Individual Difference in Study-time Allocation and Ordering

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1. Introduction

- Learning Strategies in Study-time Allocation & Ordering
  - The learners choose item that felt one of the most difficult
  - The learners are exposed to the difficult item, because the learners want to study perfectly and efficiently.

- Recent Study
  - They choose the easier item than the difficult item,
  - Thiede and Dunlosky 1999

- Study-time Allocation & Ordering
  - The goal orientation and learning strategy
  - The goal orientation is influenced by individual internal (e.g. motivation, personality) and external factors (e.g., task demands, time pressure).

- The goal orientation and learning strategy
  - The goal orientation influences the decision of learning strategy such as the study time allocation.

- Theory of Intelligence (TOI)
  - Sten and Metcalfe (2000)

- Incremental Theory
  - Thinking that intelligence can be improved by effort.

- Entity Theory
  - Thinking that intelligence is fixed and will change.

- Hypothesis
  - This study hypothesizes that the difference in regulatory-focus and 'theory of intelligence' among people will make the learners' goal-orientation different and thus make the learners choose different learning strategies.

2. Study

- Participants
  - 123 Ajou University Undergraduates - Students (Male = 65, Female = 58, Mean Age = 22.7 years)

- Design
  - 2 (Incremental / Entity) X 2 (Promotion / Prevention) between subjects

- Stimulus
  - Theories of Intelligence (TOI) essay:
    - Incremental essay
    - Entity essay

- Procedure
  - Based on the RFQ developed by Higgins (1997), Kim Sena (2015) used it as a Korean translation(5 point scale).

- Difficult Items
  - Spanish-Korean Word Pair Task
  - Adj. Galaxia - [1~10]

- Hypothesis
  - Q: If you only saw the Spanish you just saw and take the test to write in Korean, how many percent do you think is the correct answer?

3. Results

- To conduct two-way ANOVA for investigating the effect of TOI and regulatory focus on the difficult item choice rate at the early learning trials.

- A significant interaction between TOI and RF (F(1,119) = 4.71, p < .05) was found and main effect of TOI (F(1,119) = 4.71, p < .05). An interaction effect was found, conducted simple main effect analysis.

- Summary
  - A significant difference between promotion and prevention (TOI = 119, p < .05).

4. Conclusions

- Promotion focus’ participants showed the difference for time allocation by intelligence perspective, but ‘prevention focus’ participants were not affected by intelligence perspective.

- In prevention condition, there was no effect of intelligence perspective, because affecting to ‘prevention focus’ participants was to avoid the negative outcome.

- As a result, ‘promotion focus’ participants showed that intelligence perspective was more affected when participants choose the studying strategy.

5. Reference


Theory of Intelligence (TOI)

- Incremental & Entity
  - A significant difference between promotion and prevention (TOI = 119, p < .05).

Internal & External Variables

- Developmental factors affect studying performance.

- Bandura & Dweck (1981) showed that helping others affects intelligence, Mathematics is a relationship between theory and practice.


