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IMPLEMENTATION OF EXPERIENTIAL LEARNING IN PATHOLOGY: IMPACT OF HIPON PROJECT

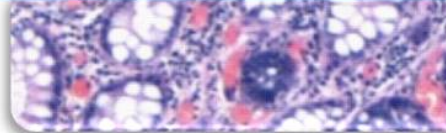
Conventional medical books follow an encyclopedic-type formula citing single diagnostic features of specific diseases without initiating the reader to think as a professional. In pathology training, one of the current hardest and most important tasks is the conversion of the extensive amount of available data into medical experience, after a proper analysis.

The relevant challenge to record online the diagnostic expertise of leading pathologists, is linked with a main educational task undertaken, i.e., structuring an inter-active e-learning platform in the context of a novel teaching strategy. **"ICT e-modules on HistoPathology: a valuable online tool for students, researchers and professionals - HIPON"** is a project supported and co-funded by the **Lifelong Learning Program of the Education, Audiovisual and Culture Executive Agency, The Commission of the European Union** (project reference number: 531203-LLP-1-2012-1-GR-KA3-KA3MP, Grant Agreement: 2012 – 4909 / 001 – 001, Key Activity 3-ICT Multilateral Projects), and coordinated by Associate Professor Dr Andreas C. Lazaris from Medical Faculty of the National and Kapodistrian University of Athens, with the following partners:

University of Zagreb School of Medicine, Croatia, Radboud University Nijmegen Medical Centre, the Netherlands, Centre for the Advancement of Research & Development in Educational Technology (CARDET), Cyprus, and Faculty of Computer Science and Engineering, Ss. Cyril and Methodius University, Skopje, FYROM.

The whole project aspires to be recognized as of high pedagogic value, creating an online environment that speeds up the ability to learn and achieves to transfer, step by step, the way of expert diagnostic thought in Pathology to its users so that the latter increase their professional experience and not just be provided with plain information of encyclopedic type. Our motivation is to promote trustworthy professional experience to HIPON users so that they develop their own necessary practical dexterities in the huge field of modern Pathology, through an interactive educational web-based platform equipped, above all, with interactive case presentations based on successive microscopic images with guiding questions/legends and annotations, as well as with educational presentations of histologic slides in video and digitalized (virtual) slides.

In order that the results of our efforts are promoted, the following HIPON-related journal publications and conference speeches / announcements / papers have been carried out:



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- Full paper publications

1. A Web-based Attempt to Acquire Professional Experience in Pathology: The HIPON Project. *MedEdPublish 2013*, www.mededworld.org.
2. HIPON Project: Acquiring Medical Experience through an E-learning Platform. A New Perspective in Pathology Education. *New Perspectives in Science Education. Edition 4, 2015*.
3. Learning Authentically through HIPON Platform. *The Future of Education, 2015*.
4. Acquiring experience in pathology predominantly from what you see, not from what you read: the HIPON e-learning platform. *Advances in Medical Education and Practice 2015:6, 1-7*.

- Conference invited speeches on HIPON

1. 25th European Congress of Pathology, Lisbon 2013.
2. 27th European Congress of Pathology, Belgrade 2015.

- Conference participations with abstracts

1. 25th European Congress of Pathology, Lisbon 2013. *Abstract published in VirchowsArchivThe European Journal of Pathology, Vol. 463, No 2: page227*.
2. 26th European Congress of Pathology, London 2014. *Abstract published in VirchowsArchivThe European Journal of Pathology, Vol. 465, Suppl. 1: pageS286*.

3. 38th European Congress of Cytopathology, Geneva, 2014. *Abstract published in Journal of Cytopathology, Vol. 25, Suppl. 1, 22-78*.

4. 30th Congress of the International Academy of Pathology, Bangkok 2014. Selected by the Scientific Committee as one of the 17 out of 400 posters to be orally presented at a special session. *Abstract published in Pathology Vol. 46, S2: page S124*.

5. 39th European Congress of Cytopathology, Milan, 2015. *Abstract to be published in Journal of Cytopathology*.

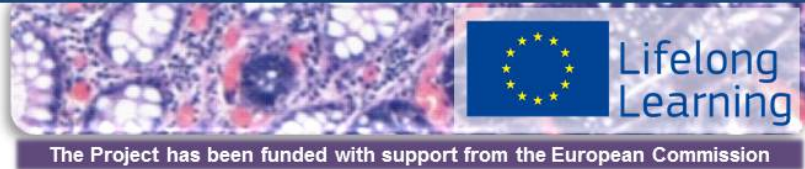
6. 9th International Online Medical Conference, 2015

7. 26th ESC Medical Students' Conference, Berlin, 2015.

In the above multiple presentations, the position of experiential learning in academic education and the application of this type of learning in HIPON e platform were extensively discussed.

The basic concept underling HIPON's methodology is the introduction of experiential learning based on real cases.

Experiential learning is a process through which students develop knowledge, skills, and values from direct experiences outside a traditional academic setting; the key element is the student, and knowledge is gained as a result of being personally involved in the pedagogical approach.



Simulating the same diagnostic procedure that expert pathologists follow in everyday practice through the HIPON presentation of several case studies (Fig. 1), users familiarize with the analytical diagnostic process and become highly knowledgeable about using all their acquired knowledge in order to achieve the correct diagnosis.

By implementing experiential learning, there is a move to a more student-centered view of learning. The educator's most important responsibility becomes to search out and construct meaningful educational

experiences that allow students to solve real-world problems; the result is that any abstract, inert knowledge that students used to memorize from dusty textbooks comes alive as they participate in the practical application of knowledge.

Through the simulating experiences provided by HIPON, users acquire medical experience in the process of diagnosing human diseases and so become more prepared and knowledgeable when they face patients in real life.

HIPON provides an innovative platform

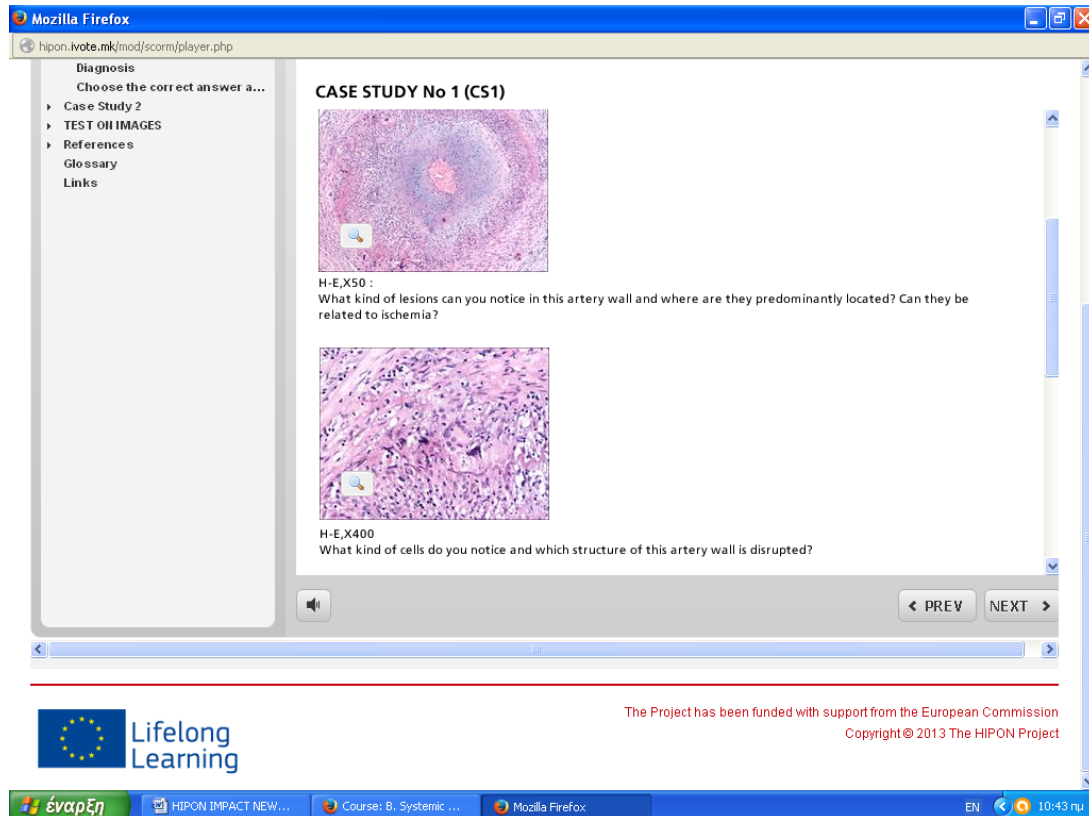
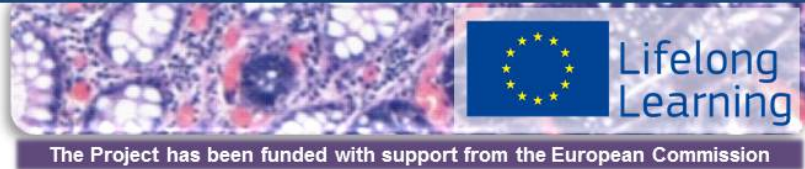


Figure 1. Part of HIPON's cases presentation



which introduces medical experience in diagnostic practical issues of Pathology and assists learners to gain practical insight of the theoretical background they are traditionally taught.

Teaching through HIPON e-platform, users decide themselves to be personally involved in the learning, practical problem-solving experience.

Experiential learning, in theory and in practice, offers rich opportunities for learning for participants and teachers/facilitators. Choosing powerful activities that increase learner involvement, following the experiential learning cycle in reflecting, generalizing and applying learning, giving and receiving valuable feedback in the moment greatly increase learning retention and the quality of learning for HIPON e platform users.

Learn more about HIPON project on www.hiponproject.eu, Twitter ([@HiponProject](https://twitter.com/HiponProject)) and Facebook ([HIPONProject](https://www.facebook.com/HIPONProject)).