Building The Future for Singaporean Students

The Relationship of Values, Future Vision, Motivational Profiles and Learning to School Success

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Overview of the Study

This study examines the pivotal role played by students’ **basic values**, personally valued **future goals**, and other salient **motivational** and **cognitive** variables in predicting their **engagement in learning** and **achievement outcomes**.
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Theoretical Model

Exogenous variables

Contextual Factors

Basic Values

Future Goals

Utility Value Of Schooling

Academic Self-concept

Achievement Goals

Learning Strategies

Self-regulated Learning

Endogenous variables

Achievement Outcomes
Purpose of this Presentation

In this presentation we want to describe and examine the scales presented in the previous chart with reference to **gender, streams and academic performance** across a representative sample of secondary school students in Singapore.
Method

Participants

- 5,773 Secondary Students
- 13 Neighborhood Schools

Gender

- Boys 54%
- Girls 46%

Grades

- Sec 1: 33%
- Sec 2: 27%
- Sec 3: 28%
- Sec 4: 10%
- Sec 5: 2%
Method

Participants

Streams

Express 47%
Normal Acad 34%
Normal Tech 18%
Gifted 1%
Method

Procedure

- A pen-and-paper survey was conducted in intact classrooms or school halls

- Administered by either the teachers or research team members

- Each survey took 30-45 minutes to complete
Method

**Instruments**

- Portrait Value Questionnaire (40 items)
- Inventory of School Motivation (39 items)
- Future Goals and UVS Questionnaire (30 items)
- Self-Description Questionnaire (15 items)
- Learning Strategies Inventory
  - Learning Process Questionnaire (12 items)
  - Goal Orientation and Learning Strategies Survey (36 items)
  - Student Approach to Learning (17 items)
  - Motivated Strategies for Learning Questionnaire (14 items)
Method

Data Analysis

- Construct validity
  - Confirmatory and Exploratory Factor Analyses
- Internal consistency reliability
  - Cronbach’s Alpha
- Descriptive statistics (mean, standard deviation)
- MANOVA
So what do we want to find out?

1. What are the profiles of Singaporean secondary school students on their:
   - Values
   - Motivational goals
   - Learning strategies
   - Academic self-concept
   - Future goals and perceived utility value of schooling

2. How do our students’ profiles differ across:
   - Gender
   - Streams
   - Academic performance
Research Findings
Values

• Principles that guide an individual’s behaviour

• There are **10 basic values** that we consider in this research.
Basic Values

- **Security (se)** - safety and stability of society, relationships, and of self.
- **Conformity (conf)** - behavior that doesn’t upset or violate social norms
- **Tradition (tr)** - acceptance of the customs imposed by culture/religion
- **Benevolence (be)** - concern for the welfare of others.
- **Universalism (un)** - understanding & tolerance of the welfare of all people.
- **Self-direction (sd)** - independent thought and action.
- **Stimulation (st)** - excitement and challenge in life.
- **Hedonism (he)** - fun, enjoying life and having a good time.
- **Achievement (ac)** - personal success through demonstrated competence.
- **Power (po)** - social status, prestige, controlling people and resources
Overall Sample’s Values Profile
Values Profiles across Gender

![Bar chart showing values profiles across gender with Male and Female categories.](image-url)
Values Profile across Streams

- Exp
- NA
- NT

Legend:

- se
- conf
- tr
- be
- un
- sd
- st
- he
- ac
- po

* * *
Values Profiles in terms of Academic Performance
Motivational Goals

- There are 8 motivational goals that we consider in this research
Motivational Goals

- **Competition (co)** - wanting to do better than others.
- **Social Power (sp)** - wanting to be in charge or a leader in a group.
- **Task (ta)** - wanting to be interested in a certain task.
- **Effort (eff)** - wanting to improve in a given task or lesson.
- **Social Concern (sc)** - wanting to help others in academic work.
- **Affiliation (aff)** - wanting to work with other students.
- **Praise (pr)** - wanting to be praised for one’s work.
- **Token (tok)** - wanting to get rewards for one’s work.
Overall Sample’s Motivational Profile

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Motivational Profiles in terms of Academic Performance

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Learning Strategies

• The cognitive and behavioral aspects of learning

• “What does a student do when learning?”

• There are 9 learning strategies that we consider in this research
Learning Strategies - Cognitive Engagement

- **Control Strategies (cs)** - checking what you have learned.*
- **Deep Learning (deep)** - analyzing information and relating it to meaningful contexts. ✮
- **Surface Learning (surf)** - focusing on only the important topics and facts. ✮
- **Planning (plan)** - prioritizing tasks and taking care to prepare for future work. ✯
- **Organisation (org)** - sequencing and selecting information to make it meaningful. ✯
- **Monitoring (mon)** - self-checking for understanding and reviewing learning from time to time. ✯
- **Elaboration (el)** - making connections between topics and previous knowledge to assist your learning. ✯
Learning Strategies - Behavioral Engagement

- **Time and Environment Management (time)**
  using time well and looking for preferred places to study.

- **Effort Regulation (effreg)**
  making effort to persist in spite of boring or difficult tasks.
Overall Sample’s Profile of Cognitive Engagement
Overall Sample’s Profile of Behavioral Engagement

- time: 5
- effreg: 4.5
Cognitive Engagement across Gender

The bar chart illustrates the cognitive engagement across gender for different subjects: cs, org, deep, surf, mon, el, and plan. The chart shows a comparison between male (blue) and female (pink) participants, with asterisks indicating significant differences. The y-axis represents the score range from 2 to 4.
Behavioral Engagement across Gender

- Male
- Female

* Indicates a significant difference between genders.
According to Stream

The bar chart shows the distribution of scores across different categories for the streams of computer science (cs), organization (org), deep, surf, mon, el, and plan. The chart compares the scores for Exp (violet), NA (turquoise), and NT (yellow) categories.

The chart indicates that the scores vary across the different streams and categories, with some categories showing higher scores than others. The asterisks (*) indicate significant differences in the scores across the categories.
According to Stream

![Bar chart showing data for different streams]

- **time**
  - Exp
  - NA
  - NT

- **effreg**
  - Exp
  - NA
  - NT

* indicates significant difference.
According to Academic Performance

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According to Academic Performance

- High PSLE
- Low PSLE

Bar chart showing performance in "time" and "effreg" categories.
Academic Self-Concept

• Individual’s belief about themselves in terms of their academic capabilities and characteristics.

• There are 3 self-concept domains that we consider in this research.
Academic Self-Concept

Self-concept in English (eng) *
an evaluation of a student’s ability in English.

Self-concept in Mathematics (math) *
an evaluation of a student’s ability in Mathematics.

Self-concept in general academic (genl) *
an evaluation of a student’s general academic ability.
Overall Sample’s Self-Concept Profile

![Bar chart showing self-concept profile for different subjects: eng, math, genl. The chart indicates higher self-concept scores for engineering and mathematics compared to general studies.](image-url)
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Across Streams

- eng
- math
- genl

Legend:
- Exp
- NA
- NT
In terms of Academic Performance

[Bar chart showing academic performance in Eng, Math, and Genl for High PSLE and Low PSLE groups.]
Future Goals

- Students’ future aspirations

Utility Value of Schooling

- “How relevant does a student perceive schooling to attaining his/her future goals?”
Future Goals and the Utility Value of Schooling

- **Person (pers)** - to become an important and famous person.

- **Job (job)** - to get a good job or career.

- **Money (money)** - to be wealthy and have material possessions.

- **Family (fam)** - to support and look after one’s family (i.e., spouse, children).

- **Society (socie)** - to help, develop and contribute to one’s society.
Overall Sample’s Profile of Future Goals

- **pers**: 3.5
- **job**: 4.5
- **money**: 4.0
- **fam**: 5.0
- **socie**: 4.0

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Overall Sample’s Profile of Utility Value
Future Goals across Gender

- pers
- job
- money
- fam
- socie

Male
Female

* Indicates significant difference.
Future Goal by Streams

The bar chart shows the distribution of future goals among different streams in terms of personal (pers), job, money, family (fam), and society (socie). The goals are categorized into three levels: Exp (Exp), NA (NA), and NT (NT). * indicates a significant difference.

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Future Goals by Academic Performance
What have we learned?

Gender differences

Girls are higher than boys on positive factors (e.g., security, self-direction, universalism, benevolence, and stimulation values; task, effort, social concern goals, control strategies, organization, monitoring, time management, and effort regulation).

Boys are higher than girls on competition and social power goals as well as surface learning.
What have we learned?

**Stream differences**

Express students are higher than Normal Academic and Normal Technical students on positive factors (e.g., security, benevolence, universalism, self-direction, stimulation, and achievement values; task and social concern goals; control strategies, monitoring, time management, and effort regulation).

NA and NT students are higher on social power, affiliation and token goals as well as surface learning.
What have we learned?

**Differences in academic performance**

High-achieving students are higher than low-achieving students on positive predictors (e.g., security, benevolence universalism, self-direction, stimulation, and achievement values; task and social concern goals; control strategies, monitoring, time management, and effort regulation).

Low-achieving students are higher than high-achieving students on token, social power and surface learning.
Individual Profiles
Motivational profile of a high and low achieving student

Low
High

co sp ta eff sc aff pr tok
Individual Profiles
Learning profile of a high and low achieving student

Graph showing the learning profiles of a high and low achieving student, with different metrics on the x-axis (cs, org, deep, surf, mon, el, plan) and values on the y-axis ranging from 1 to 5.
Individual Profiles
Academic self-concept profile of a high and low achieving student
Individual Profiles
Values profile of a high and low achieving student

![Graph showing values profile of high and low achieving students]
Limitations of the study

• Not all schools provided academic outcomes

• Did not find differentiation between high and low academic performance in English

• Control of survey administration

• Limitations of self-report survey

"And finally, would you say your fear of crime had increased?"
Questions, comments or observations?

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