

Biomedical science students' active engagement in study tool creation and use

K. Colthorpe, K.W. Lam and L. Ainscough, School of Biomedical Sciences, The University of Queensland, St Lucia, QLD 4072, Australia.

One of the key self-regulatory processes that students undertake is the transformation of information into different forms, referred to as 'study tools'. Creation of such study tools involves the overt or covert rearrangement of learning materials, it is self-initiated by a student, with the intent to improve their learning (Zimmerman, 2000). While students are free to choose how and when to create study tools, it appears that students who actively engage in the creation of study tools are more cognitively engaged in the learning process, which may be correlated to a higher academic success (Fredricks *et al.*, 2004). The aim of this project was to determine the extent to which students cognitively engaged with study tool creation and use. The participants (n=167) were either Bachelor of Physiotherapy or Bachelor of Speech Pathology students studying a physiology course. As part of the course, each student completed an assignment in which they submitted a study tool they had created, described how and why they created that tool and what use they made of it. Their submissions were evaluated to (i) determine the type of tools they created, (ii) the extent to which they actively engaged with resources, both from the course and more broadly, to create their tools and (iii) the ways in which they used the study tools. Different types of study tools were created by students, with variation in the depth and breadth of material covered within them. The extent to which students engaged with different resources also varied. Finally, students' used their tools to varying extents; for some the creation was the key outcome, whereas others actively used the tools as aids for study.

Fredricks, J.A., Blumenfeld, P.C. & Paris, A.H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research* **74**, 59-109.

Zimmerman, B.J. (2000). *Attaining self-regulation: A social cognitive perspective*, Burlington, MA: Elsevier Academic Press.