ELEARNINGNEWS ARTICLE

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Psychology and microlearning

The realisation of learning in pills (microlearning) requires time and knowledge of the dynamics of the human mind.

To realise high-quality microlearning requires a certain amount of time and knowledge of educational psychology (even if it is corporate learning aimed at adults, of course).

Educational psychology

Let us begin with a review of the five main **psychological theories of learning**.

1. Behaviouralism

"Learning is an observable behavioural change that occurs in response to environmental stimuli. Positive stimuli (rewards) create positive associations and encourage repetition of the behaviour. Negative stimuli (punishments) discourage behaviour."

Food for thought for instructional designers: does the denial of an expected reward, due to failing the test, act as a negative stimulus?

2. Cognitivism

"Learning is the product of mental faculties and activities, including thinking, knowledge, memory, motivation, reflection and problem solving. The most common modes of learning are reading and lecturing." Of course, an **experienced teacher (SME)** conveys the content of lectures, but the amount of knowledge and information absorbed depends on the mental capacity, motivation and **beliefs**.

Food for thought for instructional designers: some consider the approach of almost entirely passive listening to the lecture followed by the learning test to be outdated.

3. Constructivism

"Students learn for themselves by interpreting their world and restructuring their thinking. Social constructivism argues that students learn naturally through a process of discovering their own context. Cognitive constructivism, on the other hand, investigates the stages of learning based on age and experience. It defines learning as an expansion of the mental model of the world that the learner has acquired through experience."

Food for thought for instructional designers: If you use open questions and **collaborative thinking** in your courses, you are taking a constructive approach.

4. Experientialism

"People have to learn by themselves, it is not possible to teach someone. As facilitators of learning, we can make an experience possible, but we will never have control over what the learners gain from that experience." Here, too, microlearning plays an additional role.

5. Social learning

"Learning is an interaction between an individual and a situation. Knowledge is a product of the activity, context and culture in which it is developed and used. In other words, it is about social participation and negotiation; about new concepts and their direct application in the environment in which the learner lives and works'. This approach is crucial, for example, when the

learner has to learn the customs and soft skills required in a new workplace or, indeed, in a new culture different from their own.

Making the most of your memory

There are two principles that help improve **memory**:

- The **spacing effect** is a practice of cadenced 'delivery' of information over time, at specific intervals. Long-term retention of information improves as the distance between repeated study events increases.
- The **test effect** refers to the fact that once information is available in memory, repeated retrieval is more effective for long-term retention than repeated study. In this sense, tests and quizzes should not only be considered as a means of evaluating training, but also as a learning tool.

The combination of spacing and testing is very effective for the long-term retention of information. It is therefore important to "actively retrieve the information we want to remember and to distribute the retrieval over time, instead of concentrating it in a short period of time". In this sense, microlearning is the perfect tool for spaced retrieval.

Motivation is an important force at play: it is good if the learner wants to learn, is engaged and happy, and is not forced to learn. Also in this sense, microlearning is much more motivating than 'all-in-one' training.

Just-in-time learning (at the point of need)

Google defines a consumer's micro-moment as a 'moment full of intention, in which a person turns to a device to fulfil a need: to know, to do, to go or to buy'.

If we talk about learning, the micro-moment occurs when a learner turns to the microlearning course to quickly find out the information sought and learn what and how to do to satisfy a specific need at that precise moment. In this case, the learning must be readily available and serve the purpose, giving all the necessary references to go deeper into the topic.

The Five Moments of Learning Model or Workflow Model (Dr. Conrad Gottfredson, Bob Mosher) concerns learning at the five moments of need during work, namely:

1. **New**: people learn to do something for the first time
2. **More**: people deepen what they have already learned
3. **Apply**: people need to apply on what they have learnt
4. **Solve**: in case problems arise or the results are not as expected
5. **Change**: when people need to learn a new way (requiring new skills) of doing something.

The importance of empathy

Empathy is the "ability to perceive the emotions, feelings and needs of others". When a course is developed with **empathy**, it will have a greater impact on the learner. This is because a real connection is created with the learner that touches motivation, commitment, belonging and inspiration.

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