

**The link between academic self-schemas, motivation and learning within an academic year:
Examining the self-congruence engagement hypothesis**

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While there has been considerable research on self-schemas in social psychology, academic self-schemas have received scant attention among educational researchers, and therefore our understanding on the relationship among academic self-schemas, motivation, learning and achievement remains elusive. Academic self-schemas are defined as “students’ cognitive generalizations of their selves derived from past learning experiences, which function to guide students’ cognitive, affective and behavioural responses in learning”. This definition follows Markus’ conceptualization of self-schemas and captures their functional properties. Like other self-schemas, academic self-schemas represent one’s networked self-cognitions derived from repeated elaboration and evaluation of one’s learning experiences within a specific subject domain.

Past social psychological studies consistently showed that individuals who possess a self-schema in a specific domain strive to maintain consistency and stability by actively and promptly ignoring or rejecting social and self-related information that challenges their prevailing self-conceptions. This form of schematic consistency is not limited to social information processing. Individuals also act consistently with the self-schemas they possess. For example, recent studies on health psychology have shown that exercisers’ self-schemas led them to engage in exercise plans that were consistent with their self-conceptions. It can then be argued that students with a particular academic self-schema in learning a school subject will also learn with an engagement pattern that is consistent with their self-conceptions.

To examine the close relationship between academic self-schemas and learning, this study involved 502 Year 10 students who completed a survey twice within academic year about their learning of mathematics. These students also attempted an achievement test at the beginning and close to the end of the academic year. The survey items assessing students’ academic self-schemas, achievement goals, learning approaches and attitudes were taken from previous published studies.

Based on the finding of past social psychological studies, two hypotheses were set up to examine the self-congruence engagement pattern associated with academic self-schemas. The first hypothesis assumes that students holding a specific academic self-schema will maintain a pattern of engagement and achievement congruent with their specific self-conception over time. The second hypothesis postulates that a change in academic self-schemas will be associated with a corresponding shift in students’ engagement and achievement patterns. Cluster analyses provided clear evidence supporting these two hypotheses. The current findings provided empirical evidence regarding the link between academic self-schema, motivation, learning and achievement within an academic year, indicating that academic self-schemas are active, functional and directive during the learning process.