ELEARNINGNEWS ARTICLE

Year 7 - number 242 Wednesday 12 April 2023

How to develop an eLearning course for the healthcare industry

Designing eLearning courses in the medical field is a task as delicate as it is important. Let's discover techniques and guidelines for producing a course suitable for the target audience.

In healthcare, training is an important and ongoing issue. Not only are long years of study and specialization required to enter the health professions. Professionals are also required to make an effort to keep up-to-date throughout their health care care careers. This approach is formalized in Continuing Medical Education (CME), which, in both **Europe and the United States**, defines training modalities, workload and frequency of refresher training.

Educational credits can be given as a result of different educational formats, such as:

- Residential Events
- Field Training
- Distance Learning
- Blended

Of these, distance learning can be an interesting tool for optimizing work routines: **eLearning can be a great tool in CME, as proved by some studies on the subject.**

Having established the qualities of the technology-video conferencing, multimedia and continuous Internet connection-the point is to produce quality content and deliver it in the ways that pander to users' needs. **Developing an eLearning course for the health sector is a complex task**, not only because of the subjects covered, but also because of the expectations and objectives assigned to it.

Who designs courses: the role of providers

Providers are the entities that deliver eLearning courses valid for CME. In order to operate, they must be accredited by the National Agency for Regional Health Services, which verifies that Providers meet the quality standards required for CME training courses. For example, distance learning courses must include the ability to interact with faculty and other participants, as well as access to high-quality teaching materials and interactive tools. Various entities can act as providers, given the advanced knowledge of the courses to be delivered and the technological infrastructures suitable for the purpose: universities and scientific institutes; publishing houses and foundations of a scientific nature; companies, agencies and private entities. All of these are entities potentially eligible to act as Providers.

Designing an eLearning course for continuing medical education

The first step in designing an effective eLearning course is to define the objectives of the course. These should be specific, measurable, realistic and relevant, taking into account the needs of the target audience. For example, a continuing medical education course might aim to provide updates on new findings and best practices in the treatment of a particular disease.

Second, **identifying the target audience** is important in order to tailor the content of the course to the specific needs of those who will take it. For example, a continuing education course for nurses might focus on care protocols for pain management of patients. The target audience of an eLearning course for continuing medical education might include physicians, nurses, laboratory technicians, pharmacists, and other health care professionals.

Finally, **the design of the course content is critical to the success of the eLearning course**. The content should be accurate and up-to-date, and provide a balanced mix of theory and practice. Using different learning modalities, such as text, images,

video, and audio, can make the course more engaging and accessible. In addition, the design of the course content should include interactive activities, such as quizzes, exercises, and simulations

How to design an eLearning course

As mentioned, it is of paramount importance that the course material is deemed suitable for the training of learners. This, not only because of the obvious sensitivity and importance of the subject matter, but also to ensure that the information, in addition to being correct and scientifically grounded, is also the most up-to-date with respect to the latest findings and practices. If inaccurate or unsubstantiated notions would be without appeal deleterious, similarly, those that are outdated or obsolete would be of little value, especially in light of the hourly cost of attendees: **an hour spent on continuing education is an hour that is not employed in the profession**. The social value of the medical professions dictates that this is time well spent.

The question then is, **how to develop an eLearning course that maximizes its educational contribution, in terms of notions and delivery methods**. **This is an important issue that came to the fore during the Covid-19 period**, when emergency imposed quarantines and forced a rethinking of any organizational flow.

Around the same time, the paper " **Designing Online Courses: 12 Tips for Health Professions Educators**," by Elisabeth Schlegel, associate professor in education at the Zucker School of Medicine at Hosftra University in New York, delved into the requirements that a course must have.

The paper emphasizes the merits of asynchronous education, which is well suited to the organizational needs of students and the work they have to do. The critical point, however, is careful course design to ensure outcomes. There is certainly no shortage of tools for an eLearning medical course. If anything, the problem is how to integrate video lectures, textual and audiovisual teaching materials, discussion forums and possible field activities.

Professor Schlegel then provides some useful suggestions:

- Establish the design and flow of the course
- Determine the modules or units of learning
- Determine the assessments for each module or unit of learning
- Determine the content and its fruition
- Select activities and tools to support collaboration
- Integrate multimedia tools to support learning
- Simplify communication with the class
- Adopt a clear course layout
- Provide resources for advanced learning
- Foster the creation of a community of learners additional to the course itself
- Develop the course collaboratively
- Value feedback on the course

The focus of these suggestions is that **course design should follow a Backward Design method**, according to which the desired outcomes-the retention of specific skills or knowledge-should precede and define what are acceptable levels of acquisition which, in turn, direct the course design and choice on what activities and events to offer learners. It is to say that once it is determined what learners should know, one can choose assessment methods such as tests, projects, field activities, etc.; and only after determining what these assessment methods will be can one choose teaching methods.

Another important element are **pedagogies that draw on the active learning of learners**. These are fostered by student interaction, which, thanks to eLearning can be enabled by creating separate rooms for each working group, in which participants can consult and interact with each other to foster collective learning.

These groups can contribute to the creation of real communities, possibly reinforced by social networks such as group chats, which have the function of extending the moment of learning well beyond the duration of the course. An active community, if it remains so, is able to preserve the notions learned as a group culture, useful as an "intangible library" that each of the members can access as long as the group remains viable. Forums, group rooms and chats can foster this phenomenon; field activities can cement it, but it is up to the community of students and the study or work environment to keep it alive.

Then, with regard to the comprehension and retention of the notions enjoyed, the use of multimedia materials and social media allows students' attention to be reached in multiple ways, contributing to the vividness of mental images and clarity of understanding.

An eLearning course should then not be thought of as something stand-alone. Ideally, this should be designed to connect with other courses, whether prior, subsequent, or similar. All of these constitute the notional assets of a Provider, on which its training offerings can pivot.

Some design techniques

To design an effective eLearning course for continuing medical education, there are some important techniques and tips to consider. The following are some of these suggestions.

Resorting to **instructional design** techniques is an important step in designing an effective eLearning course. These techniques help to structure the course in a logical and consistent way, making it easy for users to follow. For example, dividing the course into modules and lesson can facilitate learning and memorization of information.

The use of **realistic case studies and scenarios** can help users better understand how to apply the knowledge and skills acquired in the course to real life. These cases and scenarios can be used as examples and practical case studies, allowing users to put the knowledge gained into practice.

The use of interactive elements can make the eLearning course more fun and effective. Quizzes can help test users' understanding, while games can increase users' interest and motivation in taking the course. In the medical field, when needs require, interaction with the subject studied is ensured by teaching in blended mode, which includes both a theoretical part, live or remotely, and a part in the field, such as in the clinic or operating room.

Not least, collaboration with experts in the field can ensure that the information in the course is properly prepared and up-to-date. Subject Matter Experts can provide feedback on course content, suggest new trends and emerging practices in the field of medicine, and identify topics of greatest interest to the target audience.

Conclusions

In summary, designing an eLearning course for continuing medical education requires clearly identifying what the objectives of the course are and identifying the target audience before going into the details of the course itself.

A backward design approach can help define what the outcomes are, in terms of notions and skills that you want learners to achieve, and then focus on how to measure them and how to have this knowledge taught.

To make a successful course, it can be very important to use instructional design techniques, realistic case studies and scenarios, interactive elements, and collaborating with experts in the field.