

Measuring Implicit Theories of Intelligence and Achievement Goals

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The Need for Integrative Models of Learning

Recent developments in the field of social-cognitive research on motivation have led to promising attempts to integrate motivational, metacognitive, and cognitive constructs in one general model of achievement behavior. One such integrative framework is the one proposed by Dweck (1986). The main postulate of this model is that implicit theories of intelligence, specifically, whether people believe intelligence is a fixed entity or a malleable trait, determines the way they approach learning and achievement tasks, and their cognitive engagement (as defined by a focus on the task at hand, self-regulation, and the use of deep-level processing strategies). People who believe intelligence is a permanently fixed entity („entity theorists“) focus on attaining good performance when they are confident in their ability to master the task, and focus on avoiding bad performance when they lack confidence in their current abilities (a „performance goal“). As a consequence of this attitude, entity theorists often show poor cognitive engagement and low perseverance in challenging or difficult learning situations. By contrast, people who believe intelligence is malleable and can be increased through effort („incremental theorists“) approach achievement tasks with a focus on learning, no matter how confident they are in their present abilities. Incremental theorists have „learning goals“ and therefore exhibit deep cognitive engagement, persevering even in the face of difficulties.

Dweck's model does not postulate that achievement behavior and cognitive engagement is directly determined by people's implicit theories of intelligence, but that this relationship is mediated by their achievement goals. As a result, most research testing her model has focused on achievement goals. One of the few exceptions is a recent study by Roedel and Schraw (1995), which examined relationships among implicit theories of intelligence, goal orientations, and responses to challenge. Their findings broadly supported Dweck's basic assumptions. Roedel and Shaw's findings are limited, however, because implicit theories of intelligence were assessed by only two self-report questions and these questions investigated only „intelligence as a fixed entity“ beliefs. The study reported here seeks to overcome this lack of standardized instruments for measuring implicit theories of

intelligence, by developing a new instrument for adult populations.

A further aim of this study was to examine adults' achievement goal tendencies. Dweck's claim about the existence of two opposite achievement orientations has not always been confirmed. For instance, Hayamizu and Weiner (1991) found three achievement goal tendencies (one learning and two performance goals) among college students.

Results

Factor analyses on both the implicit theories of intelligence and the achievement goals items of the instrument revealed respectively two implicit theories factors („incremental“ and „entity“ views of intelligence), and three achievement goals factors (the „learning goal“ (LG) and two performance goals, the first expressing a focus on establishing superiority (PGsup), and the second expressing the purpose of getting good results and advancing (PGadv)). Contradictory to Dweck's postulates, the only significant relation between implicit theories of intelligence and the achievement goals was a positive correlation between the incremental view of intelligence and the PGadv factors.

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References

- Dweck, C. S. (1986). Motivational processes affecting learning. *American Psychologist*, 41, 1040-1048.
- Roedel, T. D., Schraw, G. (1995). Beliefs about intelligence and academic goals. *Contemporary Educational Psychologist*, 20, 464-468.
- Hayamizu, T., & Weiner, B. (1991). A test of Dweck's model of achievement goals as related to perceptions of ability. *Journal of Experimental Education*, 59, 226-234.