



Learn, Play, Repeat:

Using Games for
Spaced Learning

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Designing effective spaced learning sessions

During a training session, knowledge checks or other activities encourage learners to repeat and reflect. But repetitions before and after the event are important too. Frequent repetitions, with effective feedback, help us process what we have learned and to learn from our mistakes. But how can you design those repetitions for maximum impact?

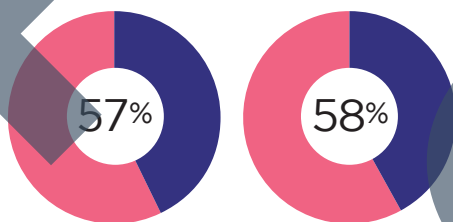
Keep it short. We process new information in our brain's temporary storage area, otherwise known as working memory. But anyone who has had to "**drink from the fire hose**" knows that space is limited. If you want people to remember what they learn, you need to divide larger topics into smaller, more memorable parts. Sweller (1988) famously set a limit of +/- seven items. Research since then has put the limit closer to four or five (Cepelewicz, 2008).

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Build on relevant prior knowledge. When new information relates to what we already know, we are more motivated to pay attention. We make connections that deepen understanding and retention, and build alternate pathways to that information that will help us recall it later.

Know your audience. Remember that everyone is not motivated by the same things. Some people prefer story-based **Scenario** games while others want to win at JEOPARDY! Some players thrive on seeing their score on the leaderboard, while others are driven by an internal desire to improve their "personal best" over time. Take the time to plan and craft an experience that reflects your audience's preferences. Use a mixture of games to engage different types of players, and reward people for motivated effort (improvement, frequency, or trying a new type of game) as well as performance.

Encourage frequent play. When you reinforce key topics and skills in a less traditional, more game-like way it makes the experience more memorable. It also challenges people to use the information, and their brains, in a new way. Not only are players more likely to play a game, they are also more likely to repeat it. According to a **sample study** of 2500 games on The Training Arcade, 57% of players played 3 or more times. Players saw a 58% improvement in knowledge between the 1st and the 3rd attempt at play!*



Rate of Play Improvements with Gamification

Players played an average of 1.7X per session.* 57% of players played 3 or more times!*

Players saw a 58% improvement in knowledge between the 1st and the 3rd attempt at play!*

**The results for the above analysis were based on aggregated, anonymous player activity data from across the span of The Training Arcade subscribers. The data included in the analysis represent approximately those points within +1 and -1 standard deviations of the normal bell distribution curve. Individual results will vary and are highly dependent on the quality of subscriber content deployed in the games, the frequency with which employees are provided access to games, and other usage factors.*

Preview and set expectations. An “advance organizer” previews and provides structure for the learning session. Diagrams and outlines are common, but what if you used a game? A JEOPARDY! game can preview key modules and review prerequisite knowledge. A Wheel of Fortune game can introduce new terms and concepts. Worried how people will react if they don’t know the answer right away? When learners have the freedom to make mistakes and receive helpful corrective feedback, failure can be a great teacher. Answering a question wrong fosters an emotional connection that makes the “right” answer more memorable.



Boost pre-course engagement. In addition to building games, you can add gamification elements—for example, leaderboards, rewards, prizes, or team challenges. Some personalities are highly motivated by gamification, while others are less so. But appropriate, skillful use of gamification can motivate one or more segments of your audience to keep playing and learning. [Arcades™](#), the gamification platform in The Training Arcade, gives you access to elements like personal statistics, leaderboards, and prizes that can drive players to keep coming back for more.

Skillful use of gamification can motivate one or more segments of your audience to keep playing and learning.

Repeat and review content. Games engage learners and give them the freedom to play and learn from their mistakes, which enhances memory and retention. Below are a few games that lend themselves to repeat play and learn.

EXAMPLE GAMES PERFECT FOR REPEAT PLAY AND LEARN SITUATIONS

WHEEL OF FORTUNE®



Add a **Wheel of Fortune** game to review key terms and concepts. It is not only effective for practicing vocabulary—you can also use it for “fill in the blank” types of questions.



Add a short Trivia game before (or instead of) a final summary slide at the end of each topic. This gives learners a fun way to pause, actively recall, and apply the information they learned.

JEOPARDY!



Encourage learners to participate in a JEOPARDY! game as a comprehensive review at the end of a training session, then provide the link so that learners can continue to play and improve their personal score.

Provide a brain break. Some quick games, like **Match** or **Jump**, can be completed between training modules. You can use them to review information from previous modules or preview information in future modules. Or, just for fun, create a Trivia game with questions about your corporate culture and/or polling questions that will help you better understand your audience.

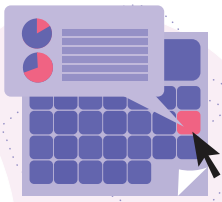
Drive engagement. Some learners are motivated to complete training on their own, while others need a little extra push. **Gamification elements** like points, badges, and leaderboards are a fun way to increase engagement and motivation, especially when your target audience has a more competitive streak.

Using game metrics to improve the experience

Game metrics are real-time, **data-driven insights** that can help you improve the training experience. You can look at scores, frequency, accuracy, and duration to see what games are more challenging, what games people are playing the most, how long it takes to complete each game, and which games are abandoned or ignored. This can help you evaluate the flow and pacing of your spaced learning sessions and determine where you might need to make some adjustments to better capture your learners' time or attention.



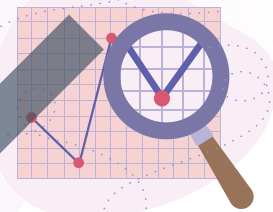
Gauge prerequisite knowledge



Individual game scores show you what people already know and who might have a little trouble getting ahead. Before a training session, consistent scores may indicate that learners are at approximately the same baseline. But if the scores are all over the map, you may need to adjust for different levels of knowledge and experience. For example, you may decide to allow certain high-performers to “test out” or mentor other participants. Or, you may recommend additional pre-course materials for learners who have some gaps to fill.

Adjust your approach

For any game, you can zoom in on a question-by-question level to see which questions are being answered correctly and where the stumbling blocks might be. For example, JEOPARDY! clues to which no one correctly responds could give you insight into topics that need more attention. Based on these insights, you might cover certain topics in more or less depth, add more repetitions of difficult concepts, or add some more challenging games to encourage repeat play. Or, maybe the clue itself isn't clear; consider if there is a way to better frame it next time.



Personalize the experience

Game metrics give you insight into your **audience's preferences** so that you can fine-tune your approach. For example, you can offer the same content in a couple of different game formats, and then compare the number of sessions to see which games learners engage with the most. You can look at the number of repeat plays to see which learners are extrinsically motivated to increase their score and climb the leaderboard, and offer challenges or awards to boost their engagement. The Arcades gamification platform shows you when players are active, so you can schedule games and challenges during peak engagement times—when they are more likely to capture people's attention.



Training Software & a Gamification Platform All-in-One

Sign up for a free 14-day trial today!
thetrainingarcade.com/free-trial

The Training Arcade® offers everything you need to create online training games rapidly and easily.

The Training Arcade® is a game builder and gamification software with a library of 10 online training games (including the only officially licensed JEOPARDY!® and Wheel of Fortune® game for training, education, and events).

Our gamification platform, Arcades™, includes all the gamification elements (leaderboards, badges, achievements, journeys, prizes, and head-to-head challenges) you need to motivate your team.

This first-of-its-kind online training software works seamlessly across mobile, tablet, PC, and touchscreen devices and can be used for eLearning, instructor-led training, live events, and virtual conference calls!



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