



*Special Issue Article*

# Regulating approaches to learning: Testing learning strategy convergences across a year at university

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**Background.** Contemporary models of student learning within higher education are often inclusive of processing and regulation strategies. Considerable research has examined their use over time and their (person-centred) convergence. The longitudinal stability/variability of learning strategy use, however, is poorly understood, but essential to supporting student learning across university experiences.

**Aims.** Develop and test a person-centred longitudinal model of learning strategies across the first-year university experience.

**Methods.** Japanese university students ( $n = 933$ ) completed surveys (deep and surface approaches to learning; self, external, and lack of regulation) at the beginning and end of their first year. Following invariance and cross-sectional tests, latent profile transition analysis (LPTA) was undertaken.

**Results.** Initial difference testing supported small but significant differences for self-/external regulation. Fit indices supported a four-group model, consistent across both measurement points. These subgroups were labelled Low Quality (low deep approaches and self-regulation), Low Quantity (low strategy use generally), Average (moderate strategy use), and High Quantity (intense use of all strategies) strategies. The stability of these groups ranged from stable to variable: Average (93% stayers), Low Quality (90% stayers), High Quantity (72% stayers), and Low Quantity (40% stayers). The three largest transitions presented joint shifts in processing/regulation strategy preference across the year, from adaptive to maladaptive and vice versa.

**Conclusions.** Person-centred longitudinal findings presented patterns of learning transitions that different students experience during their first year at university. Stability/variability of students' strategy use was linked to the nature of initial subgroup membership. Findings also indicated strong connections between processing and regulation strategy changes across first-year university experiences. Implications for theory and practice are discussed.

Learning within formal education involves persistent, adaptive effort over years of academia. From the students' perspective, this consists of applying at least two essential strategies: the organization and management of learning (regulation) and the acquisition/

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