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. Other 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 benefited from process goals.

Rationale

- **Academic Struggles of First Generation College Students:** Previous research indicates that FGCS encounter more academic difficulty and earn lower grades than their peers (e.g., Albertson, 2014; Terenzini, Springer, Yager, Pascarella, & Nora, 1996). Given these findings, current research on the topic has focused on identifying successful interventions that can improve college adjustment and performance of these students (e.g., Gibbons, Rhinehart, & Hardin, 2019; Pratt, Harwood, 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 (Fredemann & Henneke, 2015). Research suggests that for difficult tasks, process goals result in greater levels of performance, reduced feelings of anxiety, and higher perceptions of self-efficacy than outcome goals (e.g., Vallacher, Wogrin, & Sosnowa, 1989; Zimmerman & Kitsantas, 1997, 1999). 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 especially beneficial for FGCS, who may be struggling more than non-FGCS to adjust to the academic rigor of college.

Method

- **Participants:** Sixty-eight 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 38 FGCS and 29 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, participants completed a randomly distributed packet broken down into three sections (see below).

First Section: Demographic Items and Short Grit Scale

Second Section: Anagram Task

Third Section: Three items to measure Academic Confidence (i.e., generate different letter combinations e.g., “How confident do you feel about the upcoming quiz?”) and Modifed Cognitive Test Anxiety Scale (Cassidy & Johnson, 2001)

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

We randomly assigned students to either the Outcome Goal or Process Goal Condition depending on which task was in their packets. Both conditions had the same 12 anagrams (Mattingly & Lenzenweger, 2003) and eight minutes to work on the task.

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- 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.

Discussion

- **Supported Hypotheses:** We tested the effect of process goal orientation and student classification on academic confidence, test anxiety, and quiz grade. Our hypotheses were partially supported. There were no significant effects for test anxiety. However, we found significant effects for academic confidence and quiz grade (see Figures 1 and 2). As expected, when adopting outcome goals, FGCS had lower confidence and performance compared to their non-FGCS peers. However, when adopting process goals, no differences emerged between the two student groups. Instead, process goals elevated the confidence and quiz grades of FGCS to a level comparable to that of their peers.

- **Connections to Previous Literature:** Our findings support studies that have found process (versus outcome) goals to provide advantages with respect to self-efficacy and performance (e.g., Zimmerman & Kitsantas, 1997, 1999). Our findings also support previous research that suggests that FGCS are at an academic disadvantage compared to their peers (e.g., Albertson, 2014; Terenzini et al., 1996), validating the need for colleges and universities to continue to expand their efforts to support these students (e.g., Gibbons et al., 2010; Pruitt et al., 2019).

- **Practical Implications:** Our findings suggest that in addition to recommending student support services and other academic resources, teaching FGCS to adopt process rather than outcome goals is a viable avenue for enhancing their confidence and performance.