Motivational regulation strategies and situational motivation in cooperative learning

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Introduction

1. Motivation regulation

- For learning to be effective, learners need to **regulate their own motivation levels** to ensure these levels do not decrease.
- Such motivation regulation is examined in the field of **self-regulated learning** research (e.g., Wolters, 2013; Zimmerman & Schunk, 2011).

2. Motivation regulation in cooperative learning

- In recent years, “learning with others” in classrooms has been encouraged in Japan, and a focus on **cooperative learning** is fast gaining importance.
- However, there are few studies concerning motivation regulation in cooperative learning.
- Umemoto et al. (2018) developed a scale for measuring motivational regulation strategies in cooperative learning.

3. Motivation regulation and situational motivation

- Okada et al. (2013) proposed **two aspects** of situational motivation.
- 1. Level of motivation** indicated degree of high and low situational motivation within a fixed period.
- 2. Instability of motivation** indicated degree of stability and instability of situational motivation within a fixed period.
- Motivational regulation strategies were **correlated negatively** with instability of situational motivation during lectures (Umemoto & Inagaki, in press).

Purpose of this study

- Examining the relationship between motivation regulation and situational motivation during cooperative learning**

Methods

1. Procedure & Participants

- A self-report questionnaire was administered to 28 students (males 13, females 15; *Mean Age* = 20.29, *SD* = 0.92) from two universities before (**pre**) and **after (post)** cooperative learning in class.
- Each cooperative learning group consisted of 3 to 5 students.
- Cooperative learning was conducted for **40 minutes** in class.

2. Questionnaire

Pre-Questionnaire

(1) General usage trends of motivation regulation in cooperative learning

- The scale of Umemoto et al. (2018) was used (38 items; 5-point scale).

Post-Questionnaire

(1) Situational motivation during cooperative learning

- Situational motivation was measured **at 9 time points** (0, 5, 10, 15, 20....40 minutes) by 1 item (9-point scale).
- The intraindividual mean score of situational motivation was calculated as “level of motivation,” and the intraindividual standard deviation of this was calculated as “instability of motivation.” In each concept, we calculated three variables: **total** time points (all 9), **first-half** time points (1-5), and **latter-half** time points (5-9).

(2) Engagement during cooperative learning

- The behavioral (5 items) and emotional engagement (5 items) scale of Umemoto et al. (2018) was used (5-point scale). This scale was a Japanese translated version of Skinner et al.'s (2009) scale.
- The concept of engagement reflects **situational** effort, action, involvement, sentiments, and so on.

Results

- With group size and university as control variables, the results of a partial correlation analysis indicated that level of motivation (Total and First-half) was **correlated positively** with two engagements (Table 1). These results supported the **validity** of measuring situational motivation in this study.
- With level of motivation (Total), group size, and university as control variables, the results of a partial correlation analysis indicated that the general usage trend of motivational regulation strategies was **correlated negatively** with instability of motivation in the **latter-half of learning**.
- High motivation regulation and low motivation regulation groups were determined based on the median of motivation regulation scores. Figure 1 shows the mean scores of situational motivation for the two groups during the learning period.

Table 1 The results of partial correlation analysis (*N*=28)

	Level of motivation			Instability of motivation		
	Total	First-H	Latter-H	Total	First-H	Latter-H
Motivation Regulation	.02	-.11	.13	-.35	.03	-.52 **
Behavioral Engagement	.57 **	.49 *	.38	-.13	-.30	-.05
Emotional Engagement	.46 *	.40 *	.35	.20	.05	.17

p*<.05, *p*<.01

Figure 1 Situational motivation during cooperative learning

Discussion

- These results indicated that motivation regulation plays an important role in **stabilizing situational motivation**, especially in the **latter stage** of cooperative learning.
- Because of fatigue and decreasing interest in learning contents, the situational motivation of learners may become **unstable or decrease** in the latter stage of learning.
- Few studies have examined motivation regulation in cooperative learning situations. Thus, the present study, which examined the effects of motivation regulation on situational motivation in cooperative learning, is meaningful for self-regulated learning research.
- In the future, we have to examine a more elaborate process than in this study (e.g., a relationship between situational motivation and **other variables**).