

HISTODOCENCIA 2023

Nuevas estrategias docentes en Histología. Más aprendizaje y menos enseñanza: uso de microscopios virtuales e Historrelatos.

New teaching strategies in Histology. More learning and less teaching: using virtual microscope and Histostories

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Current teaching at the University needs a paradigm shift, including the use of novel methodologies able to increase the students' motivation for learning. In the digital era, lecturers need to reinvent themselves and experiment with different strategies to improve the learning experience for the participants. Here, we present two different approaches to enhance the engagement of the student body during the learning process of Human Histology at the University of Malaga.

On the one hand, there is a growing need of including digital competences in the academic curricula during undergraduate and postgraduate studies. Recently, virtual teaching environments were propelled by the COVID-19 crisis and confinement. This scenario accelerated the development of learning approaches promoting digital skills among both teachers and learners. The software designed for the study of images obtained from histological/histopathological samples has become a valuable tool for teaching. Moreover, digital competences are in high demand within the biomedical field; however, students usually do not receive sufficient training to cope with these tasks. For all these reasons, we have implemented the use of virtual microscopy (Olympus) in our practical classes, sharing 66 digitalized slides that are accessible under a specific username and password. Virtual microscopy provides the element of real-time dynamic microscopy and offers an innovative experience at exceptionally high resolution. Indeed, virtual microscopy allows students to explore the samples online from anywhere, favoring autonomy and self-learning at the same time they become familiar with this digital tool. Moreover, virtual microscope offers the possibility of capturing specific tissue areas and using these pictures to ask specific questions.

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On the other hand, transversal competences such as reading and writing skills, along with synthesis capability can be disregarded and underdeveloped in our students. Even though the immediacy of digital contents and social media can partly explain this situation, there must be other factors to consider. Aiming to make the contents more attractive and to motivate the student body, we initiated the activity of writing stories about histology contents (Histostories). Professional graphic designers from a webpage of scientific divulgation (masscience.com) illustrated the first story about erythrocytes. We conducted a survey among medical and health science (Physiotherapy and Podiatry) students to analyze the impact of this narration on their learning processes. Most of students read it and welcome the initiative, considering it as an appropriate and enjoyable instrument for summarizing and revising the concepts. We found differences among the topics more demanded between the students from different degrees. In general, first-course medical students chose immunity, whereas those from health science degrees prefer musculoskeletal system.

Finally, we encouraged our students to write their own Histostories mentored by our teaching staff. These stories will be shared through the virtual campus and on masscience website. So far, two medical students are collaborating with us in this experimental project that we expect it will bring more benefits to both readers and participants.