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Original Citation

White, Stephen and Ousey, Karen (2010) Using E-Learning And Blended Learning Principles In A Problem Based Learning Package To Contextualise Anatomy And Physiology. In: 7th Asia Pacific Nurses Convention (ASPAN), 30th June - 2nd July 2010, Singapore. (Unpublished)

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Contextualising Learning – Interactive Problem Solving

Using E-Learning And Blended Learning Principles In A Problem Based Learning Package To Contextualise Anatomy And Physiology

The computer-based interactive multimedia learning package proposed here utilises a constructivistic theoretical framework with a high-degree of novice to expert competency to guide the learners' cognition, using problem-based and interprofessional learning themes (PBL / IPL). Originally designed to present the subjects of anatomy and physiology, this tool would be of use to any tutor delivering subjects both within the classroom and in self-directed learning environments.

The initial section is about ensuring the student has a foundation of knowledge. It involves the student observing, for example, anatomical pictures or limited physiological animations; they then enter text in response to on-screen prompts to identify what they have just seen and immediately receive feedback to their responses. This low-level section can also be utilised as a revision tool for students struggling with higher sections.

Level 1 Activity
From the x-ray, identify the bone, whether it is left or right, and the highlighted area



- Click on the correct answers
- Humerus
 - Tibia
 - Femur
 - Radius
 - Left
 - Right
 - Outer tuberosity
 - Inner tuberosity

The next, slightly more complex part introduces the PBL process and develops medium-level cognition, involving reflection on newly presented knowledge as well as adjusting current conceptions; this will involve providing opportunities for students to work alone with a scenario delivered through text, images, animation and/or video. The student will start with basic information and receive further content as they follow a directed sequence of questions. On completion they should be able to enter text for the required solution/responses; again, feedback will be immediate.



The final, more complex part of the process will move the students to higher-order cognition, where they rehearse new knowledge and relate it to alternative systems and scenarios, to synthesise ideas and test their understanding. To promote interaction, which stimulates new thinking, students work in pairs or small groups, either in the classroom, or by discussion boards (synchronous/asynchronous). Once the students have used the package within their own professional sphere, it is not inconceivable that scenarios could be presented to multi-professional student groups; this will provide the opportunity to consider the subject from an alternative professional perspective.

