Process Goals Raise Academic Confidence and Performance of First Generation College Students

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Abstract: Research indicates that first generation college students (FGCS) enter college less academically prepared than non-first generation college students (Non-FGCS). This disadvantage may manifest itself in lower perceived academic competence and lower achievement of FGCS compared to their peers. As such, it is important to find ways to increase confidence and performance among FGCS. Our research has established that process goals are associated with lower levels of anxiety and higher levels of performance than outcome goals. The present study manipulated goal orientation on a difficult task and then measured confidence and performance with respect to a subsequent task. Results confirmed that FGCS benefitted from process goals.

Rationale

- Academic Struggles of First Generation College Students: Academic adjustment is one of the many challenges that FGCS face while in college. Previous research indicates that FGCS encounter more academic difficulty and earn lower grades than their peers (e.g., Atherton, 2014; Terezini, Springin, Yarger, Pascarella, & Nora, 1996). Given these findings, current research has focused on identifying successful interventions that can improve college adjustment and performance of these students (e.g., Gibbons, Rhinehart, & Hardin, 2019; Pratt, Hartwood, Cavazos, & Dittrich, 2019).
- Advantages of Process Goals: One potential avenue for bolstering efficacy and performance of FGCS may be to influence their goal orientation when approaching academic work. Process goals focus on the steps needed to achieve a certain outcome, while outcome goals focus on the desired end result (Frey & Hennecke, 2015). Research suggests that for difficult tasks, process goals result in greater levels of performance, lower feelings of anxiety, and higher perceptions of self-efficacy than outcome goals (e.g., Vallacher, Wegner, & Somoza, 1989; Zimmerman & Kitsantas, 1999, 1997). Given these findings, it seems likely that FGCS may benefit from adopting process goals.

- Purpose and Hypotheses: Our purpose was to explore the effect of goal orientation during a difficult task on confidence and performance when confronted with a subsequent challenging task. We hypothesized that students who adopted process goals for the first task would have 1) less test anxiety, 2) more academic confidence, and 3) better grades when asked to complete a subsequent pop quiz, compared to students who adopted outcome goals. We expected process goals to be particularly beneficial for FGCS, who may be struggling more than Non-FGCS to adjust to the academic rigor of college.

Method

- Participants: A total of 68 college students participated in the study (47 females, 20 males, 1 other). The sample was 51.5% Caucasian, 35.3% African-American, 5.9% Asian, 4.4% Other, and 2.9% Hispanic/Latino(a). There were 29 FGCS and 38 Non-FGCS. Mean age was 19 (SD = 3.27).
- Design and Procedure: Participants were told that a pop quiz would be administered following the completion of a voluntary problem-solving task. Before taking the quiz, the participants completed a randomly distributed packet broken down into three sections (see below).

First Section: Demographic Items

- Short Grit Scale (Duckworth & Quinn, 2009)
- 8-item measure for grit using 5-point Likert scale (e.g., “Betrayals don’t discourage me.”)

Life Orientation Test (Schwarz, Carver, & Bridges, 1994)

- 6-item measure for optimism using 5-point Likert scale (e.g., “I have a lot of confidence in myself.”)

Second Section: Anagram Task

- Outcome Goal Condition (i.e., solve anagram)
- SAHC0

Third Section: Academic Confidence

- 3-item measure to assess Academic Confidence (e.g., “How confident do you feel about the upcoming quiz?”)
- Modified Cognitive Test Anxiety Scale (Cassady & Johnson, 2001)
- 20-item measure using 4-point Likert scale (i.e., “I am more worried about doing well on this quiz than I should be.”)

Followed by two items to assess Perception of Goal Attainment for the above task (see Figure 3 for sample items)

Results

- There was a significant interaction between Student Classification and Goal Orientation Condition, F(1,63) = 4.26, p = .043.

- In the Outcome Goal Condition, FGCS scored significantly lower on the quiz (M = 2.69, SD = 1.92) than Non-FGCS (M = 5.59, SD = 2.58), F(1,63) = 9.77, p < .003, d = 1.27.

- However, in the Process Goal Condition, FGCS scored similarly (M = 5.54, SD = 3.78) to Non-FGCS (M = 5.5, SD = 3.57), F(1,63) = .03, p = .852.

- Other Significant Effects for Quiz Grade:
  - Significant main effect of Goal Orientation Condition, F(1,63) = 5.08, p = .028. Overall, Non-FGCS scored higher on the quiz (M = 5.66, SD = 2.44) than FGCS (M = 3.97, SD = 3.19).

Discussion

- The ANOVA revealed no significant effects of Student Classification or Goal Orientation on test anxiety, F(1, 35) = 1.27, p = .270.
- FGCS did not differ from Non-FGCS in levels of trait-like optimism, M = 2.27 vs. 2.29, t(64) = -.989, p = .377.

- The ANOVA revealed no significant effects of Goal Orientation on confidence and performance, t(64) = 1.35, p = .183.
- Overall, students in the Process Goal Condition (M = 2.48, SD = 1.28) felt they had met the goals in the anagram task better than students in the Outcome Goal Condition (M = 1.86, SD = 1.4).
- No other effects were significant, including the interaction, F(1, 77) = 7.34, p = .384.

Non-significant Findings

- The ANOVA revealed no significant effects of Student Classification or Goal Orientation on test anxiety, F(1, 35) = 1.27, p = .270.
- The ANOVA did not reveal differences in levels of trait-like optimism, M = 2.27 vs. 2.29, t(64) = 0.98, p = .377.
- FGCS did not differ from Non-FGCS in levels of trait-like optimism, M = 2.27 vs. 2.29, t(64) = 0.98, p = .377.

- The ANOVA revealed no significant effects of Goal Orientation on confidence and performance, t(64) = 1.35, p = .183.
- Overall, students in the Process Goal Condition (M = 2.48, SD = 1.28) felt they had met the goals in the anagram task better than students in the Outcome Goal Condition (M = 1.86, SD = 1.4).
- No other effects were significant, including the interaction, F(1, 77) = 7.34, p = .384.