



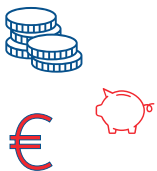
Co-funded by the  
European Union



# FinPower

Microlearning guide

DOBA



## Introduction to Microlearning

### **What is microlearning?**

Microlearning refers to a learning approach that utilizes small, carefully designed modules and brief learning activities. It addresses the brain's limited working memory capacity by tackling learner boredom, disengagement, and low retention, which often occur due to cognitive overload caused by traditional long-format instruction. (Commonwealth of Learning).

Microlearning can be defined as follows:

- Microlearning is a strategy that promotes independent learning through short, well-defined content, aiming to acquire specific knowledge and skills aligned with predetermined learning objectives.
- The content in microlearning is brief and focused, tailored to address immediate learning needs. It can take the form of videos, articles, blogs, eBooks, audio clips, or other easily indexed and accessible formats (Peters, n.d.).
- Learning occurs in short bursts, with individuals engaging with relevant content repeatedly over time to enhance retention and develop conceptual understanding (Peters, n.d.). This approach typically involves delivering concise content that can be consumed within a few minutes.
- Microlearning breaks down topics into small, digestible pieces that align with the brain's natural learning capabilities.
- Microlearning stems from the concept of micro content.
- Micro-learning refers to the process of acquiring information in small, fragmented units.

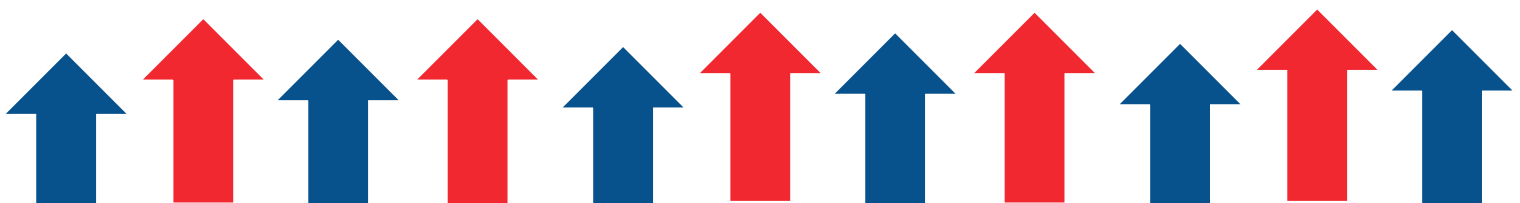
**Video attribution:** "What is microlearning?" by Commonwealth of Learning is available under CC BY-SA: <https://www.youtube.com/watch?v=HLyofif6wl4>

Microlearning is known by various names such as Micro-learning, Bite-sized learning, Micromedia, Chunks, Snacks, Bursts, Short courses, and Micro-content.

The key elements that differentiate modern microlearning from learning short content can be summarized as follows (Bregar, n.d.):

- Emphasis on clearly and precisely defined learning content and its associated learning goal, typically accompanied by measurable learning outcomes for the learner.
- Effective utilization of technology to support the attainment of the learning goal.

Microlearning, as a learning strategy, is implemented using a microlearning unit and microlearning materials. The microlearning unit encompasses the identification and definition of essential learning components, including the learning goal, content, learning activities, assessment of acquired knowledge, selection of appropriate microlearning formats, and the supporting technology (Bregar, n.d.).



Microlearning materials serve as the practical implementation of the concepts presented in the microlearning unit. Typically available in digital format, these materials can be easily accessed by participants through mobile electronic devices such as laptops, mobile phones, or tablets via the Internet or stored locally on the device.

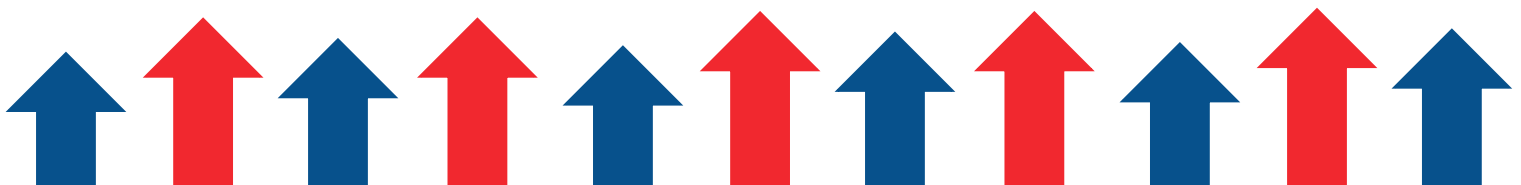
Modern microlearning, with its distinct features such as the emphasis on a single learning goal, flexibility, relevant content, authenticity, and measurable performance, offers a highly adaptable learning strategy. It can be effectively employed across formal, informal, and casual educational settings, at various stages of the learning journey, and at different levels of complexity. This versatile approach brings numerous benefits to stakeholders, including educators and learners alike (Bregar, n.d.).

### ***Microlearning characteristics***

Modern microlearning stands out for its distinct characteristics, including its singular focus on a specific learning goal, overall flexibility, content relevance, authenticity, and the ability to measure performance. These qualities, combined with a diverse range of implementation options based on pedagogical design and chosen formats, make microlearning a highly versatile learning strategy. It can be effectively utilized across formal, informal, and casual educational settings, accommodating different stages of the learning process and varying levels of complexity. As a result, microlearning brings a wide array of advantages to stakeholders, including both educators and learners.

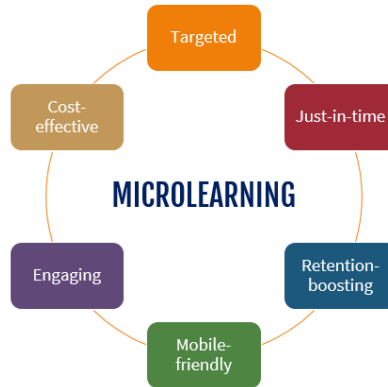
The characteristics of microlearning, as identified by Bregar (n.d.), can be summarized as follows:

- **Focus:** Microlearning is designed to be concise, and content focused. The duration of micro units may vary, but ideally, they should be kept as short as possible, typically ranging from 5 to 7 minutes, with an upper limit of 10 minutes and a lower limit of 2 minutes.
- **Flexibility:** Microlearning materials are easily accessible at any time and place, provided individuals have their own mobile devices. This on-demand availability aligns microlearning with the concept of mobile learning.
- **Relevance:** Microlearning content revolves around specific topics and typically addresses one significant question directly related to the learning objective.
- **Authenticity:** Microlearning often tackles practical issues relevant to real-life problems. It can provide guidance on how to efficiently implement a new production process, acquire accurate and timely information for work or study, or stay updated on a particular subject.
- **Measurability:** Leveraging the digitized environment, microlearning generates various data points. Through learning analytics methods, these data enable real-time monitoring and measurement of participants' progress and achievements. The connection between microlearning and the learning goal is strengthened by expected learning outcomes.



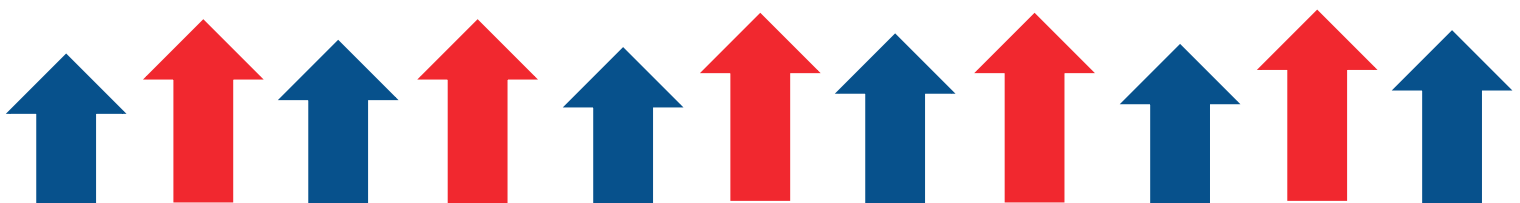
In summary, microlearning exhibits characteristics of being focused, flexible, relevant, authentic, and measurable, making it a valuable learning approach in a digital era.

Some other characteristics can be shown with the following figure:



Microlearning offers engaging content and learning experiences that capture learners' attention and maintain their interest throughout the short and focused learning sessions. It is a cost-effective approach as it requires less time, resources, and effort to develop and deliver bite-sized learning materials compared to traditional lengthy training programs. Microlearning provides learning content and resources at the moment of need, allowing learners to access information, skills, or knowledge when they require it to address immediate challenges or tasks. It focuses on specific learning goals and targets particular areas of knowledge or skills, ensuring that learners receive concise and relevant information directly related to their learning objectives.

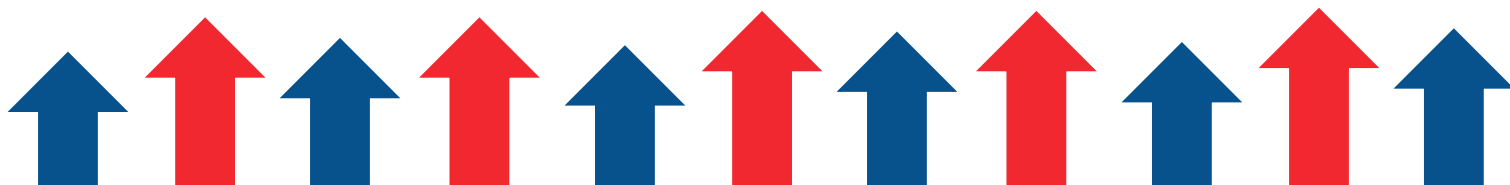
Microlearning is designed to be easily accessible on mobile devices, enabling learners to access content anytime, anywhere, and at their convenience. This mobile-friendly nature allows for flexible and on-the-go learning experiences. Microlearning employs strategies such as spaced repetition, reinforcement techniques, and interactive elements to enhance knowledge retention and reinforce learning over time, leading to better knowledge acquisition and long-term retention.



## Difference between microlearning and macrolearning

In the Table below the main difference between macrolearning and microlearning are presented.

	<b>MICROLEARNING</b>	<b>MACROLEARNING</b>
<b>Prefix meaning</b>	Short, small, focused, minute in scale	Long, large, over time, large scale
<b>Definition</b>	Focus on clearly and narrowly defined (specific) learning content, delivered in a matter of minutes.	Focus on deeper understanding concept, need more time and attention. It is done through long and comprehensive content.
<b>Outcomes from learning</b>	The learner's goal is to resolve a particular issue. exploring ideas and resolving issues in real life.	The learner wants to gain new abilities or a better comprehension of a subject. Acquiring a new ability and level of knowledge. Develop skills.
<b>Content</b>	Short content, clearly defined content, content accessed in short bursts, elements of informal learning, simple issues, learning on the job, just-in time. Short micro courses.	Large modules, formal learning elements, complex problems, learning arrange over time. Full courses to develop skills.
<b>Duration</b>	5 - 7 minute (10 minutes the upper limit and 2 minutes the lower limit)	Hours - days
<b>Forms (Types) of solutions</b>	MS PowerPoint, Screencast Matic, MS Teams, Camtasia video, blog, instructions article, ebook, audio clip, animations, GIF's, interactive resources, infographics, simulations, quizzes, flipbooks, digital flashcards	Courses, classes, MOOCS Course textbooks



## Benefits and limitations of Microlearning

Microlearning initially gained recognition in the realm of non-formal education and employee training. Today, it has emerged as a prominent educational trend within the entrepreneurial sector.

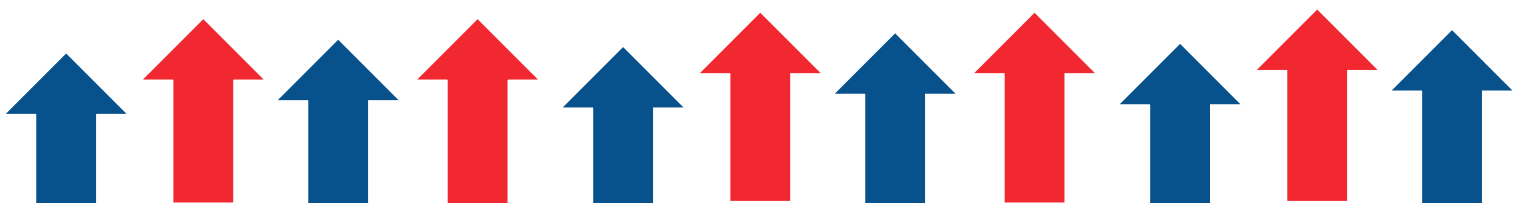
Microlearning presents a range of significant challenges and benefits, including:

- **Timely and Location-Based Learning:** Microlearning ensures that relevant learning content is delivered at the right time and in the appropriate location.
- **Time Flexibility:** Microlearning grants employees the flexibility to choose when and where they engage in learning activities.
- **Digital Competency Development:** Active utilization of tools and applications in microlearning fosters the development of digital skills and competencies.
- **Group Participation and Integration:** Microlearning facilitates participation within learning groups and promotes integration among learners.
- **Reduced Cognitive Load:** The focused nature of microlearning content, aligned with specific educational requirements, helps reduce cognitive load.
- **Rapid Results and Motivation:** Microlearning's connection with real-world problems enables quicker achievement of training outcomes, enhancing motivation for learning and training.
- **Content Updates:** Microlearning acknowledges the need for timely updates as content quickly becomes outdated and irrelevant.
- **Accessibility for All:** Microlearning ensures accessibility for all learners, regardless of their individual circumstances or needs.
- **Enhanced Memorization and Understanding:** Microlearning contributes to improved retention and comprehension of learning content.
- **Flexibility in Content Selection:** Microlearning allows greater flexibility in selecting learning materials and efficiently addressing knowledge gaps.
- **Reduced Learning Time:** Microlearning helps minimize the time employees spend on learning and training activities.

Microlearning offers significant advantages that can be categorized into three main areas: Time, Relevance, and Results:

- **Time Efficiency:**
  - Reduces the overall time spent on learning and training activities.
  - Enables organizations to achieve their goals more swiftly by swiftly adapting training to accommodate constant changes.
  - Shortens preparation time and lowers the costs associated with developing and implementing education and training initiatives.
- **Relevance:**
  - Contributes to enhancing learners' digital competencies, thereby creating favourable conditions for digital transformation.
- **Results:**
  - Enables learner to acquire knowledge and skills in a targeted and focused manner, leading to improved performance and outcomes.
  - Enhances learner engagement and motivation through the delivery of concise and practical learning content.

In summary, microlearning provides tangible benefits in terms of time efficiency, relevance to organizational needs, and positive results in terms of employee development and performance.



### ***Limitations of microlearning***

While microlearning offers several advantages, it is important to note that it may not be universally applicable as a learning strategy. There are certain limitations to consider:

- **Complexity of Content:** Microlearning may not be suitable for complex and intricate learning content that cannot be effectively presented within a few minutes. In such cases, a more comprehensive and in-depth approach may be necessary.
- **Emerging or Unknown Topics:** Microlearning may not be the most suitable strategy for addressing new or unfamiliar topics where a broader understanding and exploration are required. In these cases, a more extensive learning approach may be more appropriate.

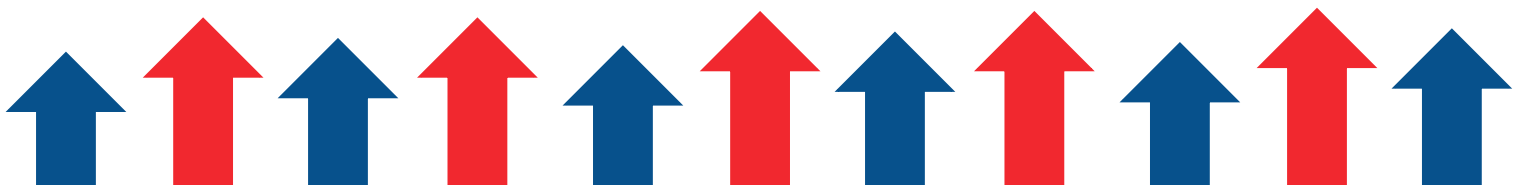
It is essential to assess the nature of the content and learning objectives before deciding on the most suitable learning strategy, as microlearning may not be suitable for every situation or subject matter.

### Creating a Microlearning Lesson

Designing an effective microlearning lesson requires a structured and meticulous approach, taking into account the unique requirements of the target audience. The development process involves several essential steps:

- **Planning/analysis:** This initial phase involves identifying the learning goals, understanding the audience's needs, and determining the scope and objectives of the microlearning lesson.
- **Design:** In this phase, the instructional design is developed, including the selection of content, organization of information, and consideration of instructional strategies to ensure engagement and effective learning.
- **Creation/development:** The actual creation of the microlearning lesson takes place during this stage. It involves developing the content, selecting appropriate media formats, and designing interactive elements that promote learner engagement.
- **Application/implementation:** Once the microlearning lesson is created, it is applied in the learning environment. This may involve incorporating it into a learning management system, making it accessible to learners, and providing guidance on how to use and engage with the materials effectively.
- **Research/evaluation:** After the microlearning lesson has been implemented, it is important to gather feedback and conduct evaluations to assess its effectiveness. This phase involves gathering data, analyzing learner performance, and making any necessary revisions or improvements based on the results.

By following these steps, the development of a tailored microlearning lesson can effectively address the specific needs of the target audience and enhance the learning experience.



The ADDIE model is widely recommended for creating microlearning lessons for training purposes. This model consists of five distinct phases that work together to attain the desired training outcomes: analysis, design, development, implementation, evaluation.

## 1. Analysis phase

The Analysis phase in the ADDIE model involves conducting a thorough assessment of various factors that influence the design and development of a microlearning lesson. This phase includes the following key analyses:

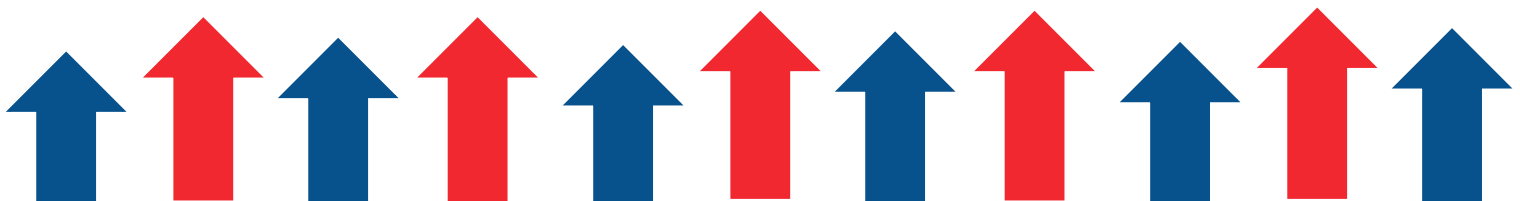
- **Learner Analysis:** This analysis focuses on understanding the characteristics and needs of the target audience. It involves gathering information about the learners' prior knowledge, skill levels, learning preferences, and any specific requirements or constraints that may impact the design of the microlearning lesson.
- **Demand Analysis:** The demand analysis examines the training needs and expectations of the stakeholders, such as the organization or clients. It identifies the desired outcomes, performance gaps, and the overall purpose of the microlearning lesson. This analysis ensures that the training aligns with the goals and objectives of the stakeholders.
- **Target Analysis:** Target analysis involves identifying the specific learning objectives and performance outcomes for the microlearning lesson. It clarifies what learners are expected to achieve by the end of the training and helps define the scope and focus of the content.
- **Content Analysis:** This analysis involves assessing the existing content or identifying the content that needs to be created for the microlearning lesson. It examines the relevance, accuracy, and suitability of the content to meet the learning objectives. Content analysis helps determine what information or resources are required for effective learning.
- **Scenario Analysis:** In scenario analysis, potential real-life situations or scenarios that align with the learning objectives are identified. These scenarios can be used to provide context and relevance to the microlearning lesson. Scenario analysis helps create authentic and practical learning experiences that allow learners to apply their knowledge and skills.

By conducting these analyses, instructional designers can gather the necessary information and insights to guide the subsequent phases of the ADDIE model, ensuring the development of a targeted and impactful microlearning lesson.

## 2. Design phase

The Design phase in the ADDIE model involves translating the information gathered during the Analysis phase into a comprehensive and well-structured plan for the microlearning lesson. This phase includes the following key components:

- **Teaching Plan Design:** In this stage, instructional designers develop a detailed outline of the teaching plan for the microlearning lesson. This includes determining the sequence of topics, deciding on the instructional strategies and methods to be used, and planning the overall flow of the lesson. The





teaching plan outlines the structure and framework of the instructional content.

- **Exercise Design:** Exercise design focuses on creating meaningful and interactive activities that support the learning objectives. These exercises can include quizzes, simulations, case studies, discussions, or other interactive elements that engage learners and reinforce their understanding. The exercises are designed to provide opportunities for learners to practice, apply, and assess their knowledge and skills.
- **Courseware Design:** Courseware refers to the digital or multimedia materials used in the microlearning lesson. In this stage, instructional designers develop or select appropriate courseware, such as videos, presentations, e-books, or interactive modules. The courseware design ensures that the selected materials effectively convey the instructional content and engage the learners.
- **Organization:** The organization aspect of the Design phase involves structuring the content and resources in a logical and user-friendly manner. It includes arranging the content modules, creating navigation pathways, and organizing supplementary materials or resources. The organization ensures that learners can easily access and navigate through the microlearning lesson, facilitating a smooth learning experience.

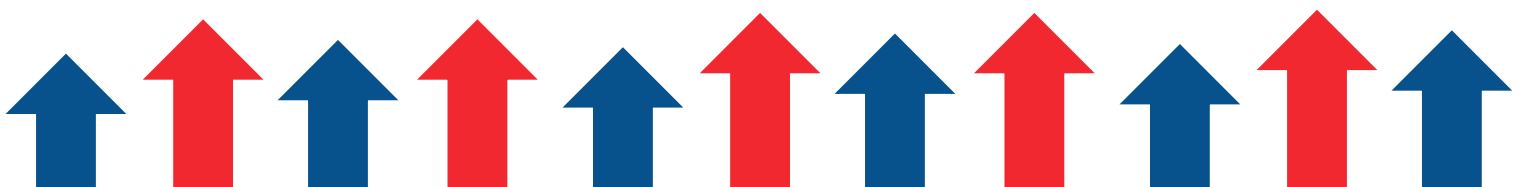
During the Design phase, instructional designers collaborate closely with subject matter experts to ensure the accuracy and effectiveness of the instructional content. The outputs of this phase serve as a blueprint for the development and implementation of the microlearning lesson in subsequent phases of the ADDIE model.

### 3. Development phase

The Development phase in the ADDIE model involves the actual creation of the microlearning lesson based on the design and plans outlined in the previous phases. This phase includes the following key components:

- **Creation of Supporting Resources:** In this stage, instructional designers and content developers create the necessary supporting resources for the microlearning lesson. This can include visuals, graphics, multimedia elements, interactive elements, and other instructional materials. The purpose is to enhance the learning experience and facilitate the understanding and retention of the content.
- **Microtraining Activities:** Microtraining activities are the core learning components of the microlearning lesson. These activities are designed to engage learners, promote active participation, and facilitate learning in bite-sized formats. Examples of microtraining activities include short quizzes, scenario-based exercises, role-playing simulations, mini-case studies, or interactive discussions. These activities are tailored to the specific learning objectives and provide opportunities for learners to apply their knowledge and skills in practical contexts.

During the Development phase, instructional designers work closely with multimedia specialists, graphic designers, and other content creators to produce high-quality and engaging microlearning materials. The emphasis is on creating content that is concise, focused, and effective in delivering the intended learning outcomes.



The Development phase is crucial in bringing the microlearning lesson to life, ensuring that the instructional content and activities align with the design specifications. The created materials and activities are then ready for implementation and evaluation in the subsequent phases of the ADDIE model.

#### 4. Implementation phase

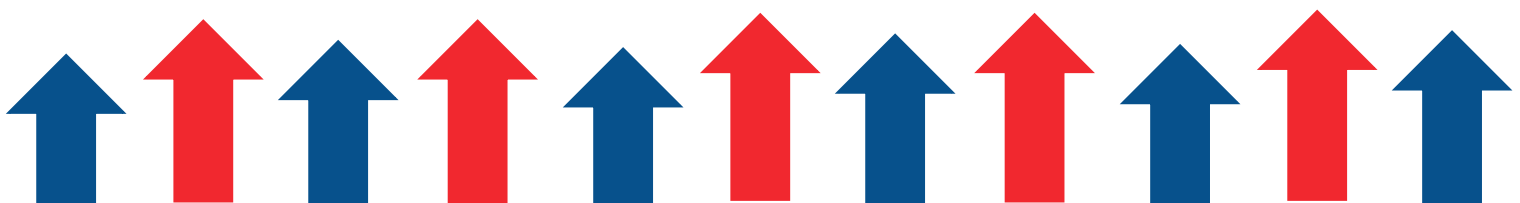
The Implementation phase in the ADDIE model involves the actual delivery and facilitation of the microlearning lesson to the target audience. This phase includes the following key components:

- **Self-Learning:** Self-learning refers to the individual learning process where learners engage with the microlearning materials independently. During this phase, learners access the microlearning resources and activities, follow the designated sequence, and engage in self-paced learning. They can review the content, complete the assigned activities, and reinforce their understanding through independent study.
- **Collaborative Learning:** Collaborative learning involves interactions and engagement among learners in a social and collaborative environment. This can take place through various means, such as discussion forums, group activities, or virtual meetings. Collaborative learning allows learners to share their perspectives, exchange ideas, and learn from each other's experiences. It fosters active participation, critical thinking, and deeper understanding of the content.
- **Support and Management:** The support and management aspect of the Implementation phase focuses on helping and guidance to learners throughout the learning process. This can involve the availability of trainers or facilitators who can answer questions, provide clarifications, and offer support when needed. Additionally, effective learning management systems or platforms are utilized to track learner progress, provide access to resources, and manage the overall learning experience.

During the Implementation phase, it is essential to ensure that the microlearning lesson is accessible to the learners and that they receive the necessary support and resources to engage effectively with the materials. The implementation phase aims to create a conducive learning environment that promotes active participation, knowledge sharing, and ongoing support for learners.

#### 5. Evaluation phase

The Evaluation phase in the ADDIE model involves gathering feedback and comments to assess the effectiveness of the implemented microlearning lesson. Feedback and comments provide valuable insights for improvement, collected through surveys, interviews, and discussions. This data helps identify strengths, weaknesses, and areas for enhancement. By incorporating feedback, designers can make necessary adjustments to ensure the microlearning lesson meets learner needs and achieves desired outcomes. The Evaluation phase supports continuous improvement in the design and delivery of effective microlearning experiences.



## Tools for creating microlearning materials

There is a wide range of tools available for creating microlearning materials, allowing you to select the most suitable option based on factors such as desired format, affordability, complexity, and additional features. In this paper, we present a few examples of commonly used tools that are effective for microlearning.

For video-based microlearning materials, you can utilize tools such as MS PowerPoint, Screencast, Matic, MS Teams, and Camtasia. The links to these tools are provided in the Age of Knowledge document titled "Tools for Recording Author's Videos." These tools offer valuable features and capabilities for creating engaging and informative microlearning videos.

To create videos with interactive elements for your microlearning content, the following tools can be utilized:

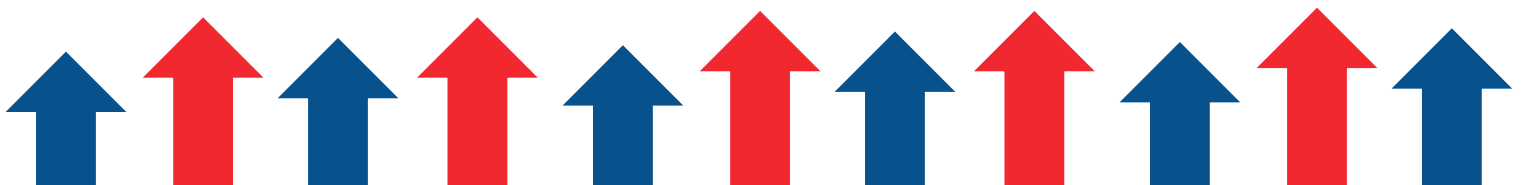
- Edpuzzle: You can use Edpuzzle (<https://edpuzzle.com/>) to create interactive videos by adding questions, quizzes, and annotations to engage learners and assess their understanding.
- H5p: H5p (<https://h5p.org/>) is another tool that allows you to create interactive videos with features such as interactive quizzes, hotspots, branching scenarios, and more.
- TedEd: TedEd (<https://ed.ted.com>) provides a platform to create and share educational videos with interactive elements, including discussions, additional resources, and personalized learning experiences.

Additionally, Capterra, a free software evaluation agency, has compiled a list of free microlearning tools. You can find the list and compare different options, including integrated learning management systems (LMS), at the following link: <https://www.capterra.com/microlearning-software/compare/132935-133660-132888-145800/TalentLMS-vs-Litmos-LMS-vs-Thinkific-vs-Easy-LMS>

These resources offer a variety of features and options to enhance interactivity and engagement in your microlearning videos.

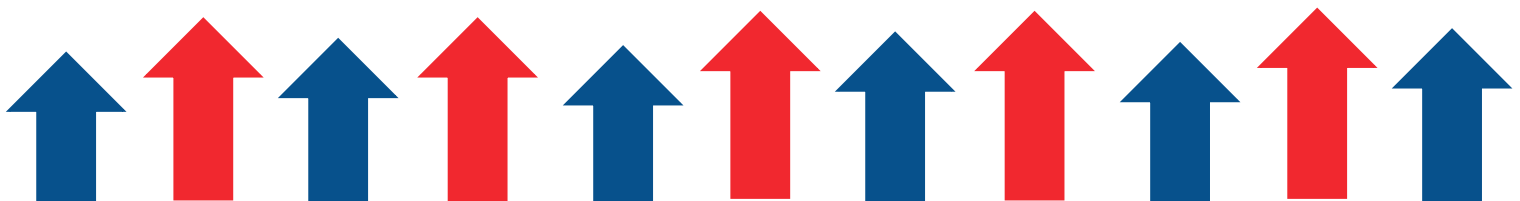
Below are links to valuable databases containing microlearning materials. This list provides access to a diverse selection of intriguing papers covering different aspects of microlearning. Please note that some links may require registration to access the content (Bregar, n.d.):

- Commonwealth of Learning. Introduction to Microlearning. <https://www.colvee.org/course/technology-enabled-learning/introduction-microlearning>  
OER course on microlearning licensed under CC-BY-SA (copyright + share under equal conditions). Access possible with registration.
- LinkedIn Learning. (2021). Creating and Deploying Microlearning. <https://www.linkedin.com/learning/creating-and-deploying-microlearning/next-steps?autoAdvance=true&autoSkip=false&autoplay=true&resume=true>  
How to design micro-learning materials according to the ML format. Access to the resource is possible with registration. One month free use.
- The Learning Guild <https://www.learningguild.com/search/#stq=microlearning>



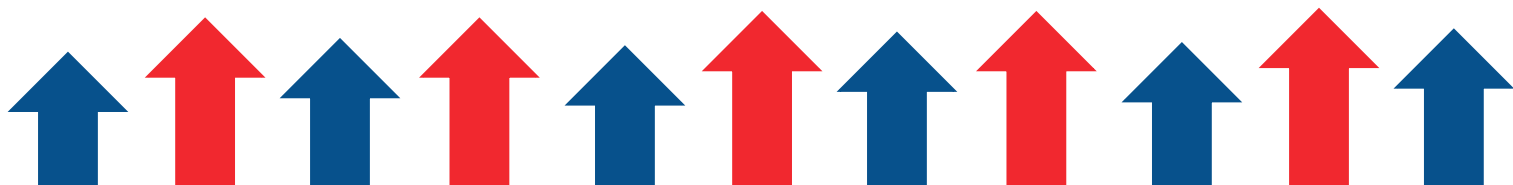
On the Learning Guild portal, search for 'microlearning' to find more current articles on microlearning. The contents of the portal are accessible by registration.

- CommLab India. Microlearning. <https://blog.commlabindia.com/topic/microlearning>  
On the portal of one of the world's leading consulting organizations for technology-supported education, you can find a rich database of articles on innovative forms of education, including microlearning.
- CommLab India (2021). Where Does Microlearning Fit in Your Learning Strategy. <https://resources.commlabindia.com/ebook/microlearning-101>, 36 str.  
Content. What is and what is not ML. Choosing the ML format according to the purpose. Types of ML. ML development (tools and dilemmas). Designing learning analytics for ML. Tips and examples.
- CommLab India (b.d.). Microlearning a beginner's guide to powerful corporate training. <https://elearningindustry.com/free-ebooks/microlearning-a-beginners-guide-to-powerful-corporate-training>, 23 str.  
Content. Presentation of ML with an emphasis on areas of application in companies. Some interesting examples.
- ATD (Association for Talent Development). What is microlearning. Glossary <https://www.td.org/talent-development-glossary-terms/what-is-microlearning>  
ATD's Microlearning password glossary directs you to several useful links about microlearning.
- ELearning Learning <https://www.elearninglearning.com/micro-learning/>  
The Elearning learning platform offers a variety of content on microlearning.
- Allela, M. (2021). Introduction to Microlearning. Commonwealth of Learning (COL), str. 89. <http://oasis.col.org/handle/11599/3877>. CC BY SA  
Content: presentation of basic concepts of microlearning (ML), benefits and risks. Instructions on using different ML formats. Steps in the preparation of micro-learning materials according to the ADDIE model. Examples of good practices and other information (eg OER at ML).
- Peters, R. K. (b.d.). The Definitive Guide to Microlearning. The What, Why, and How-to Guide to Leveraging Microlearning. Walamis. <https://www.valamis.com/hub/microlearning> .  
Content. In addition to the presentation of the theoretical foundations, an explanation of the main concepts and advantages of ML, and recommendations on how to formulate a ML introduction strategy, this manual also provides a brief historical overview of ML, identification of the differences between ML and conventional (macro) learning, reasons for the success of ML in video format, instructions to control the quality of ML and the future of ML.
- Shatte, A. B. R., & Teague, S. (2020, July 14). Microlearning for improved student outcomes in higher education: A scoping review. <https://doi.org/10.31219/osf.io/fhu8n>, 33.str.  
Content: based on a review of 40 articles on ML, an overview of the content and focus of these articles and research challenges in the field of ML in higher education is provided. The usefulness of this article also lies in the rich list of literature on ML in higher education.



## References

1. Commonwealth of Learning (b.l). Introducing to Microlearning. <https://oasis.col.org/colserver/api/core/bitstreams/3d971558-2e78-4bdb-94a9-37f6a18a8fc6/content> (Accesed: 29.3.2023)
2. Peters, K. R. (n.d.). The definitive guide to microlearning. Valamis. <https://www.valamis.com/wp-content/uploads/2022/09/microlearning-guide.pdf> (Accesed: 29.3.2023)
3. Bregar, L. (n.d.). ABC mikroučenja. Doba znanja. <https://moja.doba.si/abc-mikroucenja> (Accesed: 29.3.2023)
4. Bregar, L. (n.d.). Zakaj je mikroučenje ena izmed vodilnih učnih strategij izobraževanja odraslih. <https://moja.doba.si/zakaj-je-mikroucenje-ena-vodilnih-ucnih-strategij-izobrazevanja-odraslih> (Accesed: 29.3.2023)
5. Bregar, L. (n.d.). Orodja za izdelavo mikroučnih gradiv. <https://moja.doba.si/orodja-za-izdelavo-mikroucnih-gradiv> (Accesed: 29.3.2023)
6. Bregar, L. (n.d.). Povezave do uporabnih baz mikroučnih gradiv <https://moja.doba.si/povezave-do-uporabnih-baz-z-mikroucnimi-gradivi> (Accesed: 29.3.2023)







Co-funded by the  
European Union



# FinPower



Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them. Project Number: 2022-1-AT01-KA220-ADU-000087985