Competition-Focused Instruction Undermines Self-Regulated Study Habits in College Students

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Abstract

Educators have the ability to influence self-regulatory behavior during study sessions by modifying instructions and task difficulty. However, the impact of these task parameters may manifest differently based on goal framing toward mastery or performance outcomes. We investigated the impact of goal framing and task difficulty on self-regulated study habits and comprehension outcomes. Students read one of two articles equated for content, but differing in technical language (easy vs. difficult), then took a pretest to assess baseline comprehension. Students were sent home to engage in self-regulated study after assignment to one of three goal framing conditions (control, mastery, performance). Students took a final comprehension test 24-48 hours later. Results indicate that emphasizing competition and performance undermines achievement in college students when left to self-regulate learning for difficult tasks. Educators can use these findings to modify instructions based on task difficulty in order to facilitate students' improved motivational self-regulation.

Background

Educators can unknowingly communicate the importance of a certain motivational framework (e.g. goal orientation or mindset) through the framing of objectives or instructions.[1,2,4]

- Performance orientations are signaled by instructions that emphasize competition or comparison.[1]
- Framing that encourages self-development and growth is linked to mastery orientations.[1]

Goal orientations are used by learners to regulate effort and engagement for the duration of a task.[2,4]

- Performance-oriented goals lead to increased motivation when the opportunity to demonstrate competence arises.[3,4]
- Mastery-oriented goals encourage strategy use, resilience and persistence in the face of difficulty.[1,4]

Student performance in the face of challenge can be improved by using learning-oriented framing.[4]

- Goal framing and instruction manipulations have been shown to influence performance on education-based tasks.[1,2,4]
- Instructions that emphasize mastery are tied to increased persistence and overall task improvement.[1,4]
- Performance-oriented instructions can lead to adoption of ineffective learning strategies and poor performance.[1,4]

Existing research has not accounted for longer study durations for a single specific task. [1,3,4]

- In-lab studies assess self-regulation over the course of minutes or hours.[1]
- Observational studies assess motivation and performance over several months, but do not account for the impact of instructional framing on individual task outcomes. [3,4]

Method

Session 1

1. Pre-Task Questionnaire

Demographic Details
Naïve Goal Orientation
Competitiveness
General Self Efficacy

2. Task Instructions

"Please read the instructions carefully. When you are ready, please read the rest of the packet. You have 35 minutes to read the article."

3. Goal Framing

No Goal
"Do your best."
Test to assess understanding

Performance-Oriented
Outperform other students
Scores will be rank-ordered
Emphasizes competition

Mastery-Oriented
Demonstrate learning
Teach other students
Emphasizes growth

4. Difficulty Manipulation

Easy Article
Popular science publication
Geared toward general public

Difficult Article
Top-tier journal publication
Geared toward experts

5. Pre-Test

29 Questions
Rote & Conceptual

Session 2
(24-48 hour delay)

6. Post-Test

Identical to Pre-Test
29 Questions
Rote & Conceptual

7. Post-Task Questions

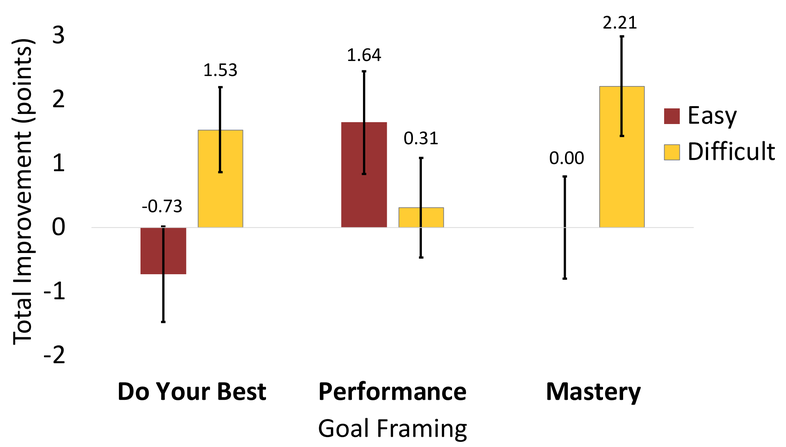
Motivation
Effort
Liking

Scoring

Pre-Post Improvement:
Overall, Rote, Conceptual

Marking (highlighting, notes)

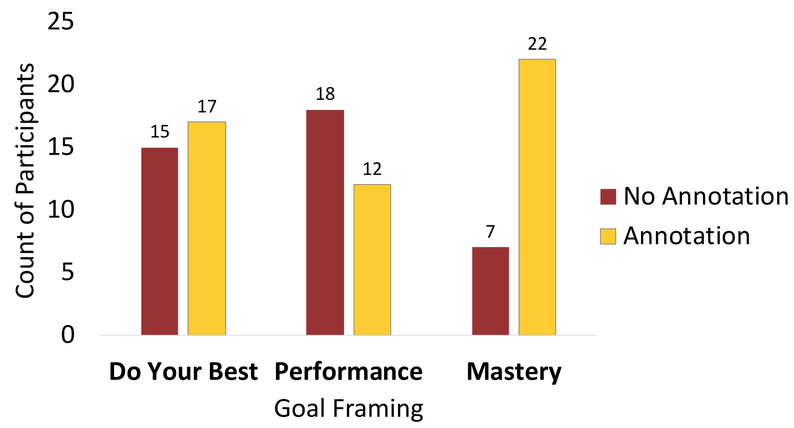
Difficulty & Instruction Influence Performance



When attempting a difficult task, participants following performance-oriented instructions demonstrated worse testing outcomes than participants who received a mastery-oriented instruction, $F(2, 85) = 3.65$, $p = .03$. When the task was easy, performance-framed instructions led to better outcomes.

Goal Framing Affects Strategy Use

Strategy use, in the form of article annotation and highlighting, differs across goal framing groups, $\chi^2(2) = 7.87$, $p = .02$. Participants who received mastery-framed instructions were more likely to engage in effortful strategy than to simply read the article. Participants who received performance-framed instructions were more likely to avoid strategy use.



Questions & Predictions

Does goal-oriented instructional framing interact with task difficulty to influence self-regulated study habits over time?

- Mastery-framed goals will facilitate better test outcomes than performance goals, especially when paired with difficult task.
- A broad and nonspecific goal (i.e. "Do your best.") will not contribute to improved performance.

Does goal-oriented instructional framing influence one's strategic approach to learning opportunities?

- Participants applying mastery-framed instructions will be most likely to engage in self-regulated strategy while studying, including marking or annotating.
- Participants working with performance-framed instructions will be less likely to apply study strategies.

In summary…

When giving instructions for a task that requires self-regulated learning, attention to task difficulty is critical.

- For easy tasks, inspiring some competition through performance framing can be beneficial.
- For difficult tasks, either allowing students use their naïve goal approaches or imposing a mastery-focused goal is best.

Self-regulation and strategy use are highly responsive to framed goals.

- Challenging tests that report scores on normed scales may implicitly signal a situational performance orientation.
- In these cases, strategy selection and use may be improved by providing explicit mastery-oriented instructions.

References

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