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Developing a self-directed e-learning package to enhance radiological interpretation in medical students

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Background: The ability to interpret an X-Ray is a vital skill for graduating medical students which guides clinicians towards accurate diagnosis and treatment of the patient. However, research has suggested that radiological interpretation skills are less than satisfactory in not only medical students, but also in residents and consultants.

Summary of work: This study investigated the effectiveness of e-learning for the development of X-ray interpretation skills in pre-clinical medical students. Competencies in clinical X-Ray interpretation were assessed by comparison of pre- and post-intervention scores, where the e-learning course was the 'intervention'.

Summary of results: Our results demonstrate improved knowledge and skills in X-ray interpretation in students. Assessment of the post training Year 1 students showed significantly higher scores than the scores of Year 2 students undertaking the same assessment at the same time.

Conclusions: The development of online simulation education allows students to perfect their skills and allows them to learn the information at their own pace. The teaching of radiology lends itself particularly well to implementation on a computer-based format due to the highly visual nature of the content. The development of the Internet and advances in multimedia technologies has paved the way for computer-assisted education. As more rural clinical schools are established the electronic delivery of radiology teaching through websites will become a necessity.

Take-home messages: The use of e-learning to deliver radiology tuition to medical students represents an exciting alternative and is an effective method of developing competency in radiological interpretation for medical students.