



WHITE PAPER

# The Power of Microlearning:

## A Proven Learning Strategy for Workplaces



Microlearning has become a buzzword in corporate training. But how many people truly understand the science behind its effectiveness? In today's fast-paced world, everyone wants a bite-sized, quick-fix solution—but not all microlearning is created equal. **The real power of microlearning lies in the science of how people learn best.** In this white paper, we dive into the research and uncover why, when done right, microlearning can transform learning experiences and drive real, measurable results. Let's explore what truly sets effective microlearning apart.

The truth is that microlearning has been around for a long time. From short pamphlets printed on a press, to infomercials, to TED talks, the idea of using bite-sized bits of standalone content that people can remember and immediately use has been around for hundreds of years.

The term “microlearning,” referring to short-form content, was coined around the early 2000s. When something gets a short, clever label, it becomes easier to talk about—and measure. That measurement has led to a growing stream of research showing that **microlearning really is a more effective way to engage employees, make the most of their divided attention, and guarantee that the information shared is retained and applied.**

Before jumping on the bandwagon, though, it helps to get clear on the actual science. Rather than trust any old microlearning vendor that comes along, you should make yourself aware of what objective, scientific findings have had to say about it. By doing so, you'll not only uncover the benefits of microlearning, but also learn how to implement it effectively to achieve your desired learning outcomes.

## Microlearning

is the process of delivering bite-sized content to learners that they can consume all at once and apply the knowledge immediately.



# Constant Interruption Means the Learning Window Is Small

Independent studies show that microlearning videos are an ideal way to present training content to your employees.

**Microlearning is often contrasted with “long-form” learning**, the kind of learning we typically think of when we think of corporate training: hour-long talks and seminars, off-site training, long compliance videos and so on.

**These bits of long-form content are not particularly well suited to today’s workplace.**

Research by Gloria Mark, professor in the Department of Informatics at the University of California, Irvine, makes this case well.

In one study, Mark and her colleagues shadowed 36 managers, financial analysts, software developers, engineers, and project leaders for three days. The researchers took meticulous notes, timing every event that occurred, down to the second.

What they found will sound all-too-familiar



**Long-form content** is not particularly well suited to today’s workplace.

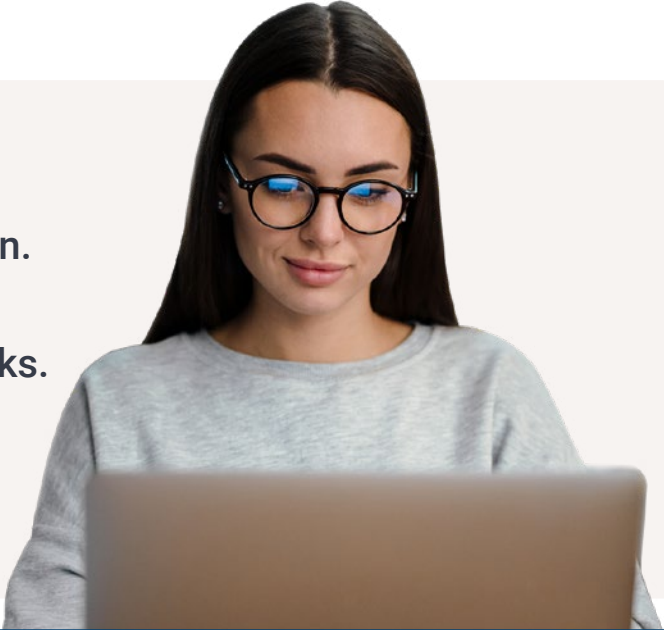


to over-burdened employees, but it's shocking to see the numbers nonetheless. **Each employee spent only 11 minutes on any given project before being interrupted with some demand on their attention**, unrelated to the task at hand.

What's more, **each 11-minute project was itself fragmented into even shorter three-minute tasks**, like answering email or working on a spreadsheet.

**And when workers were distracted from a task, they were distracted for, on average, 25 minutes.** It took even longer to return to the task, because they had to shift their attention and get back into the proper mindset.

This is bad news for the 60-minute training video. Simple math tells us that, when viewing a video of that length, an employee can be expected to be interrupted at least five times. **Factoring the time it takes to get back to viewing, that 60-minute video could, in reality, take over three hours to digest**—and only if the employee somehow manages to stick with it.

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- Each employee only spent **11 minutes before interruption.**
  - Each 11-minute project was **fragmented into 3-minute tasks.**
  - Each distraction lasted **2.5 minutes on average.**

With an employee interrupted at least five times,  
**a 60-minute video could take over three hours to digest.**



## Content Length Matters

Even if interruptions didn't happen, there's good research showing that employees can only withstand content presented in 7-to-11-minute bursts anyway. Philip Guo, an assistant professor of Computer Science at the University of Rochester at the time, looked at usage statistics for an online learning platform to see how students were engaging with the material. Guo grouped the learning videos by length (0 to 3 minutes, 3 to 6 minutes, 6 to 9 minutes, etc.) and then plotted the median time students spent watching these videos.

# Learners See the Value of Microlearning

A study presented at the International Conference on Applied Science and Engineering Innovation by Jing Chang, Dong Liu, and Xiaoguang Dong, showed that the amount of time learners spent watching online courses impacted engagement. They surveyed a sample of 200 learners to discover the extent to which they felt microlearning videos helped their education experience. And indeed it did: **71% of those 200 learners reported that microlearning videos “expanded their horizon[s] and played a leading role in in-depth learning.”**

Research on microlearning highlights its effectiveness in enhancing knowledge retention and learner engagement. According to cognitive load theory developed by John Sweller in 1988, breaking down complex topics into small, digestible pieces of information helps reduce cognitive overload, making information easier to process and recall. The spacing effect, first identified by Ebbinghaus in 1885, suggests that learning in short, repeated intervals leads to better long-term retention, reinforcing the benefits of microlearning. Michelene T.H. Chi’s research on learning indicates that incorporating resource material that reinforces key concepts and supports on-the-job application improves engagement and strengthens learning outcomes.

In workplace learning, a 2021 study by the Association for Talent Development (ATD) found that **91% of employees prefer short, digestible learning formats.**

**71% of those 200** learners reported that microlearning videos “expanded their horizon[s] and played a leading role in in-depth learning.”

# Implications of Research

These studies, performed by credentialed scientists rather than microlearning vendors, offer several insights:



Few if any people are able to sit through a 60- or 30-minute video.

**People have a small window of patience—roughly 9 to 11 minutes—and they seek to finish tasks in that time.** This makes sense, given that interruptions occur roughly every 11 minutes.

**Even if an employee can stay with a piece of training for more time, it's unlikely to happen.** The chances are great that they will be interrupted, and it might take awhile to get back to what they were doing—if they ever do. In short, few if any people are able to sit through a 60- or 30-minute video.

**Microlearning can be too short, too.** Students did not engage fully with instructional videos that were too short. Five minutes or less simply seems to be too little time to fully develop a topic in-depth and really grab the learner's attention.

**Microlearning content must be able to “stand alone.”** Taking a 60-minute video and carving it into 11-minute segments is akin to building those 11-minute interruptions right into the video design. The result is a fractured piece of content that demands too much in terms of employees' ability to pick up where they left off.

**When microlearning is done right, learners enjoy and appreciate it.** That not only means employee buy-in, but also better retention and, consequently, better learning outcomes.

# Neuromyths We Tell Ourselves

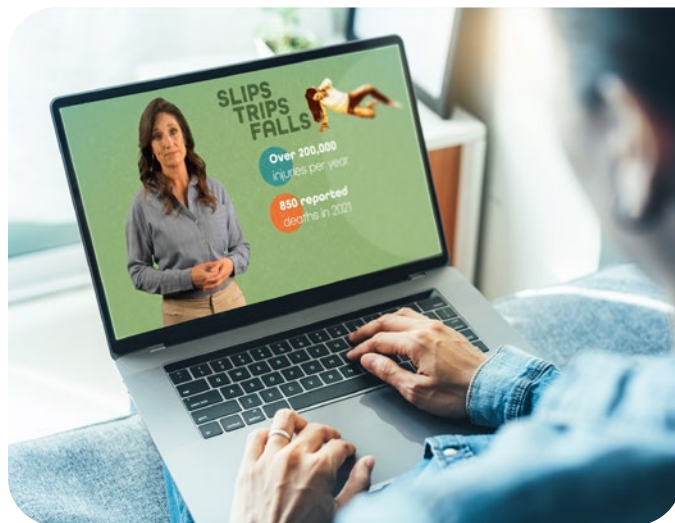
It might not be easy to tell which companies truly understand the science behind what they do, and which are just picking up random factoids to make a sales point. We've unearthed some "urban myths" that are not actually supported by the science so you can more easily spot the junk-science justifications.

## Short-term memory can absorb only four to five pieces of information at a time.

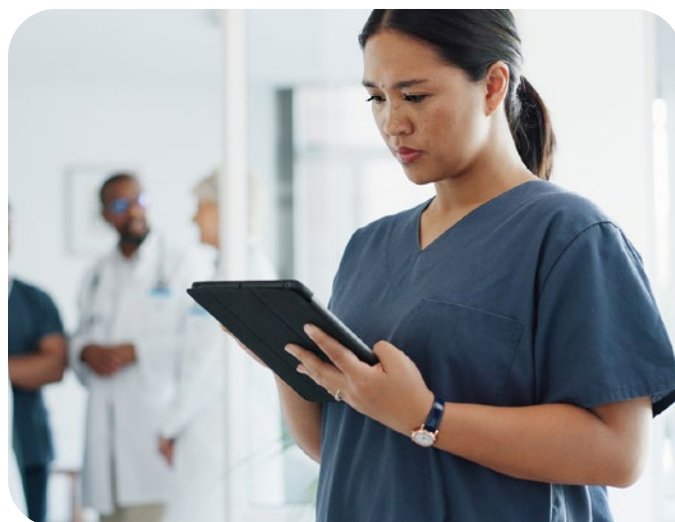
This is confusing short-term memory with something else psychologists call working memory. (It also gets the number wrong: The actual limit is seven items, give or take two.) This only measures what we can keep "in our head" while thinking through a problem. **Our short-term memories can hold much more information—if it is grouped into meaningful chunks.**

## There are "right-brain" learners and "left-brain" learners.

While it's true that the different sides of the brain have areas specialized for different tasks, there is no such thing as a "right-brained" or "left-brained" person. We all use both sides of our brains extensively. **In fact, learning is better when we engage with material in all sorts of different ways.**



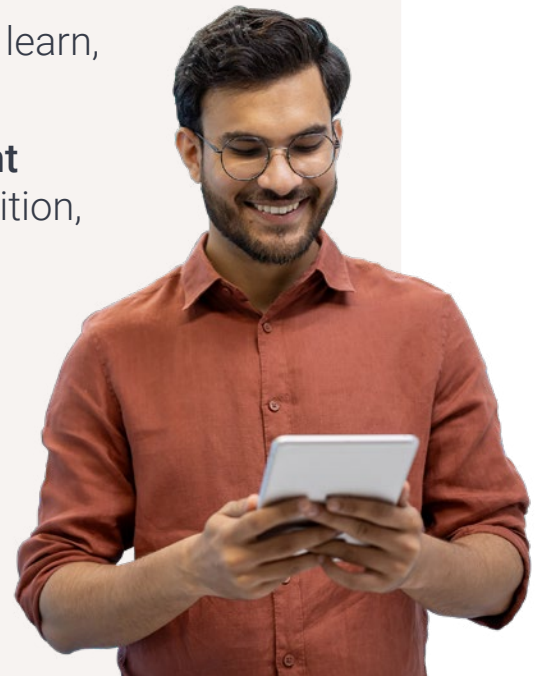
Learning is better when we engage with material **in all sorts of different ways.**



# Microlearning Is Good for Business, Too

Whenever companies have turned to true microlearning solutions, they've benefited. This is unsurprising, as microlearning is more effective, more conducive to employee productivity, and less costly. According to Dr. Ray Jimenez, author of *3 Minute Learning*, **microlearning methods will cut training costs by 50% compared to developing extensive in-person classes.**

- **Microlearning fits the attention and scheduling demands of employees**, making learning fast, easy, and convenient.
- **It's less disruptive.** Employees can get the information they need and then get right back to work.
- **Employees have better balance and clarity**, because their training does not cause "cognitive overload."
- **Completion rates are often higher** with microlearning.
- **Training and learning are more personalized**, as employees can select what they need to learn, when and where they want.
- **Microlearning makes it easier to present and reinforce information** through repetition, knowledge checks, and feedback.
- Shorter videos are **easier to stream and consume on mobile devices.**
- **Microlearning videos can be produced in 300% less time, and at 50% less cost**, than traditional courses.



# From Research to Instructional Design and Training

While it is important to take a deep look at the science, it is more important to know that the science is actually being used to inform the design of training content.

While we can't speak for training programs generally, we can present, as an example, the principles we follow at HSI to create microlearning videos with maximal impact.

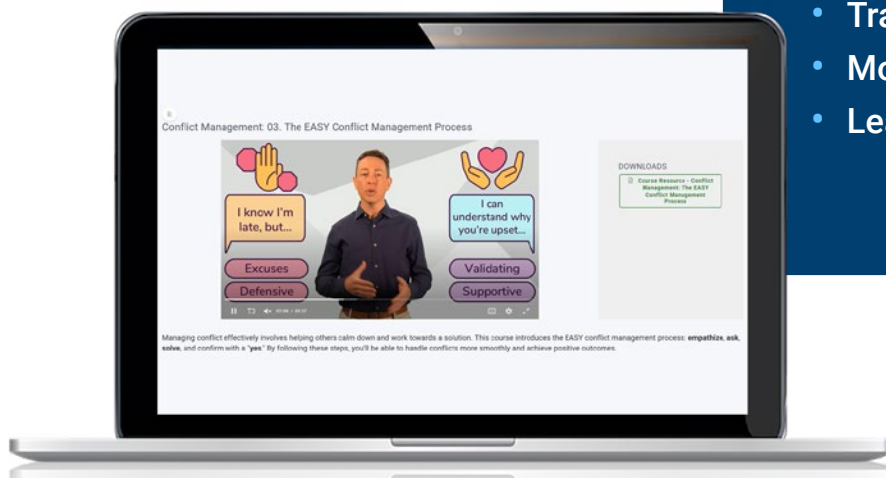
**Optimal Viewing Time.** Most of our videos average 10 minutes, fitting perfectly within the ideal length window.

**Engaging Visuals.** Let's be honest, some training topics can be abstract, tedious, or downright dull. We include creative visuals that are interesting and clear enough to engage attention, but not so prominent or flashy as to be distracting.

**Lively Presentations by Trained Speakers.** Non-verbal communication shapes much of our interactions. We work hard to make sure our presenters are clear, enthusiastic, and engaging.

## HSI's Professional Skills Development Principals:

- Optimal Viewing Time
- Engaging Visuals
- Lively Presentations by Trained Speakers
- Comprehensive Supplemental Learning Materials
- Relevant Content
- Training Reinforcement
- Mobile First
- Learning Culture



**Comprehensive Supplemental Learning Materials.** We aim to equip employees, supervisors, managers, and leaders with resources that foster learning, cultivate critical thinking skills, and offer supportive tools to empower their personal and professional development.

**Relevant Content.** Our videos can stand alone. Each has a separate title with a beginning, middle, and end, covering a single topic in its entirety. You don't need to see the rest of the videos in the series to understand any one video. That said, you can watch a series of videos, in any order, and get a comprehensive, cohesive learning experience around a subject. New video courses are released each month to ensure relevancy.

**Training Reinforcement.** Training reinforcement occurs immediately following the completion of a course by a quick knowledge check.

**Mobile First.** If employees are constantly distracted at work, who knows when or where they will pick up their training again? Our videos can be viewed on any device and can be made accessible according to you and your employees' needs. This also makes re-watching and reviewing content a snap!

**Learning Culture.** HSI helps organizations build a learning culture through self-directed learning where all employees are encouraged to continuously learn and add new skills.



# Further Reading

[What Is Microlearning?](#)

[How to Make Compliance Training Memorable](#)

[How to Fight the Ebbinghaus Forgetting Curve](#)

[Eye Movements Could Aid Memory, and Good Visuals Can Make It Happen](#)

[What is Cognitive Load, and Why Does It Matter for Corporate Training and Development?](#)

## About HSI



HSI is your single-source partner for EHS, Compliance, and Professional Development solutions. HSI provides integrated e-learning content, training solutions, and cloud-based software designed to enable your business to improve safety, operations, and employee development. Across all industries, HSI helps safety managers, and technical employees, human resources, first responders, and operational leaders train and develop their workforce, keep workers safe, and meet regulatory and operational compliance requirements. HSI's focus is on training, software, and services for safety and compliance, workforce development, industrial skills, and emergency care. HSI is a unique partner that offers a suite of cloud-based software solutions including learning management, safety management, chemical SDS management, and more, integrated with content and training so businesses can not only monitor and manage multiple workflows in one system, but train employees via one partner.

For more information, visit [\*\*hsi.com\*\*](https://www.hsi.com)