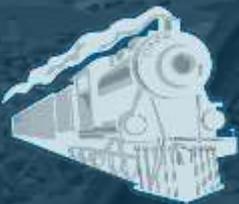


Facilitator Guide

# Learning Theory I



**Train Systems**

### About this document

Jun-17

Version: .3

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QA/QC Manager:

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# Facilitator Overview

# Getting Started

## What is the purpose of this guide?

This guide provides a master reference document to help you prepare for and deliver this course.

## What will I find in the guide?

This Facilitator Guide is a comprehensive package that contains:

- the course delivery sequence
- lists of necessary materials and preparation tasks
- presentation scripts and key points to cover
- instructions for managing exercises, assessments, and other instructional activities
- participant materials

## How is this guide organized?

Below are the types of modules you will see in this guide.

Module	Description
Facilitator Overview	The <i>Facilitator Overview</i> contains all of the background information for the course, such as why this course was created, performance objectives, preparation tasks, and a breakdown of the course, referred to as <i>Training at a Glance</i> .
Introduction	The <i>Introduction</i> provides an overview of the course for the participants and outlines the performance objectives. It also explains how the course ties into the Trains Strategic Plan.
Content modules	The course itself is divided into modules, each of which is comprised of one or more lessons. A module is a self-contained portion of the course, usually lasting anywhere from 20 to 90 minutes, while a lesson is a shorter (typically five to 20 minute) topic area.  Each module begins with a summary showing the lessons, topics, learning objectives, and durations for that module. Use these summary pages to get an overview of the module that follows.
Appendix	The <i>Appendix</i> contains the Safety Briefing Guidelines; other documents/topics can be added as needed.

## How will this guide help me facilitate?

The presentation scripts and key points to cover are described with action-driven text and accompanied by an icon and any related participant materials, such as PowerPoint slides or Participant Guide content. See the example below.

Icons	Actions	Participant material (e.g., PowerPoint slides)
	<p><b>Read</b> each courtesy point.</p> <p><b>Ask:</b> <i>Is there anything you would like added to the list?</i></p> <p><b>Obtain</b> agreement on these courtesy points (e.g., by asking for a verbal agreement or by raising hands.)</p> <p><b>Explain</b> that if anyone does have an issue with one of the items and would like to discuss it privately, he/she should see you before the end of the day.</p>	

Sample facilitator notes from the Facilitator Guide

## Icons

The icons are designed to help catch your eye and draw quick attention to “what to do and how to do it.” The following icons are used in this guide to help guide you through the facilitator notes.

Icon name	Icon	What the icon signals you to do
Activity		Facilitate an activity (e.g., individual, pair, triad, or whole class activity)
Assessment		Administer an assessment (e.g., a quiz or test)
Break		Initiate a break in the instruction
Knowledge Check		Check for understanding before continuing onto the next topic

## Facilitator Guide

Icon name	Icon	What the icon signals you to do
Flip chart		Utilize flip chart paper
Handout		Distribute a handout
Key point		Emphasize something in the content
Objectives		State the objectives of the module or of a lesson
Participant Guide		Refer to a page in the Participant Guide
PowerPoint slide		Refer to a slide in the PowerPoint presentation
Role play		Facilitate a role play
Speaker		Indicates what a guest speaker should do/say
Transition		Transition from one module or topic to another

# The Course in Perspective

## Why this course?

In November 2014, the Federal Railroad Administration (FRA) published 49 CFR Part 243 which requires railroads:

- to develop and submit a training program to FRA for approval;
- to designate training qualifications for each occupational category of employee; and,
- to conduct periodic oversight of their employees.

As part of the training program, railroads must have Designated Instructors (DI) that have “adequate knowledge of the subject matter under instruction and, where applicable, has the necessary experience to effectively provide formal training of the subject matter” (49 CFR 243.5). To meet this requirement, Trains has identified the need to qualify our instructors in the following areas:

- Subject Matter Expert
- Training Delivery
- Training Design

To qualify instructors in Training Delivery and Training Design, Trains has identified the requisite competencies and they are provided in Attachment 1. Moreover, Trains is working with our partners to create courses to develop instructor Training Delivery and Training Design competencies. The courses to be designed and developed for Training Delivery are:

- Learning Theory I
- Facilitating Learning
- Evaluating Learning I

The courses to be designed and developed for Training Design are:

- Learning Theory II
- Instructional Design Theory and Practice
- Instructional Development Practice
- Evaluating Learning II

Upon successful completion of the learning experience, the employee will be referred to as a:

**Designated Instructor:** A person designated as such by an employer, training organization, or learning institution, who has demonstrated, pursuant to the training program submitted by the employer, training organization, or learning institution, an adequate knowledge of the subject matter under instruction and, where applicable, has the necessary experience to effectively provide formal training of the subject matter.

## Performance Objectives

At the end of this course, participants will be able to do the following:

- Placeholder for course performance objectives
- Placeholder for course performance objectives
- Placeholder for course performance objectives

## Course Length

The Learning Theory I course is estimated to take X hours and X minutes.

---

**Note:** This is an estimated duration for the training; it may change as the learning experience is developed, implemented, and evaluated.

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## Participant Description

The following provides a summary description of the participants for this course. Classes may have different mixes of participants. Use this information as a baseline for participant knowledge and skills experience, educational backgrounds, and factors that may influence participant learning preferences.

Job Title	Average Age	Average Years of Trains Experience	Education	Sex	Total Number of Instructors
Career Professional	35.34	5.14	90% Post High School	56% Male	37
Sr. Career Professional	45.86	10.78	85% Post High School	73% Male	120
Combined	40.6	9.48	87% Post High School	69% Male	157

## Prerequisites

Prior to enrolling in the Training Delivery curriculum, participants must already be identified as a Subject Matter Expert (SME) in their respective fields and be employed as an Trains Trainer.

# Course Preparation

## Materials & Preparation

The purpose of the list below is to help with initial course preparation. For material and preparation lists specific to each module, review each module's *Material and Preparation* section **before** facilitating the course.

Materials	Preparation
Safety briefing <sup>1</sup>	Identify locations of safety briefing items (e.g., emergency exits, fire extinguishers, etc.) using the guidelines in the <i>Appendix</i> .  <b>Note:</b> <i>For courses that last more than one day, a safety briefing must be completed before class every day. Ask different participants to conduct the safety briefings after the first day.</i>
One Facilitator Guide per instructor	
One Participant Guide per learner	
Sign-in sheet	
Pens or pencils	
PowerPoint presentation	
Projector	
Flip chart paper	
Markers	
Computer	
Extension cord(s)	
Reference materials	Marriam, S. B., & Bierema, L. L. (2013). <i>Adult learning: Linking Theory and practice</i> . Hoboken, NJ: Jossey-Bass.  Olson, M., & Hergenhahn, B. (2013). <i>An Introduction to Theories of Learning 9<sup>th</sup> Edition</i> . Boston, MA: Pearson.

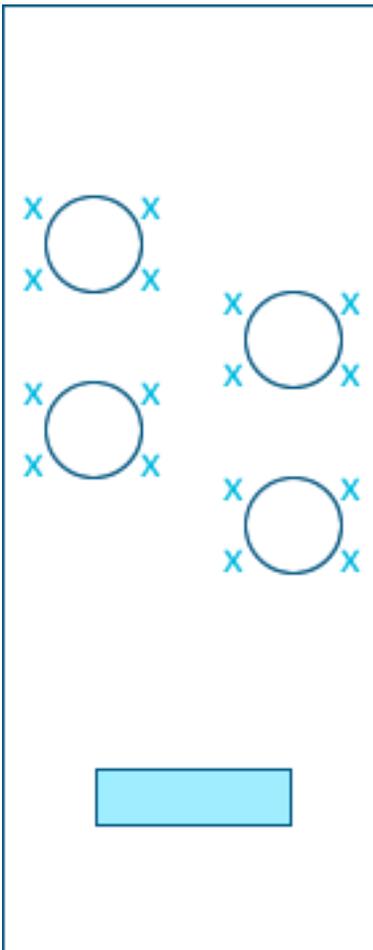
<sup>1</sup> A safety briefing **must** be conducted at the beginning of each day, once all participants are present and before the learning session begins.

## Room Set-Up

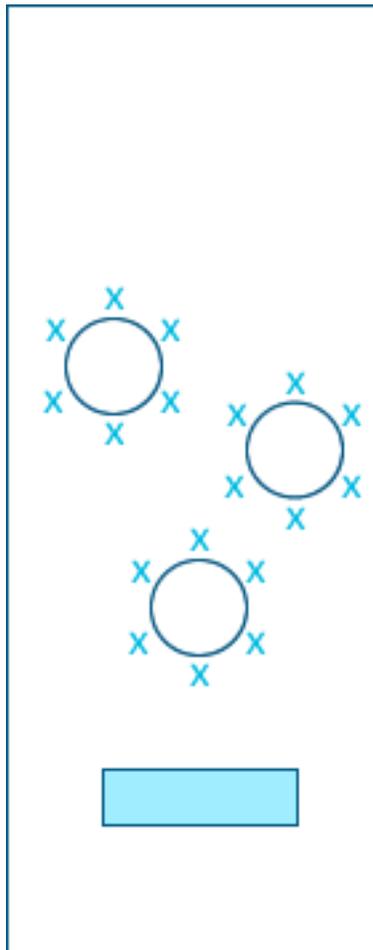
The room set-up described below is ideal for this course. If this set-up is not available, do your best to facilitate the content and activities with the resources available.

In an ideal learning environment, the tables will be arranged in pods to help facilitate organic learning and relationship building between learners. If this can't be accomplished, a U-shaped formation or a table shaped for groups is recommended. The goal is to foster collaboration, not impede it.

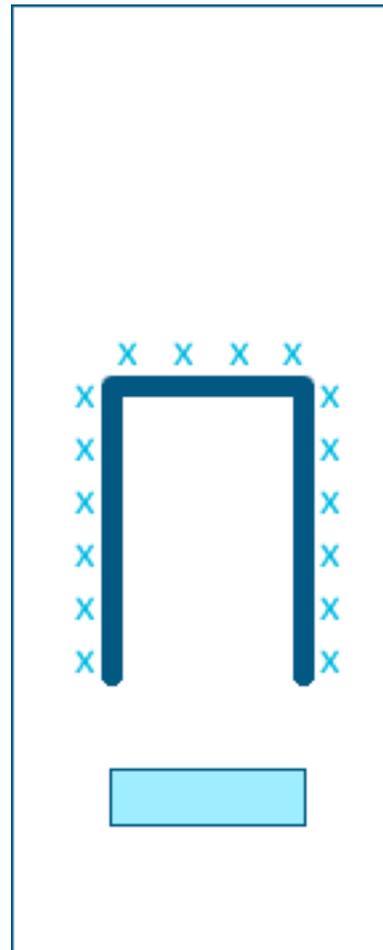
Set-up option #1



Set-up option #2



Set-up option #3



Room set-up examples

# Introduction

# Materials & Preparation

Materials	Preparation
Ice breaker	N/A. No specific materials or preparation needed.

# Timing & Agenda

Duration	Lesson title	Topics	Learning objectives
15 minutes	Course overview	<ul style="list-style-type: none"> <li>▪ Welcome</li> <li>▪ Performance objectives</li> <li>▪ Trains Vision, Mission, and Goals</li> <li>▪ Trains Safety Statement</li> <li>▪ Courtesy points</li> </ul>	N/A
45 minutes	Ice breaker	<ul style="list-style-type: none"> <li>▪ Activity: Ice breaker</li> </ul>	N/A
20 minutes	Edward Thorndike - Lecture	<ul style="list-style-type: none"> <li>• Background</li> <li>• Learning is incremental, not insightful</li> <li>• Belongingness</li> <li>• Law of Readiness</li> <li>• Revised Law of Readiness</li> <li>• Spread of effect</li> <li>• Identical elements theory</li> </ul>	<ul style="list-style-type: none"> <li>▪ Explain Thorndike’s idea of incremental, not insightful learning</li> <li>▪ Apply Thorndike’s idea of belongingness</li> <li>▪ Discuss Thorndike’s Law of Readiness</li> <li>▪ Discuss Thorndike’s Law of Effect</li> <li>▪ Apply Thorndike’s identical elements theory of training transfer</li> </ul>
1 hour	- Exercise	<ul style="list-style-type: none"> <li>• Practical Exercise</li> </ul>	
20 minutes	Break	<ul style="list-style-type: none"> <li>• Break</li> </ul>	N/A

20 minutes	BF Skinner - Lecture	<ul style="list-style-type: none"> <li>• Background</li> <li>• Conditioning</li> <li>• Learning</li> <li>• Reinforcement</li> </ul>	<ul style="list-style-type: none"> <li>▪ Explain what Skinner defined as operant conditioning</li> <li>▪ Discuss Skinner's ideas on reinforcement</li> <li>▪ Discuss Skinner's ideas on punishment</li> <li>▪ Apply Skinner's ideas on learning</li> </ul>
1 hour	- Exercise	<ul style="list-style-type: none"> <li>• Practical Exercise</li> </ul>	
1 hour	Lunch	<ul style="list-style-type: none"> <li>• Lunch</li> </ul>	N/A
20 minutes	Ivan Pavlov - Lecture	<p>Background</p> <p>Excitation and inhibition</p> <p>Irradiation and Concentration</p>	<ul style="list-style-type: none"> <li>▪ Describe Pavlov's idea of conditioned response</li> <li>▪ Apply Pavlov's idea of dynamic stereotype</li> <li>▪ Apply Pavlov's idea of generalization</li> <li>▪ List challenges associated with Pavlov's theories</li> </ul>
1 hour	- Exercise	<ul style="list-style-type: none"> <li>• Practical Exercise</li> </ul>	
20 minutes	Edwin Guthrie - Lecture	<p>Background</p> <p>One Law of Learning (also known as Law of Contiguity)</p> <p>One-Trial Learning</p> <p>Regency Principle</p> <p>Learning and Practice</p> <p>Forgetting</p> <p>Breaking Habits</p> <p>Punishment</p> <p>Transfer of training</p>	<ul style="list-style-type: none"> <li>▪ Apply Guthrie's One Law of Learning</li> <li>▪ Explain Guthrie's idea of learning and practice</li> <li>▪ Apply Guthrie's Regency Principle</li> <li>▪ Apply Guthrie's methods for breaking habits</li> <li>▪ Explain Guthrie's idea of training transfer</li> </ul>
1 hour	- Exercise	<ul style="list-style-type: none"> <li>• Practical Exercise</li> </ul>	
20 minutes	Break	<ul style="list-style-type: none"> <li>• Break</li> </ul>	N/A
30 minutes	Assessment	<ul style="list-style-type: none"> <li>• Assessment</li> </ul>	N/A

# Course Overview

**Welcome** participants to the session and **thank** them for making the time to attend.

**Introduce** yourself and any other facilitators, support people, or observers.

**Explain** that we will start with a safety briefing, which you will conduct today and would like volunteers to do it after that (if class is more than one day).

**Conduct** a safety briefing following the *Safety Briefing Guidelines* document (located in the *Appendix*), covering the following topics:

- Daily security alert and daily safety tip of the day
- Preparation prior to evacuation
- Evacuating the building
- Emergency contacts
- CRP
- AED
- Active shooter threat
- Location of restrooms

**Identify** who will conduct tomorrow’s safety briefing (if class is more than one day).



**Read** the Course overview.

**Cover** the content in the *Course overview* section.

**Explain** to students what the course will cover and the learning experience they can expect.



# Performance Objectives



**Say:** *Performance objectives describe what you should be able to do at the end of this course. In other words, what you should be doing back on the job.*

**Read** the performance objectives.



**Check** for understanding.

**Ask:** *What questions do you have about this course before we continue?*

# Trains Vision, Mission, & Goals



**Say:** Here are the Trains Vision, Mission, and Goals, which are included in the course materials, so we all understand how what we are doing in this classroom supports the company.

- The Vision Statement communicates what we aspire to do as a company; it's like a photograph of Trains in the future.
- The Mission Statement clarifies how we will achieve our Vision; it says what Trains does today.
- The goals are measurable signs of our progress; are we meeting our expectations?



# Trains Safety Statement



**Say:** Trains remains committed to being the safest passenger railroad in the country, where every passenger and employee goes home injury-free every day.

**Ask** the following questions or **say** the bullet points below:

- When is safety important?  
*At all times. It is an expectation for all of us to demonstrate safe behaviors at all times. Whether walking to a train or working in a yard, safe behaviors are expected; it's a condition of employment.*
- Who is responsible for safety?  
*Working safety is everyone's responsibility. We need to manage ourselves. We can't wait for someone to "catch us" or "correct us" to be safe.*
- What is needed for you to perform safely?  
*Education and accountability. Trains is committed to providing training and education to everyone on safe behaviors and work practices.*  
*Accountability is on you. **You** are accountable for demonstrating safe behaviors at all times... hence the statement, "Safety start with **me**."*



# Courtesy Points



**Read** each courtesy point.

**Ask:** *Is there anything you would like added to the list?*

**Obtain** agreement on these courtesy points (e.g., by asking for a verbal agreement or by raising hands.)

**Explain** that if anyone does have an issue with one of the items and would like to discuss it privately, he/she should see you before the end of the day.



## Activity: Ice Breaker



**Explain** the activity purpose and instructions with participants.

**Introduce** the activity as: *Good Times and Bad Times*

This activity has participants reflect on past learning experiences they have been a part of and what made the experience either good or bad. Each group will report out the good time and bad time and what made it that way. This will initiate participants to think about how learning experiences affect them which leads into the core learning for this course.

Activity Steps:

- Break the class into groups of 3 participants each.
- Have each group pick a person to:
  - share a story of a good learning experience and what made it good;
  - share a story of a bad learning experience and what made it bad; and,
  - capture a brief summary of each story and the *what* and *why* it was good or bad. This person will introduce to the class who are the group members and report out a summary of the two stories.
- Ask each group's report out person to share the team's:
  - member names and department
  - a two minute summary for each story and what was good or bad

Timing:

- |            |   |
|------------|---|
| 3 minutes  | Explain the activity to students  |
| 3 minutes  | Divide students into groups of three members each   |
| 10 minutes | Have the groups introduce each member and share their stories in the group  |
| 30 minutes | Have each group share the team members and story summaries with the class (Assume 18 participants/class = 6 groups times 5 minutes per report out.) |



**Listen** closely to each group's sharing of their good or bad learning experiences.

**Identify** key learning styles the class is made up of (David Kolb) as a process of doing formative analysis. This can be used by the instructor during class delivery to help inform if class activities are working well or need to be adjusted slightly.

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## Summary

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**Check** for understanding.

**Ask:** *What questions do you have before we begin?*

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# Behavioral Learning Theory

## Materials & Preparation

Materials	Preparation
N/A	No additional materials or preparation needed for this module.

## Timing & Agenda

Duration	Lesson title	Topics	Learning objectives
20 minutes	Edward Thorndike - Lecture	Background Learning is incremental, not insightful Belongingness Law of Readiness Revised Law of Readiness Spread of effect Identical elements theory	<ul style="list-style-type: none"> <li>▪ Explain Thorndike's idea of incremental, not insightful learning</li> <li>▪ Apply Thorndike's idea of belongingness</li> <li>▪ Discuss Thorndike's Law of Readiness</li> <li>▪ Discuss Thorndike's Law of Effect</li> <li>▪ Apply Thorndike's identical elements theory of training transfer</li> </ul>
1 hour	- Practical Exercise		
20 minutes	Break	• Break	N/A
20 minutes	BF Skinner - Lecture	Background Conditioning Learning Reinforcement	<ul style="list-style-type: none"> <li>▪ Explain what Skinner defined as operant conditioning</li> <li>▪ Discuss Skinner's ideas on reinforcement</li> <li>▪ Discuss Skinner's ideas on punishment</li> <li>▪ Apply Skinner's ideas on learning</li> </ul>
1 hour	- Practical Exercise		
1 hour	Lunch	• Lunch	N/A
20 minutes	Ivan Pavlov - Lecture	Background Excitation and inhibition	<ul style="list-style-type: none"> <li>▪ Describe Pavlov's idea of conditioned response</li> </ul>

## Facilitator Guide

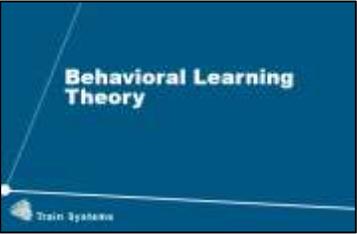
		Irradiation and Concentration	<ul style="list-style-type: none"> <li>▪ Apply Pavlov's idea of dynamic stereotype</li> <li>▪ Apply Pavlov's idea of generalization</li> <li>▪ List challenges associated with Pavlov's theories</li> </ul>
1 hour	- Practical Exercise		
20 minutes	Edwin Guthrie - Lecture	Background One Law of Learning (also known as Law of Contiguity) One-Trial Learning Regency Principle Learning and Practice Forgetting Breaking Habits Punishment Transfer of training	<ul style="list-style-type: none"> <li>▪ Apply Guthrie's One Law of Learning</li> <li>▪ Explain Guthrie's idea of learning and practice</li> <li>▪ Apply Guthrie's Regency Principle</li> <li>▪ Apply Guthrie's methods for breaking habits</li> <li>▪ Explain Guthrie's idea of training transfer</li> </ul>
1 hour	- Practical Exercise		
20 minutes	Break	<ul style="list-style-type: none"> <li>• Break</li> </ul>	N/A

The purpose of this module is to present key behavioral learning theories and theorists.

# Behavioral Learning Theory

## Module purpose

**Total Time:** 2 minutes

Item Icon & Description	Corresponding PPT Slide
 <p><b>Say:</b> <i>At the completion of this module, you will be able to apply behavioral learning theory in the delivery of training. The purpose is to present key behavioral learning theories and theorists.</i></p>	
 <p><b>Say:</b> <i>Our first lesson begins with a look at the learning theory practices of Edward Thorndike.</i></p>	
 <p><b>Read</b> each enabling learning objective.</p> <p><b>Ask:</b> <i>Is there anyone who is familiar with Thorndike and his research or theories?</i></p> <p>If no, then tell participants this lesson will provide new and interesting learning with everyone.</p> <p>If yes, then indicate you will rely on that participant to help share their understanding and familiarity during the content learning.</p> <p>This invites participants to be engaged in the learning with active inclusion and peer input.</p>	
 <p><b>Check</b> for understanding and ask if there are any questions.</p> <p><b>Say:</b> <i>We are all ready. Let's continue.</i></p>	

# Edward Thorndike (1874-1949)

## Background

**Total Time:** 1 hour 20 minutes

Item Icon & Description	Corresponding PPT Slide
 <b>Present</b> the slide. <b>Read</b> the slide content to the class.	

## Learning is incremental, not insightful

Item Icon & Description	Corresponding PPT Slide
 <b>Present</b> the slide. <b>Read</b> the slide content to the class.  <b>Do:</b> Ask the participants what their ideas and thoughts are regarding why learning needs small steps and does not happen in one huge jump?  <b>Ask:</b> <i>What about those “Ah ha!” moments when it feels like a light just came on? Is that a jump?</i>	

# Belongingness

Item Icon & Description	Corresponding PPT Slide
 <p><b>Present</b> the slide. <b>Read</b> the slide content to the class.</p> <p><b>Do:</b> Show participants the image and present that the related items have similar characteristics – each ‘belongs together’ while the not related items have very distance connection.</p> <p><b>Ask:</b> <i>When students are learning something new, how is it helpful to bridge familiar understanding with unfamiliar learning using similar examples or familiar stories?</i></p>	

# Law of readiness

Item Icon & Description	Corresponding PPT Slide
 <p><b>Present</b> the slide. <b>Read</b> the slide content to the class.</p>	

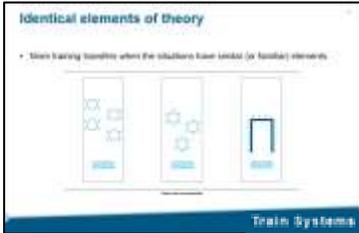
# Revised law of readiness

Item Icon & Description	Corresponding PPT Slide
 <p><b>Present</b> the slide. <b>Read</b> the slide content to the class.</p> <p><b>Ask:</b> <i>Do you agree that (positive) reinforcement increases the opportunity for performance behaviors? Why – what emotional connections occur?</i></p>	

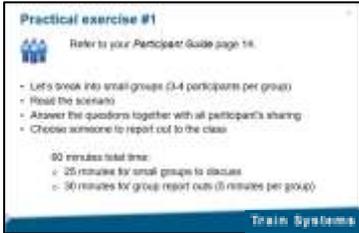
# Spread of effect

Item Icon & Description	Corresponding PPT Slide
 <p><b>Present</b> the slide.  <b>Read</b> the slide content to the class.</p> <p><b>Say:</b> <i>It is a very powerful technique to create positive reinforcement with both acknowledgements and learning exercises that provide success using the right progression of difficulty.</i></p> <p><b>Show</b> the extra behaviors that Jim wants to do given his positive learning experiences, e.g., he also wants to do some safety reading and create a checklist.</p>	

# Identical elements theory

Item Icon & Description	Corresponding PPT Slide
 <p><b>Present</b> the slide.  <b>Read</b> the slide content to the class.</p>	

# Practical Exercise

Item Icon & Description	Corresponding PPT Slide
 <p><b>Present</b> the slide.</p> <p><b>Say:</b> <i>We are going to practice applying Thorndike's ideas to a training scenario that is in your Participant Guide. Once you are in your small groups, you'll have 25 minutes to work to complete the exercise. After completing the exercise, we'll get back together so that each group can report out on their respective work.</i></p> <p><b>Read</b> the slide information to students to understand how the practice exercise #1 will work.</p>	

 <p><b>Refer</b> to page 14 in the Participant Guide.</p>	
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## Practical Exercise #1

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**Scenario:** The Shipping Department bought five different pieces of equipment and Ted has been assigned to instruct the crew on the proper use of each piece. Ted knows there is a lot to learn because they've never had equipment like this in the Shipping Department before, but he's already very busy with his other work assignments. He wants to get this assignment done quickly, but he knows he also needs the training to "stick."

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1. How might Ted structure his instruction knowing that learning is incremental, not insightful?

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2. Based on Thorndike's idea of belongingness, how should Ted organize the instruction for the pieces of equipment?

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3. How could Ted apply Thorndike's identical elements theory to help the training "stick"?

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4. Now that Ted has figured out how to organize the instruction and hopefully make it "stick," what can he do to help the crew be ready to learn?

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Item Icon & Description	Corresponding PPT Slide
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**Tell** students that we will take 20 minutes for a break.

**Remind** students to please be punctual and return on time.

Item Icon & Description	Corresponding PPT Slide
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**Say:** *Our next lesson looks at the learning theory practices of BF Skinner.*



**Read** each enabling learning objective.

**Ask:** *Is there anyone who is familiar with Skinner and his research or theories?*

If no, then tell participants this lesson will also provide more new and interesting learning with everyone.

If yes, then tell the class you want those participants to help connect BF Skinner's theories with the ice breaker stories we heard of good and bad learning experiences.

This invites all participants to reflect on the stories, to think and analyze the connections between theory and real stories, and for those participants who are familiar with Skinner to do support with the class learning.



**Check** for understanding and ask if there are any questions.

**Say:** *Great! Let's continue.*

# BF Skinner (1904-1990)

## Background

**Total Time:** 1 hour 20 minutes

Item Icon & Description	Corresponding PPT Slide
 <p><b>Present</b> the slide. <b>Read</b> the slide content to the class.</p>	

## Conditioning

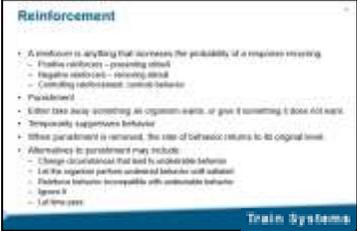
Item Icon & Description	Corresponding PPT Slide
 <p><b>Present</b> the slide. <b>Read</b> the slide content to the class.</p> <p><b>Do:</b> Ask the class to think about and share examples where they have done or seen operant behavior while at work, e.g., not stepping on icy rails (to fall is a punishment), using two people to carry large objects.</p>	

 **Use** a flip chart to capture participant's input.  
**Write** brief statements that reflect each input.

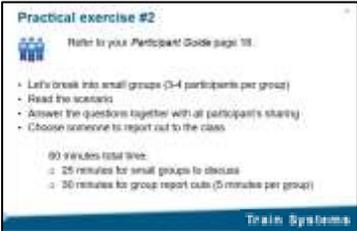
## Learning

Item Icon & Description	Corresponding PPT Slide
 <p><b>Present</b> the slide. <b>Read</b> the slide content to the class.</p>	

# Reinforcement

Item Icon & Description	Corresponding PPT Slide
 <p><b>Present</b> the slide.</p>  <p><b>Read</b> the slide content to the class.</p> <p><b>Say:</b> Notice that reinforcement can be in the form of something positive or something negative. Reinforcement is simply an environmental condition that increases the strength of the stimulus-behavior responses – either favorably or undesirably.</p>	

# Practical Exercise

Item Icon & Description	Corresponding PPT Slide
 <p><b>Present</b> the slide.</p> <p><b>Say:</b> We are going to practice applying Skinner’s ideas to a training scenario that is in your Participant Guide. Once you are in your small groups, you’ll have 25 minutes to work to complete the exercise. After completing the exercise, we’ll get back together so that each group can report out on their respective work.</p> <p><b>Read</b> the slide information to students to understand how the practice exercise #2 will work.</p>	

 <p><b>Refer</b> to page 19 in the Participant Guide.</p>	
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## Practical Exercise #2

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**Scenario:** Rae has been operating equipment for more than 25 years and is considered an expert by everyone in the organization. His boss asked him to take responsibility for training the new employees to operate the equipment, so they can hopefully become experts like Rae.

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1. Using Skinner's views of learning, how should Rae structure his course?

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2. When Rae was a new operator his boss always screamed and yelled at him when he did something wrong. Rae felt this "hammering" made him a better operator. Based on Skinner's ideas of reinforcement and punishment, what direction and suggestions would you give Rae so he can be a better instructor?

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3. How should Rae structure his course if he incorporated ideas from both Thorndike and Skinner?

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Item Icon & Description	Corresponding PPT Slide
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**Tell** students that we will take one hour for a lunch break.

**Remind** students to please be punctual and return on time.

Item Icon & Description	Corresponding PPT Slide
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**Say:** *Our third lesson explores the learning theory practices of Ivan Pavlov. Many people are familiar with Pavlov’s behavioral research with dogs to see if ringing a bell will condition the dogs to salivate in expectation of receiving food.*

*The good news is, this research also provides insight into how people can learn and respond to certain behaviors and stimuli.*



**Read** each enabling learning objective.

**Say:** *This module recognizes there can be challenges when using some theories. Let’s see if there are any challenges you might be wondering about.*

**Do:** Use a flip chart and write down challenges that participants raise. The challenges may be concerns about a theory’s validity, not knowing when or why to use it, or lack of accepting that behavior changes can happen.

Refer back to the list while delivering this lesson’s learning content when similar challenges are recognized. Discuss how to handle these challenges. This builds confidence in understanding the theories and practice in using them.



**Check** for understanding and ask if there are any questions.

**Ask:** *Are there any additional questions or concerns at this point?*

# Ivan Pavlov (1849-1936)

## Background

**Total Time:** 1 hour 20 minutes

Item Icon & Description	Corresponding PPT Slide
 <p><b>Present</b> the slide. <b>Read</b> the slide content to the class.</p>	

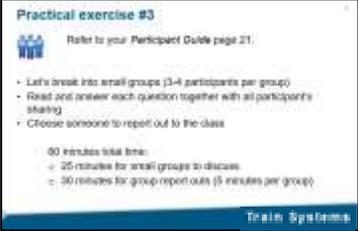
## Excitation and inhibition

Item Icon & Description	Corresponding PPT Slide
 <p><b>Present</b> the slide. <b>Read</b> the slide content to the class.</p>	

## Irradiation and concentration

Item Icon & Description	Corresponding PPT Slide
 <p><b>Present</b> the slide. <b>Read</b> the slide content to the class.</p> <p><b>Ask:</b> <i>Have you ever heard a song that makes you feel happy or sad? That's where temporary connections are firing your hearing senses and your emotion senses.</i></p> <p><i>Similarly, maybe someone scared you, or you get nervous taking tests, and that fear instinct inhibits your ability to concentrate and make decisions.</i></p>	

# Practical Exercise

Item Icon & Description	Corresponding PPT Slide
 <p><b>Present</b> the slide.</p> <p><i>Say: We are going to practice applying Pavlov's ideas to a training scenario that is in your Participant Guide. Once you are in your small groups, you'll have 25 minutes to work to complete the exercise. After completing the exercise, we'll get back together so that each group can report out on their respective work.</i></p> <p><b>Read</b> the slide information to students to understand how the practice exercise #3 will work.</p>	
 <p><b>Refer</b> to page 23 in the Participant Guide.</p>	

## Practical Exercise #3

1. From an early age, we teach children that red means “stop” – red lights, red stop signs, red burners on stovetops, etc. Pavlov’s idea of dynamic stereotype suggests that teaching someone to react differently to red, after being conditioned to stop, will be very hard. Come up with two ways to help employees learn that red means “go” when they are at work. Explain exactly how you would help them change their thinking so that when they are outside of work red means stop; but when they get to work, it means go.

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2. Using Pavlov’s idea of generalization, identify an existing response that employees have, and how could that understanding be used to teach something similar.

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3. Long time employees of the ACME Company have been conditioned that attending training means sitting and “tuning out.” When the new trainer arrives, he is irritated by this behavior and begins punishing employees that don’t participate. What does Pavlov’s research say the new trainer should do? What does Thorndike’s research suggest the trainer do?

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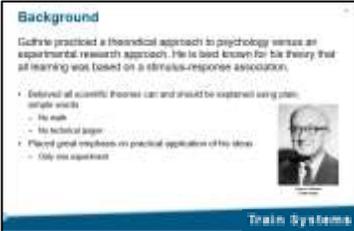
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Item Icon & Description	Corresponding PPT Slide
 <p><b>Say:</b> <i>Our last lesson in this module looks at the learning theory practices of Edwin Guthrie.</i></p>	
 <p><b>Read</b> each enabling learning objective.</p> <p><b>Ask:</b> <i>Does anyone have some learning habits that he or she feels you may want to change?</i></p> <p>If no, then tell participants that is fantastic and we'll learn how to help change habits for participants in future classes that you will deliver.</p> <p>If yes, then use a few brief moments to discuss what those habits are – make a strong mental note of who and what habits were shared for reference during the content delivery (this ties the learning to practical and real participant examples).</p> <p><b>Tell</b> participants: <i>Our learning in this lesson might help us to see how we can change habits that we've formed.</i></p>	
 <p><b>Check</b> for understanding and ask if there are any questions.</p> <p><b>Say:</b> <i>Let's continue with our fourth learning theorist and what he provided in behavioral learning theory.</i></p>	

# Edwin Guthrie (1866-1959)

## Background

Total Time: 1 hour 20 minutes

Item Icon & Description	Corresponding PPT Slide
 <p><b>Present</b> the slide. <b>Read</b> the slide content to the class.</p>	

## One law of learning (also known as law of contiguity)

Item Icon & Description	Corresponding PPT Slide
 <p><b>Present</b> the slide. <b>Read</b> the slide content to the class.</p>	

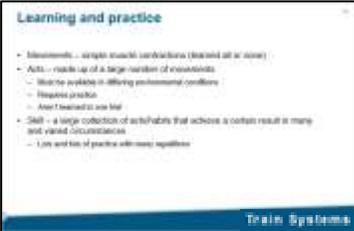
## One-trial learning

Item Icon & Description	Corresponding PPT Slide
 <p><b>Present</b> the slide. <b>Read</b> the slide content to the class.</p> <p><b>Ask:</b> <i>If this is true, then how important is it that the one-trial learning experience creates the right connection?</i></p>	

# Regency principle

Item Icon & Description	Corresponding PPT Slide
<p> <b>Present</b> the slide.</p> <p><b>Read</b> the slide content to the class.</p> <p><b>Say:</b> <i>A couple factors should be considered:</i></p> <ul style="list-style-type: none"> <li>• <i>Do you remember what you did last?</i></li> <li>• <i>Can you judge and decide how similar are the same circumstances?</i></li> <li>• <i>Were you lucky in the last circumstance and you do, or do not, want to take the same high risk in the same circumstance?</i></li> </ul>	

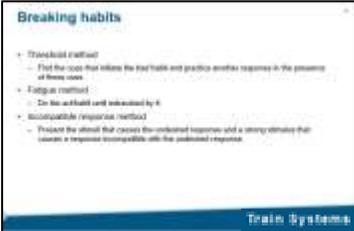
# Learning and practice

Item Icon & Description	Corresponding PPT Slide
<p> <b>Present</b> the slide.</p> <p><b>Read</b> the slide content to the class.</p>	

# Forgetting

Item Icon & Description	Corresponding PPT Slide
<p> <b>Present</b> the slide.</p> <p><b>Read</b> the slide content to the class.</p> <p><b>Ask:</b> <i>Do you agree that an alternative response is learned rather than the original response leads to forgetting? If you learned a better response, then is forgetting a good or bad thing?</i></p>	

# Breaking habits

Item Icon & Description	Corresponding PPT Slide
 <p><b>Present</b> the slide. <b>Read</b> the slide content to the class.</p>	

# Punishment

Item Icon & Description	Corresponding PPT Slide
 <p><b>Present</b> the slide. <b>Read</b> the slide content to the class.</p>	

# Transfer of training

Item Icon & Description	Corresponding PPT Slide
 <p><b>Present</b> the slide. <b>Read</b> the slide content to the class.</p>	

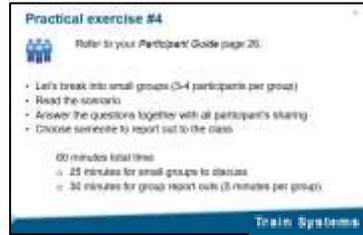
# Practical Exercise

Item Icon & Description	Corresponding PPT Slide
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**Present** the slide.

**Say:** *We are going to practice applying Guthrie's ideas to a training scenario that is in your Participant Guide. Once you are in your small groups, you'll have 25 minutes to work to complete the exercise. After completing the exercise, we'll get back together so that each group can report out on their respective work.*



**Read** the slide information to students to understand how the practice exercise #4 will work.



**Refer** to page 29 in the Participant Guide.

## Practical Exercise #4

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**Scenario:** Diana's boss sends her to forklift training so she can help the rest of the crew unload and move materials in the shop. But when she returns from training, her fellow crew members complain that she wasn't properly trained because she does "extra" steps in the process which makes the unloading and moving tasks take her longer than the other crew members.

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1. Using Guthrie's ideas, which do you think is the most likely issue in this situation – lack of skill or transfer of training? Explain.

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2. Diana's boss is upset that she takes too long to unload and move the materials, so he calls the instructor and asks him to come to the shop and retrain her. When the instructor arrives, he observes Diana operating the forklift as she was trained; however, he notices that the other crew members are using techniques that make the unloading and moving tasks faster, but could lead to unsafe situations. Using Guthrie's ideas, what may have happened that caused the crew members to start operating differently than they were trained?

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3. Using Guthrie's methods, what should the instructor do to help the crew members operate the forklift more safely?

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Item Icon & Description	Corresponding PPT Slide
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**Tell** students that we will take 20 minutes for a break.

**Remind** students to please be punctual and return on time.

## Summary

The learner should now be able to do the following:

- Explain Thorndike’s idea of incremental, not insightful learning.
- Apply Thorndike’s idea of belongingness.
- Discuss Thorndike’s Law of Readiness and Law of Effect.
- Apply Thorndike’s identical elements theory of training transfer.
- Explain what Skinner defined as operant conditioning.
- Discuss Skinner’s ideas on reinforcement and punishment.
- Apply Skinner’s ideas on learning.
- Describe Pavlov’s idea of conditioned response.
- Apply Pavlov’s idea of dynamic stereotype and generalization.
- List challenges associated with Pavlov’s theories.
- Apply Guthrie’s One Law of Learning.
- Explain Guthrie’s idea of learning and practice.
- Apply Guthrie’s Regency Principle and methods for breaking habits.

Item Icon & Description	Corresponding PPT Slide
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Transition to the next module.

At the conclusion of the class, **thank** students for their participation and time.

**Explain** how the course assessment will be managed, and how participants can contact you for further help.



*Ask: Are there any final questions or further information you may want to know?*

# Appendix

# Safety Briefing Guidelines

Conduct a safety briefing prior to all meetings.

The safety of each employee is our foremost priority. It is important that every employee receive proper and prompt medical attention and is briefed on emergency evacuation procedures.

- 1. Review the daily security alert (provided in e-mail) and the daily safety tip of the day (if applicable).**
  
- 2. Preparation prior to evacuation:**
  - a. Identify the location of the emergency exits.
  - b. Explain the alarms, sprinklers and smoke detectors that are utilized.
  - c. Identify the location of the fire extinguishers and pull stations.
  - d. Anyone who is qualified to use fire extinguishers may do so. (Qualified means that you have attended the Trains Fire Extinguisher course).
  - e. Identify hazards in the room (i.e. tripping hazards).
  - f. Have employees note who is seated to their right and left, this will help account for all the employees in the event an evacuation is necessary.
  - g. Ask if anyone needs assistance evacuating the building. Assign a person to assist that individual.

**3. Evacuating the building:**

- a. Leave the building or follow local instructions immediately upon hearing the alarm or seeing alarm lights.
- b. The elevators will be shut down; do not attempt to use them.
- c. Identify how to get to the stairways that lead to the ground floor.
- d. Identify how to get to the main exit from the ground floor.
- e. Identify the assembly point outside the building (at least one block away from the building).
- f. Do not re-enter the building until the building has been cleared for occupation by proper authority (Fire Department, Police Department, etc.)

**4. Emergency Contacts: Have at least two people prepared to call 911 or APD (1-800-331-0008) or a designated number in the event of an emergency.**

- a. Post/state the facility address.
- b. Use cell phones if a phone is not available in the room.
- c. If a phone is available in the room, do you need to dial a number to reach an outside line?
- d. When contacting 911 or the designated number include the facility address, city and state.

**5. CPR: In the event of a medical emergency, identify someone qualified to administer Cardiopulmonary Resuscitation**

- a. If yes - identify them to the class.
- b. If no – emergency services will perform CPR upon their arrival.

## Facilitator Guide

### **6. AED: If there is an Automated External Defibrillator (AED)**

- a. Where are the AED and First Aid Kit located? Give directions.
- b. Assign someone to get the AED and First Aid Kit (if available).
- c. Identify person(s) qualified to use the AED?

### **7. Active Shooter Threat: Evacuate (RUN) - Hide Out (HIDE)– Take Action (FIGHT)**

- a. What is the escape route from the location? Where will you hide?
- b. Determine who will lock or how you will barricade door if necessary?
- c. As a last resort, think about how to disrupt/incapacitate the shooter.
- d. Call APD at 1-800-331-0008, text APD11 (27311) or call 911 when safe to do so.

### **8. Identify location of restrooms.**

*(Safety Resource Library, June 2015)*