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Title: **Development and Assessment of Animations for the Teaching of Nuclear and Radiation Physics to Medical Students.**

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Concepts in Nuclear and Radiation Physics such as Magnetic Resonance Imaging (MRI) may be difficult for medical students, with a limited knowledge in physics to grasp. Problems arise due to the fact that to clearly explain MRI requires many Physics concepts and thus making the entire topic of Magnetic Resonance Imaging difficult to grasp within the short time-frame available to medical students. Animations have proved to be very effective as a learning tool and when incorporated with traditional teaching methods they have resulted in marked improvements in retention and understanding. MRI animations have been developed focusing on some of those concepts which have been reported to give students the greatest difficulty to understand.

Our investigations sought to compare, by multiple choice assessment, the understanding of MRI concepts, both, after lectures delivered in its traditional format and with animations incorporated into lectures to groups of students with a weak background in physics. Results showed that there was an overall increase in the average student performance by 15.86% and 23.2% when animations were incorporated into lectures. Also, by the use of rubrics the efficacy of the animations developed were assessed by the student participants, who assigned an average grade of 84.99 % to the animations.