

Using Microlearning To Elevate Business Performance





What is microlearning?

The term microlearning has gotten a lot of press lately. But what exactly does it mean, and how is microlearning leveraged to support performance in organizations?

Microlearning is an educational event that is small, focused and targeted to help you learn one piece of information and one piece only.

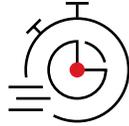
A teenager who goes on YouTube to learn how to tie a tie is participating in microlearning, as is a musician wanting to learn how to play a guitar chord using an app on their smartphone. An employee who reviews the proper procedure for wearing a respirator before going into a confined space also uses microlearning.

In their book, *Microlearning: Short and Sweet*, authors Karl Kapp and Robyn Defelice define microlearning from an organizational perspective as “an instructional unit that provides a short engagement in an activity intentionally designed to elicit a specific outcome from the participant.”

Microlearning, as a technique for delivering content to learners in small and specific bursts over time or as needed, has become important from a learning and development perspective for several reasons.

“Microlearning is an instructional unit that provides a short engagement in an activity intentionally designed to elicit a specific outcome from the participant.”

— *Microlearning: Short and Sweet*
Karl Kapp and Robyn Defelice



Short time bursts

The short time burst needed for microlearning means that the learning can occur at any time without pulling a person away from their work tasks for extended periods of time. This means minimal disruption to a person's work activities.

While there is no official time limit on microlearning, many events labeled as microlearning tend to last between three to five minutes.



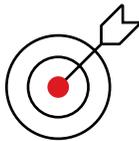
Delivered anywhere

Microlearning can be delivered on many devices. With the ever-present nature of smartphones, the learner can acquire a skill during their downtime, e.g., while waiting for a machine changeover or a meeting to begin. Microlearning creates new opportunities for when a person can learn or reinforce their knowledge, skills and behaviors.



Less learning interference

Since the learner is only concentrating on one topic or objective — often of their own choosing — the focus is on mastering that one idea. This means that other topics will not interfere with learning.



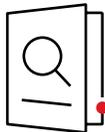
Narrow topic focus

The single-topic focus means the learner can concentrate on learning one specific concept at a time. It provides a targeted delivery of instruction and reinforces one objective or concept, making it easier for the learner to acquire and retain the knowledge they need.



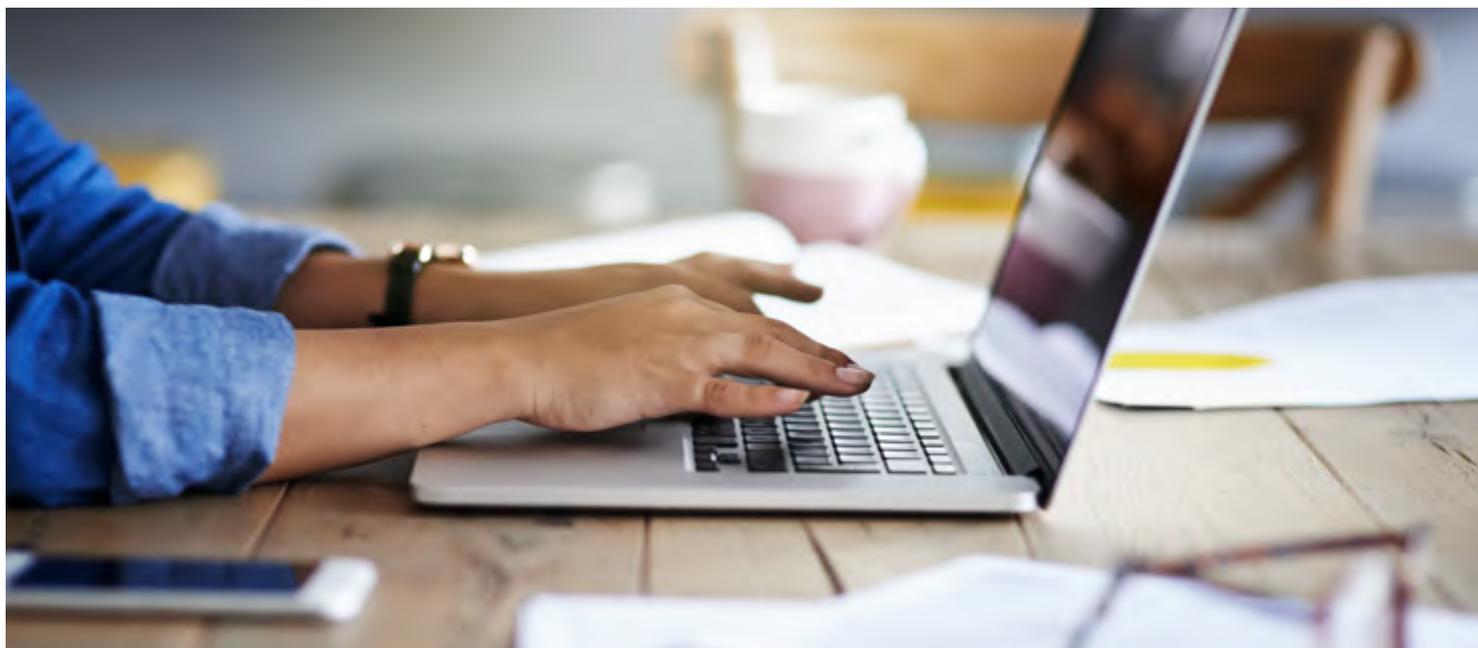
Personalized

With microlearning, a person has more control over their learning experience. The shorter learning sessions can be viewed in whatever manner and order works best for each individual learner. Learners are not bound by an instructor's or e-learning developer's preferred order. The learner is in control of the learning process.



Available when you need it

A learner can access microlearning instructions when the need arises, leverage technology and use it to address specific and immediate educational requirements. QR codes or sensors could trigger a microlearning event, which allows for learning **within the flow of work**.



Microlearning can be an effective tool for delivering critical instruction at the time of need or to remind learners of rules and regulations.

The advantages of microlearning lie in its small, hyper-focused areas of expertise. Rather than overwhelm a person with hours and hours of information, a microlearning experience only lasts a few minutes.

For example, instead of offering a single 60-minute course, 12 microlearning segments at about five minutes each could be taught in the course of an hour. A person could then watch the segments back-to-back or view the most applicable five or 10 minutes of content.

The learner only receives a small amount of information over time. This makes it easy for the learner to comprehend the information and helps enhance recall. Because it is only a small bit of information and the time commitment is minimal, the learner doesn't feel rushed to review the content. Presenting educational content in small pieces enhances attention, retention of the content and makes retention more likely to occur. The quick nature of microlearning allows the learner to focus on the content when and where they choose.

Microlearning could strengthen any organization's learning curriculum.

Example of microlearning

In 2019, UL Solutions launched a microlearning training series on various healthcare topics. The series consisted of sets of courses — one short course on a particular healthcare topic and three follow-up training sessions with probing questions or sample scenarios to solidify the knowledge. The idea was for learners to take the initial course, with additional trainings coming out at targeted intervals afterward to refresh learners' knowledge.

The science behind microlearning

Microlearning has received a great deal of attention because research strongly supports its efficacy over time and in a format that challenges the learner to recall information later, rather than reciting or reviewing content in the moment. While the science behind microlearning is well established, technology has now caught up and can properly support the concept.

1. Spaced practice

One particularly powerful element of microlearning is spaced retrieval, a concept that provides learners with course content spaced over time and has been shown to be an effective tool for aiding student retention (Carpenter and Delosh, 2005). Spaced retrieval helps learners retain access to memorized information over prolonged periods of time because the intervals promote deeper processing of the learned material. The greater the amount of spacing between retrieval events, the greater the potential benefits to retention.

Spaced retrieval can also be employed in a face-to-face classroom environment if the facilitator instructs the learners to engage with small units of content for a few minutes a day. This contrasts with mass practice where a student attempts to learn a large amount of content all at one time. The problem with traditional learning is that the preceding or succeeding educational content can interfere with the study of the current instructions or when reinforcement is particularly important for learning and application.

For the greatest benefit, the time between the learning events should be greater than 24 hours, but shorter times have also been found to be effective. Even eight years after an original training, learners whose practices were spaced out over longer intervals showed better retention than those who studied over a more concentrated period (Clark and Mayer, 2011).

Within an instructional setting or context, the employee could log into a website or open a mobile application and engage with the content they need to learn and view the desired content. The next day, the learner logs back in and can review the content and study new related content. This would continue until all the required content was covered.

2. Retrieval practice

Retrieval practice requires learners to recall information rather than simply revisit it. Retrieval practice primarily uses tests or quizzes to get learners to recall previously learned information by asking questions. In some cases, this kind of educational gamification incorporates the use of a reward or point system, or answers may simply be marked correct or incorrect. This process involves repeating missed questions until the student gains proficiency in all of the content. A review of the pertinent scientific literature reveals that the benefits of retrieval practice have been known for at least 100 years and have been demonstrated with many diverse groups (Larsen, Butler and Roediger, 2009).

Retrieval practice has been shown to improve learner recall performance (Dobson, 2013). Using quizzing as a technique in microlearning forces the learner to recall content previously learned, and the act of retrieving information from memory alters the retrieved memory by strengthening the existing memory trace and/or creating additional retrieval routes. One consequence of these changes is an increase in the probability of successful recall in the future, making testing a potent mechanism for enhancing long-term retention (Roediger and Butler, 2013).

3. Combining spaced practice and retrieval practice

While spaced practice and retrieval practice are two powerful stand-alone techniques, combining the two can boost the education's success. One study indicated that by combining the two practices, students in the subject of anatomy and physiology were able to increase retention by 35% to 61%, with an average of 41%.

In addition to knowledge increases, microlearning or micro reminders can be powerful tools in shaping behaviors. As an example, more than 500 men with impaired glucose participated in a study conducted from 2009 to 2012. Each participant was randomly assigned to either receive targeted text messages or more general communications. The text message group received repeated, short, behavior-focused messages, such as taking the stairs instead of the elevator. Meanwhile, the control group received general information on how to manage impaired glucose tolerance. Eighteen percent of the participants in the text message group developed Type 2 diabetes compared with 27% in the control group. (Ramachandran, A., Et. Al., Effectiveness of mobile phone messaging in prevention of type II diabetes by lifestyle modification in men in India: a prospective, parallel-group, randomized controlled trial the lancet diabetes & endocrinology, early online publication, September 2013 doi:10.1016/ s2213-8587(13)70067-6)

The research behind microlearning is strong, suggesting a positive influence on behavior, knowledge and skills.





Best types of microlearning in a life science or other regulated industry

After giving considerable thought to the applications of microlearning for our customers, UL Solutions has considered three basic approaches: refresher, targeted and enhancement training.

The intent of refresher training is to reiterate the main points of content previously covered. It serves to remind the learner of key objectives from the training and is typically delivered after a certain period has passed since completion. Refresher microlearning is also considered spaced retrieval training.

Targeted microlearning is intended to cover new material - usually only a single topic or two. These brief courses cover small units of content, not lengthy content with multiple topics. Targeted microlearning can be used for entirely new concepts or updates to existing regulations or practices.

Enhancement microlearning focuses on content that may need remediation. Like refresher training, enhancement content focuses on strengthening the knowledge of already covered content. Instead of covering all the key objectives of the previous training, enhancement microlearning focuses on a single objective that perhaps many learners need to revisit. This approach can be customized easily to include specific examples and case studies from a particular customer's work practices.

How should you leverage microlearning in your organization?

There are three different approaches to consider when thinking about implementing microlearning into an organization's educational offering: compliance, technology and learning.



Compliance approach

This approach considers how microlearning can complement an organization's general focus on compliance through compliance-related instruction to introduce, reinforce or remediate information. The microlearning strategy will be shaped by the company's decisions in line with its existing compliance efforts. Typically, questions will include: Should employees receive daily or weekly messages related to compliance? What departments should be asking the questions? Is there an expectation to track microlearning views? Is microlearning a supporting effort or main educational effort?



Technology approach

Microlearning has gained traction partly because technology has enabled employees to view video and learning modules on demand because of the widespread use of smartphones, tablets and wireless networks. But complications can arise regarding the safety of technology in the workplace. Organizations need to consider if employees will access content using personal or company devices and potential impacts on the organization's wireless network.



Educational approach

When implementing a microlearning strategy, consider what learning requirements already exist for employees. Any employee would likely be overwhelmed by 25 daily microlearning lessons delivered to their mobile device. Instead, developing a program to help raise employee awareness of available microlearning offerings to encourage participation is recommended. An enterprise wide approach must be taken to ensure that any compliance-based microlearning effort fits in with other organizational learning efforts.

A careful evaluation of the different approaches to microlearning will determine the successful development and deployment of an organization's microlearning strategy. Careful consideration of its potential impact on compliance, technical infrastructure and education strategy of the organization is critical for a smooth rollout. Make sure to include IT, employee training and development, and compliance staff in the development of any compliance-to-competency microlearning efforts.

Summary

Microlearning can be an effective tool when implemented into an organization correctly. The research is clear regarding its efficacy, and many organizations have achieved success when applying microlearning. As with any tool for improving performance, microlearning has a proper methodology and practice and should be applied strategically to specific instructional needs within an organization. Microlearning can be used effectively to offer refresher training, just-in-time information or enhance traditional learning interventions, such as instructor-led training and e-learning modules.

Next steps

If you think microlearning could be beneficial to your organization, examine your existing instructional offerings and identify which areas would be best complemented by microlearning or if there are any gaps that can be bridged by introducing new content. Review our questions to consider before implementing microlearning. UL Solutions experts can help you answer these questions and partner with your team to build a microlearning strategy that helps improve retention, reinforce skills and change learner behavior.

Questions to consider before implementing microlearning

- Has your company developed microlearning programs in the past? How did you determine and measure success?
- Which topics are appropriate for microlearning? What are the learning objectives?
- How much time do these topics require? How will you divide a 30-minute learning topic? In five- or 10-minute segments?
- What visuals, i.e., product demonstrations, would be valuable for your microlearning program?
- Should video be included as a microlearning exercise?
- What specific change do you expect from the learners?
- What type of training has already been developed? Policy training? Standard Operating Procedure (SOP) training? Classroom or e-learning?
- Who are your learners and their environment? Are they knowledge workers? Operations?
- Do learners have computers and smartphone access? Where are learners located?
- Would you prefer to document this training completion as part of the learner's transcript?

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