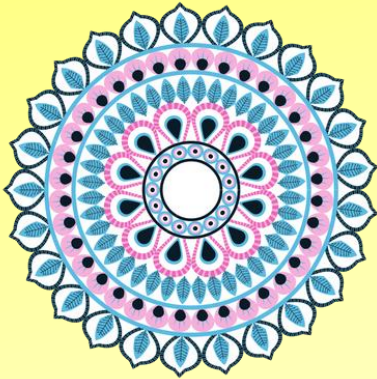


Motivating the Academically Unmotivated

The Why's and How's



Research Insights

To bolster students' academic interest, teachers can **facilitate a learning environment** that nurtures:

- **incremental beliefs about intelligence** (i.e., growth mindset) *i.e., the belief that intelligence can be increased through efforts*
- **adoption of mastery goals** *i.e., the desire to acquire additional knowledge or master new skills and*
- **engagement in intrinsic motivation** *i.e., engaging in academic activities out of interest and enjoyment*

RESEARCH BACKGROUND

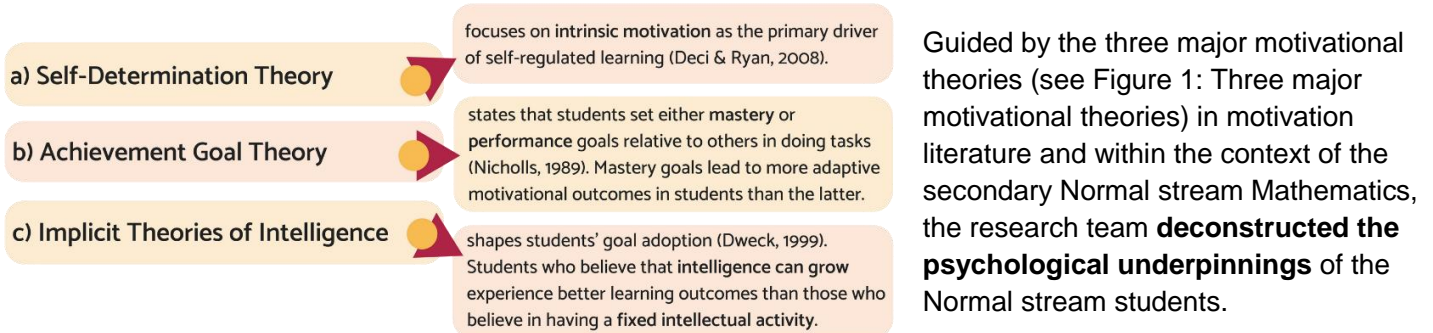


Figure 1: Three major motivational theories

Specifically, the team investigated:

- the relationship between students' intrinsic motivation, self-regulation, mindsets and goals adopted in Mathematics
- teachers' intelligence belief and teaching methods, with an aim towards informing a follow-up intervention study

RESEARCH PURPOSE

The research aims to integrate the three motivational theories to explain students' interest or motivation in Mathematics classes. The research questions are as follows:

1. What are the cognitive, affective, motivational and behaviour symptoms associated with students' interest in learning? Are these symptoms domain-specific?
2. How do students' self-theories of ability and achievement goals affect their interest in learning?
3. How do teachers' performance feedback and teaching methods affect students' self-theories and abilities, achievement goals, and learning motivation?
4. How do teachers' theories of ability affect their teaching methods and the way they communicate performance feedback to their students?

RESEARCH PURPOSE (CON'T)

5. Will students' learning interest and academic performance increase by adopting teaching methods that support an incremental mindset and mastery goals?

RESEARCH DESIGN

The research is a longitudinal study with questionnaire administration. In phase 1, students' intrinsic motivation, self-regulation, achievement goals, theories of intelligence, perceived autonomy support, and time invested in schoolwork were assessed, with teachers' theories of intelligence and preferred teaching methods. In phase 2 six months later, a subset of students were assessed on the same variables as in phase 1.

KEY FINDINGS

- Students' motivations impacted their performance in school. Self-driven students enjoyed, valued, felt competent in, and put in more effort in school. They spent more time on homework and revision. Students only driven by external reasons (e.g., rewards, punishments, feeling guilty) were less likely to enjoy, value, feel competent, or invest effort in school.
- Students with growth mindset aimed to master Mathematics instead of compare with other students, and enjoyed Mathematics more than those with performance goals.
- Students who enjoyed, valued, or felt competent about their schoolwork were more likely to do better in tests compared to students who did not. Enjoyment and perceived competence were vital to performance.
- Teachers taught in ways that reflected their beliefs, which were correlated to students' intrinsic motivations and goals set in Math. Note that these findings were not causal.

IMPLICATIONS FOR POLICY AND PRACTICE

With the finding that a growth mindset, mastery goals, and intrinsic motivation are adaptive for academic interest, policymakers can form an increased focus around these psychological constructs in their consideration of policies that are targeted towards improving pedagogy of teachers and academic performance of students.

In line with the Teacher Growth Model proposed by the Ministry of Education in 2012, which emphasizes the importance for teachers to continuously learn and be equipped with knowledge, this study strongly supports the education of teachers with regard to how their intelligence beliefs may influence their teaching methods and students' motivations in the classroom. This is especially in Mathematics, the sole subject upon which our variables were measured.

FOR MORE INFORMATION

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To visit the project page

Scan code or visit <https://www.nie.edu.sg/project/oer-21-12-wck>.

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