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Student-faculty co-creation of curricula: Student scholarship in the science of learning

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Research Domains

Academic practice, work, careers and cultures (AP)

Abstract

Our 'Science of Learning' Undergraduate students are invited to explore the concept of learning through three different angles; as a biological function of the brain, as a psychological function of the mind, and as a socially situated activity. Our goal is to equip students to critically evaluate the process of learning through these three perspectives, through continuous reflection on their learning experiences, and by learning to analyse the application of these perspectives in a range of HE teaching-related contexts. Engaging in this reflection led students to greater agency of their learning trajectories, and an overall increased sense of awareness of self and others within the same or similar context. In this paper, we report on the succesful collaboration between students and staff to co-create educational neuroscience resources for use in the module, and the scope of opportunities afforded by this partnership.

Full paper

For the past 3 years, we have run a 10-week Termly elective module called the Science of Learning as an elective option that 2nd year Medicine and Natural Sciences can take in the Autumn Term and 3rd year Engineering (cross-Faculty) students can take in the Spring Term of each academic year. We meet with a cohort of 40 students, in-person, for two hours per week. In this module, students are invited to explore the multifaceted concept of learning through three angles: as a biological function of the brain, as a psychological function of the mind, and as a socially situated activity. Our educational goal is to equip students to critically evaluate the process of their own individual approaches to learning through these three perspectives. We work towards this goal together with our students, by fostering their reflection skills on their own individual learning journeys through our module's learning design. Pekrun's control-value theory of achievement emotions, and the concepts of self-regulated learning and developing self-efficacy provide the overarching theoretical framing of our learning design. We utilise methods, tools and approaches from each of the three core content areas (neuroscience, psychology, education) to expose students to the main ways in which 'learning' has been defined, by gradually building their understanding of this concept from the 'bare-bones biology' to that of a socially situated and multilayered activity as experienced during their HE studies. Assessment-wise, we have devised a continuous, and largely formative and developmental multilayer assessment diet: we ask students to complete short, 100-words long weekly reflection logs using a prompt-based template for the duration of the module, we conclude each main content section (neuroscience/psychology/education) by asking them to submit a 500-word reflection on how the topics covered resonate with an educational challenge

they have/are facing in their current studies, and the only summative assessment is a group presentation on identifying two collectively-derived educational challenges and analysing it through the lens of two or more of the concepts and ideas we have discussed throughout the module with a view to enhance their future educational experience. We feel that the combination of teaching format, activities, and assessments are effective in ensuring sustained engagement and development of their educational self-regulation and self-efficacy. In this paper, we will present two examples of succesful faculty-student partnership that have come to be as a direct result of students' engagement with this module: (1) the co-creation of neurodivergence awareness materials for use at Undergraduate induction, and (2) the co-production of educational neuroscience learning resources for use as part of the module's curriculum.

References

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