

# **Academic excellence: The dynamic relationship between approaches to studying and learning gain**

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## **Abstract**

Academic performance is universally recognised as the most appropriate measure of learning (e.g., Bowman, 2010; Gonyea, 2005). However, a recent review by McGrath and colleagues (2015) highlighted that students' academic excellence can better be defined as progress or distance travelled in their knowledge, skills and personal development. According to the self-determination theory (Deci & Ryan, 1985; Ryan & Deci, 2000) humans naturally strive for progress and therefore progress in studying is conceptually more accurate representation of learning than achievement per se. While there are some studies in the US aiming to examine predictors of students' learning gains (e.g., Beck & Blumer, 2012; Cahill et al., 2014), there is little research done on academic progress in Europe. The current study aims to examine whether approaches to studying that showed to correlate with academic achievements (e.g., Diseth, Pallesen, Brunborg, & Larsen, 2010; Rogaten, Moneta & Spada, 2013) can equally well predict learning progress, and whether any particular approach to studying facilitates better progress at different stages of a degree and at different baseline levels of academic performance.

A sample of 504 undergraduate students from a London University took part in this research. Coursework grades from prior semester and end-of-semester were retrieved from the university database, and each student completed the Approaches and Study Skills Inventory for Students (ASSIST). Associations between approaches to studying and end-of-semester grades, and their interactions with degree level and prior semester grades, were tested using Model 3 of the PROCESS Macro (Hayes, n.d.).

Models were estimated separately for deep, strategic and surface approaches to studying. The deep approach predicted academic progress of weaker students in the beginning of their degree and undermined academic progress towards the end of a

degree. The strategic approach to studying predicted academic progress for academically strong students towards the end of their degree. Importantly, there was no association between surface approach to studying and coursework attainments. As such, results support the importance of adaptive approaches to studying for academic success.

The findings from this study have important theoretical implications and practical applications. Firstly, developing students' deep and strategic approaches to studying is more important for academic success than merely preventing the surface approach, but in doing so one needs to consider students' ability and level of education they are currently at. Secondly, understanding the moderating effect of a degree level on the relationship between approaches to studying and learning gains will enable teachers to design curricula and educational environment that facilitates learning gains for students with different starting abilities.

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