CORE CONCEPTS: A MEANS TO REVOLUTIONISE FIRST YEAR BIOLOGY EDUCATION?

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PROBLEM

Students in an introductory physiology unit (BMS107) at Murdoch University have diverse career aspirations (clinical/non-clinical, animal/human) and wide ranging ATARs (Australian Tertiary Admission Rankings; 70-95). This diversity has historically produced challenges in engaging, and creating valuable learning for, each student.

PLAN

BMS107 was re-created with a focus on internationally-recognised Core Concepts in Physiology (Michael, Cliff, McFarland, & Wright, 2017), with the intention that these “big ideas” would engage diverse students and provoke higher-level learning of relevance to students pursuing divergent career paths.

ACTION

Innovations included bookending the semester with focused Core Concepts material, iteratively signposting core concepts with icons and interactive content, and assessment revision. All methods were scalable and suitable for online delivery.

REFLECTION

Core concepts’ impacts on student learning, experience and performance, and challenges that emerged, were interrogated. It will be proposed that core concepts can challenge novice students to pursue deeper, more connected learning, if sufficiently scaffolded and supported. For staff teaching in content-heavy disciplines, core concepts can liberate staff from details-focused teaching, allowing them to operate effectively as a curator of and expert in the discipline. It is proposed that the core concepts approach is more valuable to students and more satisfying for educators.

REFERENCE

Michael, J., Cliff, W., McFarland, H. M., & Wright, A. (2017). *The Core Concepts of Physiology.* New York, NY: Springer.

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