Impact of Student Goal Orientation and Self-Regulation on Learning Outcomes

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The aim of the present study was to examine students' dispositions and self-regulation behaviors on learning outcomes. Specifically, this study examines whether goal orientation and core self-evaluations are related to students' grade goals, study habits, and learning outcomes. Results reveal that goal orientation and core self-evaluations have positive associations with student behavior and learning outcomes. Future research is discussed in light of how these dispositions can be impacted by engagement strategies to enhance student learning outcomes.

The self-concept has played a key role in our understanding of individual differences in motivated behavior in a variety of learning and performance contexts. Recent research has suggested that self-concept traits are important in explaining differences in motivated behavior in achievement contexts distinct from demographic differences. Two self-concept trait classifications – goal orientation and core self-evaluations – are considered to be central to understanding individual differences in self-regulatory behaviors that influence academic learning outcomes. Goal orientation is characterized by individual differences in personal goals that include learning, performance prove, and performance avoid orientations, while core self-evaluations reflect perceptions of individual capabilities represented by the traits of generalized self-efficacy, self esteem, locus of control, and emotional stability (Judge, et al., 1997; VandeWalle, 1997). Traits have an effect on regulatory focus that may indirectly affect learning and work-related behaviors (Lanaj, Chang, and Johnson, 2012).

Collectively goal orientation and core self-evaluations have been researched for their explanatory value with goal seeking and feedback-seeking behaviors as well as performance in learning and other task contexts (e.g., Judge, Van Vianen, & DePater, 2004; Porath & Bateman, 2006; Zweig & Webster, 2004). Recent meta-analyses have demonstrated moderate associations between goal orientation and core self-evaluations with performance outcomes (Cellar, Stuhlmacher, Young, Fisher, Adair, Haynes, Twichell, Arnold, Royer, Denning, & Riester, 2011; Judge & Bono, 2001; Payne, Youngcourt, & Beaubien, 2007). As self-concept traits, goal orientations and core self-evaluations are associated with individual differences in self-regulatory behaviors that have been shown to have a direct effect on performance outcomes (Kolic-Vehovec, Roncevic, & Bajsanski, 2008; Chamorro-Premuzic, Ahmetoglu, & Furnham, 2008). These studies examined goal orientation or core self-evaluations as predictors of academic success through their influence on self-regulatory behaviors. While goal orientation and core self-evaluations have emerged as important dispositions that may explain self-regulatory behaviors that are indicative of effort; these constructs have been studied in relative isolation of each other limiting our understanding of their collective explanatory value in learning outcomes. This paper seeks to address this gap by examining these variables in the same study. Thus, one purpose of the current study is to examine

goal orientation and core self-evaluative relationships. As with personality-based attributes (e.g., self-esteem, conscientiousness, extroversion, etc.), it is important to understand how personal attributes influence behavior in a learning environment. A second purpose is to examine their relative contribution to other self-regulatory behaviors (e.g., grade goals, hours studied, and study habits) with outcomes in a learning context. It is important to understand how personal dispositions may impact with various strategies used to enhance the learning environment and outcomes.

GOAL ORIENTATION AND CORE SELF-EVALUATIONS AS SELF-CONCEPT TRAITS

The self-concept reflects the diverse attributes and capacities that are manifested by ones' internal beliefs and feelings (Coopersmith, 1967). It is characterized by one's self-awareness, self-image, and self-evaluation (Gecas, 1982) and is shaped, in part, by a number of personality traits. The trait characteristics associated with the self-concept are also considered to be important determinants of task-related behaviors and outcomes including job performance and job satisfaction (e.g., Judge, et al., 1997). For instance, individuals with a positive self-concept are more likely to engage in adaptive behavior patterns that are characterized by task persistence even in the face of difficulty or prior failure. As a result, these individuals would be expected to be more engaged in the task at hand and subsequently perform better. In contrast, individuals with a negative self-concept are more susceptible to engaging in maladaptive behaviors that are characterized by task avoidance and even withdrawal. These behaviors increase the likelihood of task withdrawal and lower levels of performance (VandeWalle, 1997). Given the outcomes associated with positive and negative self-concepts, it is important to examine these relationships and outcomes in academic settings. A brief review of goal orientation and core self-evaluations is provided followed by the proposed hypothesized relationships examined in this study.

Goal Orientation

The goal orientation constructs reflect motivational dispositions that affect an individual's task choice, self-set goals, and effort mechanisms in learning and performance contexts (e.g., Button, Mathieu & Zajac, 1996; Fisher & Ford, 1998; Radosevich, Vaidyanathan, Yeo, & Radosevich, 2004). VandeWalle's (1997) multidimensional model of goal orientation consists of *learning goal orientation (LGO)* defined as "a desire to develop the self by acquiring new skills, mastering new situations, and improving one's competence. *Performance prove goal orientation (PPGO)* reflects the desire to prove one's competence and to avoid negative judgments about it, while *performance avoid goal orientation (PAGO)* reflects the desire to avoid the disproving of one's competence and to avoid negative judgments about it (p. 1000)". Depending on one's orientation to focus on learning versus performance, individuals may pursue different goals display differential effort expenditures that varies depending on whether they persist on a task or are more likely to withdrawal. The individual differences associated with goal orientation may represent important intrinsic factors around personal goals that help explain both the direction and persistence of effort based on how it may impact the self.

Recent studies have linked goal orientation to individual differences in self-regulatory behaviors (Cellar et al., 2011; Day, Radosevich, & Chasteen, 2003; Ford, Smith, Weissbein, Gully & Salas, 1998; Lanaj et al., 2012; VandeWalle, Brown, Cron & Slocum, 1999) and learning outcomes (Brett & VandeWalle, 1999; Brown, 2001; Chen, Gully, Whiteman, & Kilcullen, 2000; Payne et al., 2007; VandeWalle, et al., 2001). Prior research has shown that learning goal orientation demonstrated the strongest association with academic performance, while performance prove and performance avoid goal orientations have been consistently negatively associated with academic performance (Payne et al., 2007). Conceptually, Dweck and Leggett (1988) first suggested goal orientations may be a key factor for understanding the self-concept and how it influences behavioral variability in learning contexts. The differences associated with goal orientations shape an individual's response in task settings and thus are considered important antecedents to self-regulatory behaviors (e.g., effort and persistence; VandeWalle et al., 1999; 2001) and psychological states (e.g., task self-efficacy; Payne et al., 2007; Phillips & Gully, 1997).

Core Self-Evaluations

Core self-evaluations reflect dispositional characteristics that influence attitudes (e.g., satisfaction) and ultimately performance (Judge et al., 1997). Core self-evaluations have been defined as "fundamental and broad evaluations of one's self-regulatory capacities" (Johnson, Rosen, & Levy, 2007). Judge and colleagues (1997) conceptualized that four traits – generalized self-efficacy, self-esteem, locus of control, and emotional stability – represent the evaluative component of the self-concept and one's relative standing on these traits influences effort and performance. *Generalized self-efficacy (GSE)* is considered to be a trait-like generality of task self-efficacy and defined as "an individual's perception of their ability to perform across a variety of different situations" (Chen, Gully & Eden, 2001). *Self-esteem (SE)* is a trait that reflects an individual's overall evaluation of their self-worth (Rosenberg, 1965). In essence, it reflects the extent to which individuals have pride in themselves and their capabilities. *Locus of control (LOC)* reflects the degree to which individuals believe they have control over events in their lives (e.g., internal) or whether they believe outside forces control the events in their lives (external; Rotter, 1966). In general, locus of control reflects an individual's belief in their ability to control their own performance outcomes. Finally, *emotional stability (ES)* is a personality trait drawn from the Big 5 personality taxonomy (McCrae & Costa, 1992) that reflects an individual's tendency to experience negative emotional states or emotional stress tolerance.

Judge and colleagues (1997) have noted that core self-evaluations are also important antecedents of effort tendencies and persistence as it relates to task and job performance. Furthermore, they suggest that one's standing on generalized self-efficacy, self-esteem, locus of control, and emotional stability shape a positive or negative self-concept. A positive self-concept is reflected by high agreement on these traits, while a negative self-concept would reflect lower agreement. A positive or negative self-concept would impact one's confidence in capabilities, which are suggested to result in differences demonstrated by effort and subsequent outcomes in learning and task contexts. These traits have demonstrated moderate correlations with both job satisfaction and job performance (Judge & Bono, 2001). In addition, Erez and Judge (2001) found moderate correlations with task performance, persistence, and task motivation. It is these same motivational variables and performance outcomes associated with goal orientation effects. Thus conceptually and empirically, core self-evaluative traits and goal orientation are expected to be linked nomologically that reflect both evaluations of self (e.g., core self-evaluations and learning goal orientation) and evaluations by others (e.g., performance prove and performance avoid goal orientations). It is important to understand how these attributes influence student behavior in learning contexts.

Goal Orientation and Core Self-Evaluations in Learning Outcomes

Both goal orientation and core self-evaluations are considered to have direct effects on self-regulatory behaviors (e.g., task engagement) as well as indirect effects on learning and performance outcomes. Consistent with prior research in work motivation, traits are expected to be distal predictors of performance which often interact with or act as antecedents of task-specific behaviors and psychological states (Kanfer, 1990). These task-related behaviors include self-regulation (VandeWalle et al., 1999), learning strategies (Ford et al., 1998), effort (Fisher & Ford, 1998), and goal-setting (Phillips & Gully, 1997). These studies have shown consistent positive associations with learning goal orientation, while results for performance goal orientation have been mixed with findings of small positive, or negative associations with these behaviors. Other studies have examined goal orientation relationships with a variety of performance outcomes including learning (Colquitt & Simmering, 1998; Fisher & Ford, 1998), training performance (Brown, 2001; Ford et al., 1998), task performance (Bell & Kozlowski, 2002), and academic performance (Chen et al., 2000; Phillips & Gully, 1997; VandeWalle et al., 2001). Overall, these findings reflect positive associations with learning goal orientation and often performance prove goal orientation but negative associations with performance avoid goal orientation. Though performance prove goal orientation is associated with a positive self-concept, prior research has shown that performance relationships are often negative or near zero (Payne et al., 2007). As a result, performance prove goal orientation would be expected to have a negative relationship with performance

and the examination of self-regulatory variables in this study are evaluated to explain this paradox. Performance avoid goal orientation is considered to reflect a negative concept and thus it is more likely associated with individuals who reduce effort on tasks and even withdraw from tasks accounting for the negative relationships.

Core self-evaluative traits have also been examined with task-related behaviors and outcomes including job performance and job satisfaction (Judge et al., 1997; Judge & Bono, 2001; Judge, et al., 2004) but have received less attention in learning contexts for their influence on behavior. Some research has shown that generalized self-efficacy, self-esteem, locus of control, and emotional stability are each considered to have an influence on student learning goals and outcomes (Johnson et al., 2008). A recent review by Johnson and colleagues (2008) assert that core self-evaluative traits may positively or negatively influence motivation by the attitudes one may hold about oneself. Specifically, core self-evaluations are associated with anxiety and positive and negative affective states that also effect self-regulatory behavior patterns (Chamorro-Premuzic et al., 2008). Collectively, learning goal orientation and positive core self-evaluations are expected to be positively associated with academic performance. In contrast, the performance goal orientation constructs (performance prove and performance avoid) along with negative core self-evaluations would be expected to yield negative relationships with academic performance. To satisfy one purpose of the current study, these traits were examined in hypothesized relationships that would be expected to reflect a positive or negative self-concept and thus *a priori* these traits should be differentially related to each other and performance outcomes.

> *H1: Learning goal orientation, generalized self-efficacy, self-esteem, locus of control, and emotional stability are positively related to academic performance.*
> *H2: Performances prove goal orientation and performance avoid goal orientation are negatively related to academic performance.*

Achievement-Related Constructs

It is generally accepted that self-regulatory variables, which are situational behavior patterns, have stronger associations with performance than traits (e.g., Kanfer, 1990; Chen et al., 2000). Unlike the self-concept traits, self-regulatory variables are those influenced by the situation and more likely to effect task-related behaviors and performance outcomes. Task self-efficacy is one of the most widely studied situational variables that has shown strong associations with performance across a variety of situations (Marsh, Dowson, Peitsch, & Walker, 2004; Stajkovic & Luthans, 1998). Self-efficacy has been assessed within specific contexts focusing on evaluations of competence toward a specific task (Bandura, 1986; Gist & Mitchell, 1992) and meta-analytic results support stronger associations with performance compared to traits (Stajkovic & Luthans, 1998). The academic learning environment in this study allows one to draw on prior research for the self-regulatory behaviors associated with learning outcomes. Specifically, grade goals, hours studied, and study habits directed toward performance were included in this study. These variables have been studied as self-regulatory behaviors associated with achievement outcomes (Pintrich, Smith, Garcia, & McKeachie, 1991). It is expected that task specific self-efficacy, hours studied, grade goals, and study habits will be positively related to academic performance and likely result in stronger associations than the self-concept trait variables.

> *H3: Exam self-efficacy, grade goals, hours studied, and study habits are positively related to performance.*

Though situational and self-regulatory variables should be expected to have stronger associations with performance, a second purpose of this study was to examine whether self-concept traits make incremental contributions in explaining performance in learning outcomes. It is hypothesized that the self-concept traits of goal orientation and core self-evaluations will make incremental contributions above and beyond those of the self-regulatory variables.

H4: Goal orientation and core self-evaluations will make incremental contributions to academic performance above and beyond self-regulatory variables.

METHOD

Sample
Participants in this study were comprised of 314 students in various undergraduate management courses at large southeastern university. Participation in the study was voluntary and participants received either extra course credit or were entered in a random drawing for cash prizes.

Procedure
The relationships examined in this study were conducted in the normal classroom environment over the course of a single semester of approximately four months. Data for this study was collected in three time waves. At time 1, self-concept traits of goal orientation and core self-evaluations along with grade goals were assessed (N=314). A subset of the larger sample (N=81) represent the data for time 2 and time 3. At time 2, exam self-efficacy and exam grade goals were assessed before examinations. At time 3, study habits and hours studied for the exam were assessed immediately after examinations. Performance data was collected at the end of the semester.

Measures
Goal Orientation. Goal orientation was assessed with a 13-item measure developed by VandeWalle (1997), with 5 items assessing *learning goal orientation*, 4 items for *performance prove goal orientation*, and 4 items assessing *performance avoid goal orientation*. Sample items of learning goal orientation, performance prove, and performance avoid goal orientation include "the opportunity to learn new things is important to me," "I'm concerned with showing that I can perform better than my coworkers," and "I prefer to avoid situations where I might perform poorly," respectively. Responses to scale items were assessed with a 6-point Likert scale, with responses of 1 (strongly disagree) to 6 (strongly agree).

Core self-evaluations. Core self-evaluations were measured by four previously validated scales assessing generalized self-efficacy, self-esteem, locus of control, and emotional stability utilized by Judge et al. (1997) in their initial conceptualization of the construct. *Generalized self-efficacy* was assessed with the 8-item scale developed by Chen et al. (2001). Sample items include: "I will be able to achieve most of the goals I set for myself" and "even when things are tough, I can perform quite well." *Self-esteem* was assessed with the 10-item scale developed by Rosenberg (1965). Stronger agreement reflects a high self-esteem, while disagreement reflects a low self-esteem. Sample items include: "on the whole, I am satisfied with myself" and "I take a positive attitude toward myself." High agreement reflects a positive self-esteem. *Locus of control* was assessed with 10-items from the internality, powerful others, and chance scale developed and validated by Levenson (1981). Sample items from this scale include: "My life is determined by own actions" and "When I get what I want, it's usually because I have worked hard for it." High agreement reflects an internal locus of control. *Emotional stability* was assessed with Goldberg's (1999) International Personality Item Pool (IPIP). For the current study, emotional stability was assessed with 10 items from the anxiety subscale and 5 items from the vulnerability subscale. Sample items include: "I generally worry about things" and "I generally remain calm under pressure." High agreement reflects a higher degree of emotional stress tolerance. Responses to each scale were assessed on a 6-point Likert scale, with responses of 1 (strongly disagree) to 6 (strongly agree).

Exam self-efficacy. Exam self-efficacy was assessed with two items created for this study to exam confidence in performing on an upcoming exam and in the course overall. A sample item includes, "I am confident in my ability to perform well on the upcoming exam." Responses were assessed on a 6-point Likert scale, with responses of 1 (strongly disagree) to 6 (strongly agree).

Exam Grade Goal. Exam grade goal was assessed with a single item, "What grade goal are you trying to attain on the upcoming exam?" on a scale from A to F, with A coded as the highest score.

Hours studied. Hours studied was assessed with a single open-ended item, "How many hours did you study for this exam?"

Study Habits. Study habits were assessed with an eleven item scale developed by Pintrich et al., 1991 with sample items that include, "I tried to put together the information from class and from the book" and "When applicable, I worked on practice exercises at the end of the chapter."

Performance. Final course grades were used as a measure of performance. The final course grade represented cumulative performance on examinations administered throughout the semester to measure learning (e.g., the acquisition of knowledge) of the course material. The extra course credit provided based on participation in this study was not included in the final performance measure.

RESULTS

Descriptives and Correlational Analyses

The hypotheses tested inter-correlations between goal orientation, core self-evaluations, exam self-efficacy, grade goals, study habits, hours studied, and performance. The results of the hypotheses tested on the relationships between goal orientation, core self-evaluations, and self-regulatory variables are presented in Table 1.

TABLE 1
CORRELATIONS AMONG STUDY VARIABLES

Variables	LGO	PPGO	PAGO	GSE	SE	LOC	ES	SSE	GG	SH	HrsStudy
LGO	.89										
PPGO	.49	.88									
PAGO	.13	.49	.84								
GSE	.74	.41	.11	.92							
SE	.62	.36	.16	.56	.78						
LOC	.55	.32	-.02	.47	.57	.66					
ES	.63	.32	.13	.49	.55	.47	.88				
SSE	.42	.29	.09	.29	.32	.30	.24				
GG	.51	.41	.24	.35	.29	.23	.38	.53			
SH	.15	-.06	-.13	-.02	.09	-.11	.02	-.06	-.05		
HrsStudy	.16	-.003	.06	.12	.10	.14	.08	-.14	.01	.45	
Performance	-.15	-.22	-.17	.20	-.16	-.11	-.24	-.16	-.30	-.03	.16
M	21.94	16.01	11.42	36.79	44.71	42.29	57.47	8.54	5.10	46.98	2.63
SD	4.17	1.14	3.97	5.83	8.58	5.87	12.34	1.51	.831	10.96	1.44

Note. N=386 for nomological correlations and N=81 for self-regulation and contextual variables with performance. LGO=VandeWalle learning goal orientation scale; PPGO=VandeWalle performance prove goal orientation scale; PAGO=VandeWalle performance avoid goal orientation scale; GSE=generalized self-efficacy; SE=self-esteem; LOC=locus of control; ES=emotional stability; SSE=exam self-efficacy; GG=exam grade goal; SH=exam study habits; HrsStudy=hours studied for exam. Reliabilities are reported on the diagonal

Hypotheses 1 and 2 tested the differential relationships between goal orientation and core self-evaluative traits with academic performance outcomes. Hypothesis 1 was only partially supported with generalized self-efficacy yielding the only positive relationship with academic performance. Surprisingly, the remaining positive self-concept traits resulted in negative relationships including learning goal orientation (r=-.15), self-esteem (r=-.16), locus of control (r=-.11), and emotional stability (r=-.24). Hypothesis 2 was supported with both performance prove and performance avoid goal orientations resulting in negative a correlations with performance of r=-.22 and r=-17, respectively.

Hypothesis 3 was only partially supported. Hours studied was the only variable with a positive association with performance (r=.16). The negative associations of exam self-efficacy (r=-.16) and grade

goals (r=-.30) with performance were surprising. Study habits were also negatively related (r=-.03) with performance, a near zero correlation.

Regression Analyses

The predictive validity of the trait variables were examined to evaluate their relative contribution for explained variance above and beyond self-regulatory and contextual variables in performance as measured by learning outcomes. A step-wise regression was performed and the ordering of variables was determined both by theory and by the strength of association found in the current study. Exam self-efficacy was entered in the first step, grade goals were entered in step 2, and hours studied in step 3. Because prior research as well as the current study has resulted in stronger relationships of the core self-evaluative traits with performance, compared to goal orientation, these variables were entered in the fourth step. Goal orientation variables were entered in the final step of the analysis. The results of the regression analysis are reported in Table 2.

TABLE 2
HIERARCHICAL REGRESSION RESULTS FOR SELF-CONCEPT TRAITS AND ACHIEVEMENT-RELATED BEHAVIORS WITH ACADEMIC PERFORMANCE.

Predictors	B	MR	ΔMR	R^2	ΔR^2
All Predictors:					
Step 1: Exam Self-Efficacy (SSE)	.091	.095	-	.009	-
Step 2: Grade Goal (GG)	-.334	.277	.182	.077	.068
Step 3: Hours studied	.110	.277	0	.077	0
Step 4: Generalized Self-Efficacy (GSE)	.453				
Self-Esteem (SE)	-.221				
Locus of Control (LOC)	-.131				
Emotional Stability (ES)	.309	.551	.274	.304	.227
Step 5: Learning Goal Orientation (LGO)	-.010				
Performance Prove Goal Orientation(PPGO)	-.078				
Performance Avoid Goal Orientation (PAGO)	-.234	.600	.049	.360	.056

As shown in Table 2, results of the regression analysis indicated a significant portion of variance explained by the variables in this study. A closer examination reveals the relative contribution of each of these variables in explaining academic performance. Exam self-efficacy did not account for a significant portion of variance with a correlation of. 095 and variance explained of .009. The addition of grade goals in step 2 increased the multiple correlation to .277 (ΔMR=.182), while the variance increased only slightly to .077 (R^2=.068). The inclusion of hours studied in step 3 produced no change in the multiple correlation or variance explained. The addition of the core self-evaluative traits in step 4 increased the multiple correlation to .551 (ΔMR=.274) and variance increased to .304 (ΔR^2=.227). The inclusion of goal orientation variables in the final step resulted in a slight incremental increase in the multiple correlation to .600 (ΔMR=.049) and variance to .360 (ΔR^2=.056). Thus, hypothesis 4 was supported with goal orientation and core self-evaluative traits providing not only an incremental contribution to course performance but were stronger predictors than self-regulatory variables.

DISCUSSION

Overall, these findings reveal that goal orientation and core self-evaluations were important predictors of academic performance. One of the key contributions of this study highlights the stronger associations of these traits with performance than task specific self-efficacy. The relationship between goal orientation and core self-evaluative traits resulted in some interesting findings. Learning goal orientation resulted in moderate to strong correlations with generalized self-efficacy, self-esteem, locus of control, and emotional stability suggesting a greater need to examine the shared variance among these constructs. The performance prove and performance avoid goal orientations also resulted in interesting findings. In contrast to prior research, these variables demonstrated small to moderate associations with core self-evaluative traits. Given that self-concept reflects both descriptive and evaluative aspects of human behavior, there is a need for future research to examine the meaning of the overlapping relationships.

Among the contextual variables studied, achievement-related behaviors resulted in negative relationships with performance, with the exception of hours studied. These findings were not expected but raise the issue of the appropriateness of these specific behaviors in examining academic performance. This is especially important given the negative associations of exam self-efficacy, grade goals, and study habits with performance. Collectively, these variables would be expected to reflect self-regulation reflecting effort but actually contributed less than trait variables in explaining learning outcomes.

Limitations

While this study is one of the first to examine the nomological associations of trait goal orientation and core self-evaluations and their relationships with learning outcomes, there are some limitations to address. While this study found support for hypothesized relationships between goal orientation and core self-evaluations, convergent and discriminant validity were concerns particularly with learning goal orientation and core self-evaluations. For instance, the level of multicollinearity between learning goal orientation and core self-evaluative traits ($r>.50$) may have produced misleading results and inappropriate interpretations (Marsh, et al., 2004; Pedhazur & Schmelkin, 1991). While it is expected that these traits would be correlated, the level of association between learning goal orientation and core self-evaluative traits was unexpected.

Another limitation is the sole reliance on self-report data. Self-report data are considered to be a fallible source of data for a number of reasons including the tendency for socially desirable responses (Tan & Hall, 2005; Visweswaran & Ones, 2000). Recently Judge and colleagues have included significant other assessments of the core self-evaluative traits to address this issue (e.g., Judge, Bono, & Locke, 2000). It is unknown whether social desirability effects were present in the current study but it is likely given the nature of the self-concept that individuals may have responded based on how they would like to be rather than who they truly are. Future research is needed to examine social desirability effects in goal orientation and core self-evaluative constructs. Finally, the smaller than desired sample size (N=81) examining performance relationships limit the generalizability of the findings.

Future Research

Both goal orientation and core self-evaluations represent promising extensions in dispositional research that can capture person characteristics that influence motivation. Motivation has proven to be an elusive construct to measure in prior research but these traits may explain why some individuals are more resilient than others and more likely to persist when facing difficulty or challenges. The relationship of self-concept traits with performance in this study merit further research to examine the overall validity of these variables. Specifically, it has been suggested that the validity of these constructs have not received enough empirical support (e.g., DeShon & Gillespie, 2005; Judge, et al., 2004). There is a need for future research examining the nature of these constructs and the operationalization of them with self-regulatory variables. It may be that the items developed to assess task specific self-efficacy as

exam self-efficacy in this study did not sufficiently tap the construct of interest, although the items were similar to prior research and met acceptable reliability levels.

Goal orientation and core self-evaluations would be important variables to study when attempting to understand and develop strategies to enhances the learning environment. For example, strategies intended to positive influence motivation in learning contexts such as bonus credits (Rassuli, 2012), attendance policies (Snyder, Forbus, and Cistulli, 2012), and use of technology (Charron, & Raschke, 2014) may result in differences based on the students' predisposition on goal orientation and core self-evaluations. Prior research has found that students with a learning goal orientation are more open to experience and can rebound more readily from failure, while students with performance prove and performance avoid goal orientations tend to resist new and/or challenging environments (Ferla et al., 2008; Howell & Watson, 2007; Porath & Bateman, 2006). As we continue to explore approaches that engage students and enhance learning, it is important to examine the impact of their dispositions that may be able to determine how they will respond to educational strategies

Goal orientation has garnered a great deal of research and is suggested for work contexts (VandeWalle et al., 1999). A recent review of goal orientation research highlights several areas of future research to continue examining the utility of this construct. This research has focused on the consequences of goal orientation with procrastination (Howell & Watson, 2007) and self-regulated learning and strategy use (Ferla, Valcke, & Schuyten, 2008; Kolic-Vehovec, et al., 2008); however, the antecedents of goal orientation have received much less attention. From the initial conceptualization of the construct, goal orientation was suggested to be influenced by an individual's implicit theory of ability with differential views on whether ability is stable or malleable. These issues have been cited in prior studies and additional research is needed on the overall nomological validity of goal orientation constructs. Prior research on both goal orientation and core self-evaluations cite the need for additional research to better understand the mechanisms of influence with trait constructs (Johnson et al., 2008; Payne et al., 2007).

The use of goal orientation and core self-evaluations in organizational research has also increased with a specific focus on these variables in predicting performance outcomes in work settings (Johnson et al., 2007; Payne et al., 2007). As research continues to explore these traits as predictors to enhance the validity in personnel selection outcomes, these self-concept traits may provide additional utility beyond understanding academic performance. What is not known, however, is whether group differences (e.g., race or gender) exist that may result in equal opportunity concerns. Future research is needed to extend work on these traits to determine whether race or gender invariance may exist to address this issue.

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