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Teaching in eLearning courses: managing activities and exercises

Activities and exercises thanks to eLearning can offer students the way to evaluate their preparation and teachers the quality of the courses designed

The growing relevance of eLearning as a training tool can be explained by the advantages it can bring to businesses and users. Ubiquity and interactivity are two of the main characteristics that this technology can provide. However, the mere availability of online content is not enough to ensure effective and meaningful learning. This is where instructional design in eLearning courses comes into play.

Technological innovation partially modifies but does not go beyond the need to give organic form to the contents to be provided. Teaching design represents the link between learning theory, technology and user experience. It not only facilitates the organization and delivery of learning materials, but plays a crucial role in ensuring that students can learn in an effective, engaging and meaningful way.

Designing eLearning courses requires the collaboration of multiple specialized figures. In addition to lessons, it is important to provide activities and exercises for users to carry out to ensure that their interaction has positive effects on final learning.

Studies in the psychology of learning and the best practices of human resource management and personnel evaluation in the company environment allow us to decide how to organize and define these parts of the course.

Instructional Design in eLearning

Instructional design is the backbone of a successful eLearning course. This is much more than just organizing content; it is about optimizing the learning experience for students. The order, importance and connections of the concepts to be presented are not defined a priori but must take into account the teaching objective to be achieved. In particular, it is important to consider the level of preparatory knowledge possessed by the users of the course, in addition to the objectives that it must achieve: the more in-depth the final knowledge that must be achieved, the more it will be necessary to provide in-depth analysis in the margins for concepts that are not already known to all those attending, for example.

- It is possible to summarize some basic principles for designing effective teaching:
- High and continuous involvement of those attending
- Clear and well-defined learning objectives
- **Accessibility** must allow the needs of all users to be met

Students must be actively involved and motivated during the online learning process. Thoughtful design helps create engaging experiences that keep students interested.

Careful design ensures that content is structured to enable students to achieve these goals.

Accessibility is not only a problem of disability or physical limitations, but also of age, learning styles, etc.: the course designer should consider that there is not a single student, but several ideal " **learner personas**", each with propensities, limitations and preferences. Antonio is a color-blind visual learner; Maria, with attention deficit, prefers to enjoy audio content; Tommaso prefers to follow the flow of his own questions to delve deeper into a concept; Roberta is more comfortable with programs defined and taught by an ever-present teacher. Online courses need to be flexible to adapt to students' needs, allowing them to learn at their own pace.

Instructional design in eLearning courses draws inspiration from numerous theories of learning psychology. These theories provide a solid framework for understanding how students learn and how to design courses that maximize learning.

Albert Bandura's **social learning theory** highlights the importance of observation and imitation in learning. In eLearning, this principle can be applied through the use of instructional videos, online discussions, and collaborative activities that encourage students to learn from others. Activities and exercises can benefit from this approach if students are enabled to compare their actions and decisions with those of others and with the examples presented by teachers.

Active learning theory suggests that students learn best when they are actively involved in the learning process. Course design should include activities that require students to apply what they have learned, such as quizzes, hands-on exercises, and projects. The course designer should therefore reflect on how to make even the most theoretical concepts more suitable for exercises.

Motivation is a key factor in learning. Course design should take into account **theories of motivation**, such as self-determination theory, to create an environment in which students feel motivated to actively engage in content. This aspect overlaps with human resources management practices, which include a wide range of tools, such as economic incentives; the increase in responsibility, qualifications and hierarchy in teams; career prospects. Aligning employee motivation with company needs is part of the broader principal-agent problem, in which one party delegates to the other the performance of certain tasks in their own interest without maintaining complete control over the final result.

Based on these learning theories, we can outline some best practices for instructional design in eLearning.

First, it is essential to clearly define the learning objectives of the course so that students know what to expect. It is also important to incorporate interactive activities that actively involve students in learning. Both these interactive activities and the tests on the concepts learned must provide constant feedback to students to help them improve and monitor their progress. As already mentioned, courses and exercises must adapt to the different needs of students.

Management of Learning Activities

Learning activities are the beating heart of any eLearning course. They are places where students have the opportunity to apply what they have learned, develop skills and consolidate their understanding of content.

Course-related activities allow students to apply the concepts learned in real or real-life situations. This facilitates in-depth understanding and transferability of knowledge. Active involvement allows you to keep their motivation and attention high, especially when lessons are followed in groups: the average attention is supported by those students who are most active at a time; their questions keep the class alive, encouraging and stimulating each other.

Through activities like quizzes and exercises, students receive immediate feedback on their performance, which can guide them in the learning process. Activities can be structured to encourage students to solve problems, developing their critical skills and approach to problem-solving, qualities of great value in the workplace.

Designing engaging activities is a key element to the success of an eLearning course. Here are some practical tips for designing effective activities:

- Clearly define the learning objectives of the activity so that students know what they need to achieve.
- Use a variety of activity types, such as quizzes, discussions, simulations, and projects, to keep students interested.
- Incorporate elements of collaboration and social interaction into activities, such as group discussions or collaborative projects, to encourage student participation.
- Provide constructive and specific feedback on student efforts, highlighting positive aspects and suggesting improvements.
- When possible, create activities that reflect real-world situations or practical scenarios relevant to the course content.

Effective eLearning exercises

Exercises represent a fundamental part of eLearning courses, significantly contributing to the acquisition of skills and understanding of the contents.

These offer students the opportunity to actively apply what they have learned, turning theory into practice. Through practice and repetition, exercises allow students to consolidate their understanding of concepts and develop specific skills, preparing students for real-world situations or work situations.

Designing effective exercises requires attention to detail and a focus on achieving learning objectives. Here are some tips for designing successful exercises:

- Clearly define the objectives of the exercise so that students know what they need to achieve.
- Structure the exercises gradually, starting with simpler activities and gradually progressing to more complex tasks.
- Provide detailed, constructive feedback to students, specifically indicating where they can improve.
- Use a variety of exercise types, such as quizzes, written assignments, practice exercises, and simulations, to provide diverse, engaging, and challenging learning experiences.
- Connect the exercises to the course context or real-world situations, so that students can see the practical applicability of the concepts.

In conclusion

Activities and exercises are essential elements of an eLearning course. These allow us to summarize the notions learned, to add further context to the theoretical cases presented by the teacher, and to stimulate the students' creative reasoning.

To provide the best contributions, these should be timed appropriately throughout the course: at the end of the main units, to summarize the body of notions learned; as well as within them, in a more streamlined format, to ensure that the level of attention remains adequate.

Another important point is the level of difficulty: activities and exercises that are too simple could be perceived as an annoying interruption; a level that is too high would spread uncertainty about the course, the teacher or the qualities of the students themselves. The suggestion is to arrange them in increasing order of difficulty and intensity, with the possibility of introducing final tests that require creative solutions and reasoned applications of the concepts learned, where the student is aware that what is required is both a challenging objective, for which is worth giving one's best effort, much in excess of the minimum requirements.