**Thinking in Colour: The Six Thinking Hats as a Catalyst for Cognitive and Affective Student Engagement in Higher Education**

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**Abstract**

Student engagement remains a challenge in higher education, with declining motivation and surface approaches to learning hindering student outcomes. This study investigated Edward de Bono’s Six Thinking Hats framework as a pedagogical tool to develop multidimensional engagement. A randomised controlled trial was conducted with 156 undergraduate students from three disciplines across two universities, comparing the Six Thinking Hats framework as a constructivist intervention with an active control condition across a 12-week semester. Quantitative results found statistically significant but small improvements in affective and cognitive engagement, and discrepancies emerged by discipline. There were considerable scores in cognitive and affective engagement associated with the Six Thinking Hats intervention, with the strongest effects in the social sciences, demonstrating that epistemological alignment can shape findings. Alongside the quantitative results, semi-structured interviews were analysed thematically to help identify mechanisms that explain results, including a greater metacognitive structure, less evaluative anxiety, and improved collaborative discussion quality. These data provide support for the suggestion that the Six Thinking Hats framework may have potential to enhance engagement, but this depends on the context or discipline. Results also pointed to the importance of being selective regarding implementation and aligning structured thinking pedagogies with the epistemological and disciplinary contexts. This study provides empirical evidence into discussions about student engagement by demonstrating the benefits of structured thinking frameworks in higher education and also by showing the need for context sensitive pedagogical innovation.

**Keywords**: student engagement; structured thinking; active learning; higher education pedagogy; collaborative learning