



SERIE: THE CHALLENGES IN UNDERGRADUATE RADIOLOGY EDUCATION

Presentation of the series ‘‘The challenges in undergraduate radiology education’’



Presentación de la serie «Los retos en la formación de radiología en pregrado»

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You may have considered joining the university faculty and training to be a lecturer at some point; maybe you are already a radiology lecturer and want to hone your teaching skills; or perhaps you are wondering how you could improve students’ radiology knowledge. These all present a series of challenges that must be tackled if we mean to train students in our specialty. Not everyone will be ready to take on these challenges, sometimes because they don’t know where to start. With this in mind, *RADIOLOGÍA* has compiled this series of articles to try to encourage, help or guide the reader to overcome them.

University teaching is changing. Since the establishment of the European Higher Education Area, there has been a shift in the practice of teaching with a view to reducing its expository component, focused on the lecturer and the transmission of knowledge, and boosting the learning element, centred on the student as a protagonist in their own education. University students have changed too. This generation are digital natives; they use technology

intuitively and have ample information sources and training resources at their fingertips. These changes mean that teaching methodologies must adapt accordingly, and teachers must be trained to implement the changes. This series of articles will cover a wide range of topics spanning several areas.

Firstly, we will provide an overview of radiology teaching in Spain today. This will include a ‘snapshot’ of training in medical schools and in other university disciplines (dentistry, nursing, physiotherapy, podiatry, etc.), looking at possible areas for improvement. This section includes an analysis of the current situation of undergraduate teaching staff, as well as the access routes for the different grades of teaching post as they stand under current Spanish legislation. All this will serve as a backdrop for understanding the framework in which we operate.

The second area will deal with new teaching methodologies being applied and which break with the teacher-dependent education model to focus instead on the student, on guiding them and facilitating reflexive learning. It is important here to be aware of experiences integrating radiology with other subjects in new training programmes. The European Society of Radiology (ESR) has been rec-

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ommending the application of new teaching methods to integrate radiology into the curriculum, such as e-learning courses, the flipped class (in which the student prepares the material prior to classroom sessions) or simulation-based training. The latter in radiology requires teaching not only the description of the images but also diagnostic reasoning, integrating findings with a patient's clinical situation and making decisions regarding their treatment. In other words, a more holistic approach to undergraduate education in radiology.¹

The third area will look at the relationship students have with the specialty of radiology. There is a general consensus that students should have clinical placements as early as possible, and the current curriculum requires students to complete a final year project at the end of their degree that trains them in basic research skills. First, in-person internships in radiology departments should be increased and be of the highest possible quality. What's more, the work of radiology lecturers should lead to an increase in the numbers of radiology dissertations. Both are important in student training, so they can have first-hand knowledge of what a radiologist does and gain a deeper understanding of medicine from the perspective of diagnostic imaging.

Finally, the national residency entrance examination (MIR, to use the Spanish acronym) is the main means of accessing specialty training.² This, to a certain extent, directs medical students' efforts, particularly in the final years of their studies. We are therefore interested in looking at how radiology is reflected in the MIR exam and how the

visibility given to our specialty in this exam impacts teaching and learning throughout the undergraduate course.

These are four elements that will provide different perspectives to give us a better understanding of where we are, what we are doing and where we should be focusing our teaching efforts.

Author contributions

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Conflict of interests

The authors declare that they have no conflicts of interest.

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