
REFLECTIONS AND LEARNINGS FROM AN INTERDISCIPLINARY SUBJECT

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BACKGROUND

We share our experience on the development and delivery of an undergraduate interdisciplinary subject, which was co-developed by the School of Biomedical Sciences (SBS) within the Faculty of Medicine, Dentistry and Health Sciences, and the School of Historical and Philosophical studies (SHAPS) at the Faculty of Arts. This is a university breadth subject that provides student learning experiences outside their core major studies. It focuses on the development of interdisciplinary skills to explore wicked problems and examine issues that arise when humans interact with technology.

OBJECTIVES

To improve student learning experience in an interdisciplinary HASS-STEM subject through tutorial and assessment re-design that further enhances the constructive alignment elements of the curriculum.

REVIEW

We report on our journey across the 5 years of delivering this subject and how our critical reflections on curriculum structure, assessment data and student feedback have informed the development of lecture content and lesson design to date. The changes implemented adhere to constructive alignment principles and incorporate more scenario-based activities to improve engagement in interdisciplinary skill building.

REFLECTION

We share our, **1)** use of student feedback, survey and assessment data to implement effective changes to improve student engagement in learning and demonstration of interdisciplinarity, **2)** use of scenario-based group activities to develop integrative thinking (Hilton 2003) that are informed by interdisciplinary research techniques (Keestra et al., 2016) and the constructive alignment framework (Biggs 2014), **3)** Challenges and future planning, and **4)** the spin-off work-integrated learning opportunities that can further add value to skills gained from the subject.

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REFERENCES

- Biggs, J. (2014). Constructive alignment in university teaching. *HERDSA Review of Higher Education*, 1, 5-22. Retrieved from <http://www.herdsa.org.au/wp-content/uploads/HERDSARHE2014v01p05.pdf>
- Hilton, G. L. (2003). Using scenarios as a learning and teaching strategy with students. *European Journal of Teacher Education*, 26(1), 143-153. <https://doi.org/10.1080/0261976032000065599b>
- Keestra, M., Rutting, L., Post, G., de Roo, M., Blad, S., & de Greef, L. (2016). An Introduction to Interdisciplinary Research: Theory and Practice (S. Menken & M. Keestra, Eds.). Amsterdam University Press. <http://www.jstor.org/stable/j.ctt1bc540s>

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