 40 cannot be creative.
- Ideas pop into your head; you do not have to think about them.
- Creative people are discovered by others. They do not have to market their ideas.
- The best creations and inventions have already been discovered.
- Play is frivolous and cannot possibly be appropriate in the workplace.
- Creativity is too emotional for practical people.

Activity: Completion of this activity will reveal the ingrained beliefs and myths about creativity. They are the statements listed on this page.

Have participants read statements and check any that are true. Debrief this exercise; there are no true statements. Rewrite any two false statements to make them true (on the next page). Ask a few volunteers to share their rewrites.




Creative environment

"The question isn't whether you want more creative employees; you've already got them. The real question is whether you're going to recognize their creativity and figure out how to use it better."

—Stan Gyskiewicz,
The Center for Creative Leadership

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Overcoming common misperceptions

Next, rewrite any two of the false statements from the preceding statements.

Statement One

Statement Two

Exposing creativity myths

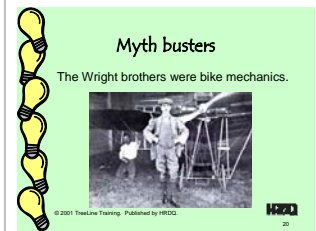
A myth is a fictitious belief about something that has developed over time. It is a myth that most great inventions were made by individuals with well-developed skills in their field.

A sculptor developed the ballpoint pen.

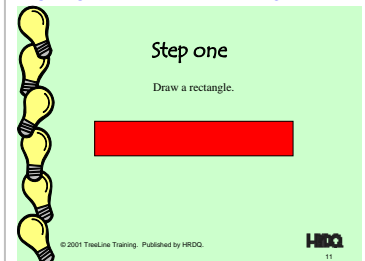
The inventor of Kodachrome film was a musician.

A journalist envisioned the parking meter.

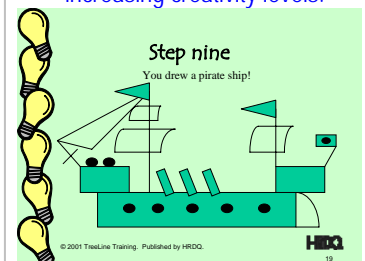
The Wright brothers were not aeronautical engineers; they were bike mechanics.



Activity: Participants will now draw a pirate ship. You will guide them step-by-step through the process. **DO NOT TELL THEM THIS.**

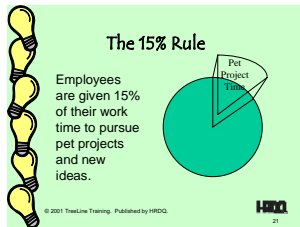


1. Say, "Now you will complete an activity to determine how well you follow instructions."
2. Instruct them to use a blank piece of paper. Use the nine slides to guide them step-by-step through this drawing.
3. Do not reveal what they are doing until all nine steps are complete.
4. Debrief asking, "How many of you would have said 'I can't' if I had asked you to draw a pirate ship?" For those who say they could have drawn the ship, ask them why. They will most likely say they had done it before.
5. Consider what else you might try. This is a step toward increasing creativity levels.



Just as "location, location, location" is key in real estate, corporate climate is key to creativity. Discuss ideal working conditions for business creativity. Companies that instill a safe environment to promote creativity make it easier for employees to generate new, creative ideas. An example is the ratio of praise to criticism.

3M introduced the concept of the 15% Rule. It is one of the company's six innovation drivers. The other five are: 1) company vision is to be the most innovative enterprise in the world, 2) foresight means making sure the market is ready for the new idea, 3) set objectives to push employees to innovate vs. business as usual, 4) communication and interdepartmental networking is strongly encouraged so expertise is combined, and 5) three peer recognition awards are given annually for innovation.



Managing creativity and time constraints

A creative environment provides many of the things listed below:

- Grants idea time
- Insists on trust and openness
- Allocates budget for an appropriate physical environment
- Encourages risk-taking
- Keeps conflicts to a minimum
- Recognizes the benefits of playfulness and humor
- Provides a forum for debate
- Keeps red tape to a minimum

The 15% Rule

The 15% Rule refers to allowing employees to spend 15 percent of their work time pursuing their own projects.

List the creative challenges found in your workplace:
