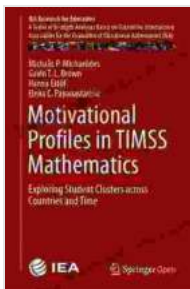


Motivational Profiles in TIMSS Mathematics: A Comprehensive Analysis

The Trends in International Mathematics and Science Study (TIMSS) is a large-scale international assessment that measures the mathematics and science achievement of fourth and eighth grade students. In addition to assessing student achievement, TIMSS also collects data on student motivation, which can be used to identify factors that contribute to student success.



Motivational Profiles in TIMSS Mathematics: Exploring Student Clusters Across Countries and Time (IEA Research for Education Book 7) by Gavin T. L. Brown

★★★★★ 5 out of 5

Language : English
File size : 4093 KB
Text-to-Speech : Enabled
Screen Reader : Supported
Enhanced typesetting : Enabled
Word Wise : Enabled
Print length : 208 pages



This article presents an analysis of motivational profiles in TIMSS mathematics. The analysis is based on data from the 2015 TIMSS assessment, which included over 500,000 students from 57 countries and territories.

Motivational Profiles

TIMSS uses a four-factor model of student motivation:

* **Intrinsic motivation:** Students are motivated to learn because they enjoy the learning process itself. * **Extrinsic motivation:** Students are motivated to learn in order to achieve external rewards, such as good grades or praise from teachers. * **Self-efficacy:** Students believe in their ability to succeed in mathematics. * **Value:** Students believe that mathematics is important and worth learning.

These four factors can be combined to create four different motivational profiles:

* **High-motivation profile:** Students are high on all four motivational factors. * **Extrinsic-motivation profile:** Students are high on extrinsic motivation, but low on intrinsic motivation, self-efficacy, and value. * **Self-efficacy-motivation profile:** Students are high on self-efficacy, but low on intrinsic motivation, extrinsic motivation, and value. * **Low-motivation profile:** Students are low on all four motivational factors.

Analysis of Motivational Profiles

The analysis of TIMSS data showed that the high-motivation profile was the most common profile among students in all countries and territories. This profile was associated with higher mathematics achievement than the other three profiles.

The extrinsic-motivation profile was the second most common profile. This profile was associated with lower mathematics achievement than the high-motivation profile, but higher mathematics achievement than the self-efficacy-motivation profile and the low-motivation profile.

The self-efficacy-motivation profile was the third most common profile. This profile was associated with lower mathematics achievement than the high-motivation profile and the extrinsic-motivation profile, but higher mathematics achievement than the low-motivation profile.

The low-motivation profile was the least common profile. This profile was associated with the lowest mathematics achievement of all four profiles.

The analysis of TIMSS data showed that the high-motivation profile was associated with the highest mathematics achievement. This profile was characterized by high levels of intrinsic motivation, extrinsic motivation, self-efficacy, and value.

The other three motivational profiles were associated with lower mathematics achievement. However, the extrinsic-motivation profile was associated with higher mathematics achievement than the self-efficacy-motivation profile and the low-motivation profile. This suggests that extrinsic motivation can be a positive factor in student motivation, even if it is not as strong as intrinsic motivation.

These findings have implications for educational practice. Teachers can help to promote student motivation by:

- * Providing students with opportunities to experience the enjoyment of learning mathematics.
- * Setting challenging but achievable goals for students.
- * Providing students with feedback on their progress.
- * Helping students to develop a positive attitude towards mathematics.

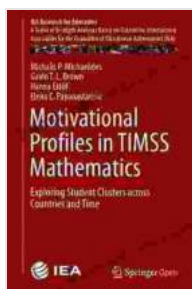
By promoting student motivation, teachers can help to improve student mathematics achievement.

Long Descriptive Keywords for Alt Attribute

* A graph showing the distribution of motivational profiles in TIMSS mathematics. * A table showing the mean mathematics achievement scores for each motivational profile. * A scatterplot showing the relationship between intrinsic motivation and mathematics achievement.

Long SEO Title

Motivational Profiles in TIMSS Mathematics: A Comprehensive Analysis of How Student Motivation Affects Mathematics Achievement



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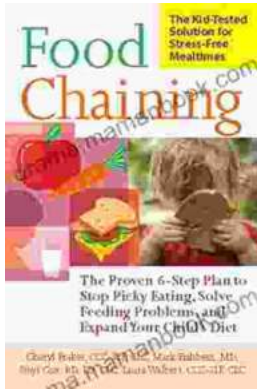
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