

# Young gastrointestinal angle: E-learning in gastroenterology: Future is now

## BENEFITS AND STRENGTHS OF E-LEARNING IN GASTROENTEROLOGY

Over the years, e-learning culture has progressively taken hold, in particular in medical education; since, it allows the advantage of eliminating distances and making teaching and learning easier. Online learning provides access education at any time on-demand, facilitating training and allowing time optimization and cost reduction compared to face-to-face teaching.<sup>1</sup>

The application of e-learning in Gastroenterology has been easy and immediate for several reasons. First of all, the magnitude of topics to be taught often makes it challenging to fulfill the training needs with frontal teaching and local resources. In this setting, e-learning allows bringing together competency, sharing expertise and knowledge, and filling educational gaps.

Moreover, the growing interest and innovation in gastrointestinal (GI) procedure, especially in endoscopy, has significantly increased the use of e-learning for live endoscopy, allowing operators and learners to share images of live procedures from every corner of the world.

Finally, the rapidity of innovations in gastroenterology makes it difficult to quickly organize live education, for example, soon after the release of a drug or new guidelines. These limits are overcome by digital learning which is almost immediate.

For all these reasons, it is likely that this tool will reserve an increasing role in gastroenterology education in the coming decades, especially for trainees and young physicians.<sup>2</sup>

Several academic institutions, as well as European scientific societies including United European Gastroenterology (UEG) and European Association for the Study of the Liver (EASL), have already implemented an e-learning platform on their websites with outstanding results.<sup>3,4</sup> These projects are expanding and constantly growing all over the world, thus enriching the learning possibilities and improving the quality of gastroenterology.

## E-LEARNING EXPERIENCE IN GASTROENTEROLOGY: THE ITALIAN JOB

In 2012, a multimedia platform named 'Gastrolearning' was founded in Italy with the aim of creating a national education network in gastroenterology.<sup>5</sup>

The project was managed by the national board of gastroenterology professors (Unigastro), and received the endorsement of the main Italian scientific societies of gastroenterology, hepatology and endoscopy.

All 28 Italian schools in Gastroenterology have joined and were included in the project. An editorial board, composed by five members, was set up with the task of designing an annual programme of lessons. The lectures were then assigned to a panel of senior experts from all Italian universities, according to their expertise, and broadcasted online on a web-based platform every Monday afternoon, twice a month.

The participants of the seminars were mainly gastroenterology trainees of all Italian schools. During the lessons, the discussion was managed by a moderator, and the interaction was always permitted, allowing trainees to ask questions and receive answers at any time. All the seminars were also recorded and uploaded to the 'Podcast' section of the website, allowing the learners also access multimedia content at any time 'on-demand'.

The activity was financed by the University of Palermo (promoter of the project), by the Italian Society of Gastroenterology (SIGE), and periodically received non-conditioning grants from sponsors, whose support has been steadily declared on the website.

None in the group of teachers or learners earned or paid for using this service, and the platform was released with free access.

In 9 years of activity (2012–2021), Gastrolearning has always provided continuous education without interruptions. Globally, over 97 lessons were held, covering various topics including hepatology, endoscopy and inflammatory bowel diseases.

The audience data confirm that the platform is widely used throughout Italy. The website annually records about 5000 users, more than 10,000 sessions and over 30,000 page views, with homogeneous distribution from all the country.

The seminars allowed all the postgraduates, belonging to the 28 schools throughout the country, to attend free lessons that at that time were held hundreds of kilometers away, with the only use of computer and Internet connection. In order to complete and customize the training needs, e-learning seminars were also integrated with the face-to-face lessons in the respective home school.

Finally, users were periodically invited to participate in satisfaction questionnaires in order to evaluate the perception of the service and to identify the unmet needs of the educational offer.

## E-LEARNING EXPERIENCE IN GASTROENTEROLOGY: THE EUROPEAN JOB

Developing effective training tools and educational content to meet the learning requirements of the future is also a major aim of UEG Education.<sup>6,7</sup>

Since the venture started 11 years ago, a small collection of webcasts has grown into a comprehensive online learning portal that with a large uptake. Thanks to the hard work, engagement and enthusiasm of numerous volunteers, it has been possible to bring together the competency of national and specialist GI societies and to provide top-quality multidisciplinary and up-to-date education in different formats.

More than 30 continuing medical education online courses reach over 10,000 users around the world, and webinars on different topics provide live educational training and real-time interaction. The 50<sup>th</sup> 'Mistakes in...' article was published in April 2021, with additions coming all the time. The GI Guidelines mobile app that includes diagnosis and treatment recommendations quickly gained popularity. Finally, the UEG Library<sup>8</sup> is another excellent resource and home to thousands of abstracts, posters, images guidelines and recordings, also those of past webinars and events.

An innovative blended learning concept that will deliver the best online educational offerings with the added value of in-person expert involvement and interaction will start at the end of 2021. The first multidisciplinary topic to be covered in this format will be chronic pancreatitis. Participants will first study a range of online learning materials and undertake assessments, before meeting with an expert multidisciplinary faculty in a classroom environment for case-based learning in small groups.

## THE RELEVANCE OF E-LEARNING IN THE NEXT FUTURE

E-learning can no longer be considered only a futuristic tool since it is already an integral part of our professional life. Despite this, some additional considerations need to be made.

Recently, the SARS-CoV-2 pandemic has stressed the health system, and also medical education.<sup>9</sup> Several lines of evidence from European countries show an alarming reduction in GI training as a consequence of the pandemic, with a drop up to 90% in the procedures performed by trainees, and significant concerns about their competency developed in this timelapse.<sup>10,11</sup>

In the absence of traditional face-to-face teaching, e-learning took over a greater role and a specific responsibility, both in the field of teaching and professional updating. As a result, the lesson from this experience is that every institution needs an e-learning educational program to meet ordinary and extraordinary needs.

Nevertheless, the shift to an online system requires a reorganization of the way of teaching, since online modalities use different models and also present obstacles that must be overcome. For instance, they cannot include contact with the patient, which is of primary importance in medical education, and they cannot replace

physical training in procedures. Although the use of multimedia, such as images, videos or live sessions, may compensate these gaps; e-learning always needs to be integrated with clinical activities.

For all these reasons, and based on our experience, we suggest the use of an e-learning network for integrating the teaching in schools of gastroenterology, which also includes an integrated face-to-face teaching plan.

Moreover, we recommend that educational programs be designed and tailored, according to the training needs of the learners and the teaching offer of the home school.

## CONFLICT OF INTEREST STATEMENT

The authors have no proprietary, financial, professional or other personal interest of any nature or kind in any product, service and/or company that could be construed as influencing the position presented in, or the review of this manuscript.

## AUTHOR CONTRIBUTIONS

All authors had contributed to the manuscript drafting and revision for important intellectual content, and had full control over preparation of manuscript.

## KEYWORDS

e-learning, endoscopy, gastroenterology, gastrolearning, young GI angle

Marcello Maida<sup>1</sup>   
Calogero Cammà<sup>2</sup>

<sup>1</sup>Gastroenterology and Endoscopy Unit, S. Elia-Raimondi Hospital, Caltanissetta, Italy

<sup>2</sup>Department of Health Promotion, Mother and Child Care, Section of Gastroenterology and Hepatology, Internal Medicine and Medical Specialties, PROMISE, University of Palermo, Palermo, Italy

## Correspondence

Marcello Maida, Section of Gastroenterology, S. Elia – M. Raimondi Hospital, Caltanissetta, Italy.  
Email: [marcello.maida@hotmail.it](mailto:marcello.maida@hotmail.it)

## ORCID

Marcello Maida  <https://orcid.org/0000-0002-4992-9289>

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