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# The Relationship among Task-Value, Self-Efficacy and Academic Achievement in Omani Students at Sultan Qaboos University

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**Abstract**
Students' academic achievement is explained by a combination of variables. Among these are task-value and self-efficacy. The current study examined whether task-value can predict students' self-efficacy and how the two variables relate to students' academic achievement. A task-value and self-efficacy questionnaire was administered to 284 students enrolled in different courses at Sultan Qaboos University (SQU). Grade Point Average (GPA) data from these randomly selected students were collected. Pearson correlation coefficients, independent sample *t*-test and regression analyses were used to answer the study questions. The results revealed a relationship between task-value and self-efficacy, with both variables significantly correlated with students' GPA. Female students had higher task-value and less self-efficacy compared with male students. Importantly, task-value predicted self-efficacy. One implication is that instructors at SQU need to pay attention to the value students attach to their courses.

**Keywords:** Task-value, Self-efficacy, Academic performance.

## 1. Introduction

Students' beliefs regarding self-efficacy and task-value have emerged as important constructs in students' learning, with both constructs contributing to the variance in students' academic achievement. Furthermore, a substantial amount of research has been done to investigate both constructs in relation to other domains, such as metacognition (AL-Harthy & Was, 2013; Al-Harthy, Was, & Isaacson, 2010; Metallidou & Vlachou, 2010). It is well established inside and outside the classroom that value and efficacy beliefs in students affect the behaviors they engage in to achieve academic tasks. In the current study, we focus on explaining the nature of the relationship between self-efficacy and task-value in academic settings.

## 2. Self-Efficacy

The first variable of interest in the current study is self-efficacy. Bandura (1997) argued that motivation is one of four conditions that are essential for behavior to occur. He defined self-efficacy as personal judgments of one's capabilities to organize and execute actions to attain designated goals. Schunk (1991) offered a similar definition for academic self-efficacy, which refers to students' beliefs about their ability to perform academic tasks at designated levels. The work of Bandura and Schunk showed that self-efficacy affects behavioral functioning by influencing individuals' choices relating to academic activities. Perhaps Bandura's most significant argument was that people are more likely to engage in certain behaviors when they believe they are capable of executing those behaviors successfully. Schunk (1981) also found that the higher one's perceived self-efficacy, the greater one's continued involvement in the activities and subsequent achievements will be. Other psychologists such as Al-Harthy & Was (2013) and Al-Harthy et al. (2010) also shed light on self-efficacy as a motivational variable.

Findings from different studies conducted at the high school and university levels have demonstrated the importance of self-efficacy as a predictor of students' academic performance (Abdi, Bageri, Shoghi, Goodarzi, & Hosseinzadeh, 2012; Al-Harthy & Was, 2013; Al-Harthy et. Al., 2010; Andrew, 1998; Bandura, 1993; Barkley, 2006; Liem, Lau, & Nie; 2008; Paulsen & Gentry, 1995; Schunk, 1981, 1989; Zimmerman, 2000). For instance, Barkley's 2006 study investigated whether sixth, seventh, and eighth grade students' efficacy beliefs were predictors of reading comprehension achievement as measured by a reading comprehension subtest score on the Stanford Achievement Test. The survey was designed to measure the students' efficacy beliefs about four strategies that improve reading comprehension (prior knowledge, self-monitoring, cooperative learning, and using graphic organizers). The results of this study demonstrated a positive correlation between subjects' efficacy beliefs regarding prior knowledge, self-monitoring and graphic organizers, and their reading comprehension achievement.

## 3. Task-Value

In the literature, different models have addressed the value that people place on tasks (Atkinson, 1964; Rotter, 1954). For example, the major contribution of the Atkinson' theory to other expectancy *x* value models is in its consideration of the need for achievement as an explicit source of individual differences in tendencies to approach success or to avoid failure. The main goal of Atkinson's theory was to enable a prediction of whether a person would approach or avoid an achievement task. The achievement behavior was conceptualized in his theory as a conflict between two tendencies, one to approach tasks and another to avoid tasks. These two opposing tendencies are strengthened or weakened by stable individual differences in motives and by expectations regarding the likelihood of accomplishing a particular goal.
Most research argues that the definition provided by Atkinson is very narrow. Other research assessing values using a broader definition suggests that individual's place more value on tasks for which they believe they have high competence (Eccles & Wigfield, 1995; Wigfeld & Eccles, 1992). For example, Eccles, in his revised expectancy *x* value theory, offers broader conceptualizations of the value component. Eccles proposed three kinds of values relevant to achievement (Wigfield & Eccles, 1992). These values are attainment value, utility value, and intrinsic value. The attainment value is determined by how the task or the domain fulfills a person's needs; it concerns the relevance of an activity to a person's actual or ideal self-concept. The utility value concerns the usefulness of a task as a means to achieve goals that might not be related to the task itself. The intrinsic value is the immediate enjoyment one gets for doing a task. Eccles points out that value needs to be considered in the context of costs in energy, psychological risks, and alternative activities. For example, college students who do not work hard in a particular class are not necessarily lazy or unmotivated. They have more

likely chosen to exert their effort in other domains and may, for example, be putting their energy into other courses or nonacademic pursuits.

In addition, researchers have noted that the need for achievement does not necessarily remain constant or stable throughout a person's lifetime. For example, Eccles & Midgley (1989) argued that the transition from elementary school to middle or junior high school is associated with negative changes in young adolescents' motives, beliefs, values, and behaviors. Thus, the need for achievement may change for any given transition stage student task.

Substantial amounts of research support the conclusion that task-value is positively correlated to academic achievement (Al-Harthy et al., 2010; Liem et al., 2008; Metallidou & Vlachou, 2010). In addition, students with high task-value were found to be more cognitively engaged. For example, a study conducted by Metallidou and Vlachou (2010) investigated the relationship between teachers' evaluation of $5^{th}$ and $6^{th}$ graders and students' task-value. The results of a task-value questionnaire demonstrated that students with high task-value beliefs in math were described as more cognitively, metacognitively, motivationally competent learners, as compared to students with lower task-value beliefs.

## 4. The Current Study

In the current study, we hypothesized that Sultan Qaboos University students' task-value plays a fundamental role in motivating them toward academic achievement. These students first look at the value to be obtained from working on a task and then evaluate the consequences. In other words, they may decide to work on a very difficult task if they place a high value on it. A study conducted by Liem et al. (2008) investigated the relationship between English achievement, task-value, and self-efficacy. The results pointed out that prior English achievement correlated with task-value and self-efficacy. Revealingly, self-efficacy and task-value predicted students' goal orientation, with task value being the more predictive of the two for mastery goal adoption. As suggested by Nicholls (1989), this may indicate that students' pursuit of a mastery goal is underpinned more predominantly by a task-related belief than a self or ego-related belief. That is, while students' self-confidence in their own capabilities for learning English is also influential, the perceived instrumentality of the subject plays a more pivotal role in motivating them to develop competence in English.

The findings mentioned above were the impetus for this investigation into whether task-value has more influence on behavior than self-efficacy. The hope is that the present research will contribute to the existing body of literature, offering more in-depth explanations on students' behaviors using task-value and self-efficacy, specifically with regards to Omani students at Sultan Qaboos University. Below we briefly describe why task-value is believed to have more influence on behavior than self efficacy.

First, self-efficacy has specific properties across activities and contexts (Zimmerman, 2000). These properties are level, generality, and strength. The level of self-efficacy refers to its dependence on the difficulty of a particular task. Generality relates to transferability from one task to another, and the strength of self-efficacy is measured by the amount of one's certainty about performing a given task (Zimmerman, 2000). We argue that the *level* of self-efficacy is affected by task-value. For example, a student who perceives an academic task as difficult but is compelled to complete it in order to earn a degree. As we can see, in this instance, high task-value (earning a degree) would motivate students to engage in certain behaviors to finish the task. In short, the task-difficulty may contribute to lower a student's self-efficacy, but having a perceived high value may make it seem worthwhile to take the risk and put in increased effort to complete the task.

Second, the cognitive side of social cognitive theory of motivation is evident in the

expectations, cognitive processing, and awareness of response-consequence contingencies. Social cognitive motivational theory states that people interpret events and develop expectations about reinforcement. These interpretations and expectations, in turn, affect their behavior (Bandura, 1977). To answer the question of what contributes to students' expectations, we put forward that task-value plays a primary role. Students who are aware of a task's consequences would likely expect that high-value tasks require more work when compared to tasks of lower value. It is therefore not unrealistic to assume that task-value would contribute to students' expectations and eventually to their motivation.

Third, Bandura (1993) emphasized the importance of personal evaluation as positive reinforcement. He claimed that most people value the self-respect and the self-satisfaction derived from a job well done more highly than they value material rewards. As such, achieving personal goals and experiencing the accompanying self-satisfaction can serve effectively as reinforcement. In formulating the hypotheses of the current study, we paid particular attention to the value students' associate with self-satisfaction. This value is apparent in the way SQU students derive self-satisfaction from their completion of a course.
Taking the three points above into consideration, the present study suggests that the value students get from self-satisfaction motivates them to engage in actions to finish a task that was previously perceived as having less value.

# 5. Methodology

## 5.1 Participants

Participants were 284 undergraduate college students enrolled in different courses at Sultan Qaboos University in the Sultanate of Oman. More than half of the participants were females (n= 145, 51%). The participants were recruited from their courses. For ethical considerations, the participants were informed about the purpose of the study and that their participation in the study has no connection with their school grade or teacher/instructor's evaluation. The participants were ensured that participation in the study was completely voluntary and all students who were present on the day of data collection chose to participate in the study.

## 5.2 Design and Procedures

The study followed a descriptive research design to examine the levels of self-efficacy and task-value in the participants, and the intercorrelation between these two important motivational constructs. All participants were administered one questionnaire that contained demographic questions plus items measuring task-value and self-efficacy. Students were asked to provide their GPA in the questionnaire. Participants provided their answers on task-value and self-efficacy using a Likert-type scale ranging from 1 = *strongly disagree* to 5 = *highly agree*.

## 5.3 Instruments

### 5.3.1 Self-Efficacy

The participants of this study answered questions aimed to measure students' self-efficacy for learning and performance. This sub-scale was adopted from Motivated Strategies for Learning Questionnaire (MSLQ; Pintrich et al., 1991). It contains a total of 8 items. Sample questions include "*I believe I will receive an excellent grade in this class*" and "*I am confident I can learn the basic concepts taught in this course.*" The self-efficacy scale was previously adapted using the translation back translation procedure (Aldhafri et al., 2009; Alkharusi, 2009). To ensure the validity of the measure, the final Arabic version was

reviewed by a group of reviewers and all the items were deemed appropriate. Early research shows reasonable reliability values using Cronbach's Alpha (α = 0.83). All items were positively worded. A unifactor solution explaining 54.25% of the variance was extracted using exploratory factor analysis. Items loaded 0.70 or higher on this single factor.

### 5.3.2 Task-Value and Academic Performance

A single sub-scale adopted from the MSLQ was designed to measure how important, interesting, or useful the course was seen by the student. A total of six items were used to measure task value, sample items include "*I think I will be able to use what I learn in this course in other courses*" and "*it is important for me to learn the course material in this class.*" Similar test adaptation was followed to adapt the task-value measure for use with Omani participants. Early research shows good validity and reliability measures (Alkharusi, Aldhafri, Alnabhani, & Alkalbani, 2013). In addition, academic performance was measured using students' GPAs.

## 6. Results

The results are organized according to our research questions: (a) are there any correlations among task-value, self-efficacy, and students' GPA? (b) are there any differences in academic achievement, task-value and self-efficacy based on gender? (c) can task-value predict self-efficacy? To answer these questions, data were analyzed using different statistical techniques that are suitable for each question. These included means, standard deviations, independent sample *t*-test, Pearson correlation coefficients and regression.

The first question is: are there any correlations among task-value, self-efficacy, and students' GPA? Table 1 provides the descriptive statistics and correlation coefficients for variables of interest in the current study. Task-value is significantly correlated with self-efficacy ($r$ = 0.50) and students' GPA (0.19). Self-efficacy also significantly correlated with students' GPA ($r$ = 0.20).

**Table 1:** Correlation Matrix and Descriptive Statistics for Variables

| Variable | Task-value | Self-efficacy | GPA |
|---|---|---|---|
| Task-value | 1 | | |
| Self-efficacy | 0.50** | 1 | |
| GPA | 0.19** | 0.20** | 1 |
| M | 4.02 | 3.87 | 2.07 |
| SD | 0.63 | 0.64 | 0.81 |

***p< 0,01*

The second question is: are there any differences in task-value and self-efficacy based on gender? The *t* test analysis provides that there are significant statistical differences in task-value, $t$ (1, 264) = 3.05, $p$ = 0.003 and self-efficacy $t$ (1, 264) = 2.26, $p$ = 0.024 based on gender. The descriptive analysis indicates that the 145 females had task-value and self-efficacy means of 4.14 and 3.93, respectively. Also, the analysis shows that the 121 males had task-value and self-efficacy means of 3.90 and 3.75, respectively. Using the independent sample *t* test, these differences were all significant favoring female students.

Further analysis was computed to investigate if there were any differences in task-value and self-efficacy between high and low-performers. Participants were divided into two groups based on their GPA. The *t* test analysis provides that there are significant statistical differences in task-value, $t$ (1, 152) = 2.60, $p$ = 0.010 and self-efficacy $t$ (1, 90) = 2.42, $p$ =

0.016. The descriptive analysis indicates that the 152 low-performers had task-value ($m$ = 3.96) and self-efficacy ($m$ = 3.79). Also, the analysis shows that the 90 high-performers had task-value ($m$ = 4.18) and self-efficacy ($m$ = 4.00). The differences between these means were all significant using the independent sample $t$ test.

The third question of the current study is: can task-value predict students' self-efficacy? Regression analysis indicated that task-value is capable of predicting students' self-efficacy. More specifically, it appears that 25% of the variability in overall students' self-efficacy is explained by students' task-value, $f(1, 282) = 93.89$, $p < 0.001$.

## 7. Discussion

This section is framed based on the aforementioned research questions. First, the present study investigated the relationship among task-value, self-efficacy, and students' GPA. Positive significant relationships were found between the variables. This result is in accordance with other findings (Abdi, Bageri, Shoghi, Goodarzi, & Hosseinzadeh, 2012; Al-Harthy & Was. 2013; Al-Harthy, et. Al., 2010; Andrew, 1998; Bandura, 1993; Barkley, 2006; Liem et al., 2008; Metallidou & Vlachou, 2010; Paulsen & Gentry, 1995; Schunk, 1981, 1989; Zimmerman, 2000). As mentioned in the introduction, students who place high value on an academic task will work toward achieving it. We argue that self-satisfaction is the reward students get. Stated differently, students who assign value for a certain task will experience self-satisfaction from having achieved the task (and hence gaining the value). In addition, students' efficacy beliefs positively correlated with GPA. This means that students, who believe in their abilities to accomplish a goal, will take actions toward achieving the goal.

The second research question of the current study examines if there are any differences in academic achievement, task-value and self-efficacy based on gender. We argue that gender is a variable that plays a role in students' performances at Sultan Qaboos University. The results indicated that female students placed high academic value and had significant beliefs in their abilities to accomplish their goals. There are different interpretations possible for this result. To start with, in Omani culture, women have a low probability of finding a job without a high level of achievement (as measured by GPA in the current study). This is not the case for male students, who have a plethora of job opportunities available to them. As a result, female students at SQU view their courses as having high value compared to male students. Additionally, they also believe that they are capable of completing their studies with a high GPA. Furthermore, admission to SQU is highly competitive, especially among female students. As a consequence, female students place high value on being an SQU student. This value encourages female students to show high dedication and commitment toward their learning.

The third question in the current study investigates whether task-value predicts students' self-efficacy and the current study does indeed demonstrate this. That is, SQU students who place high value on an academic task, believe that they can achieve it no matter how difficult the task is. Looking at this more deeply, SQU students were the best high-school students in the country (Sultanate of Oman). Students had attached a high-value on SQU even before they were accepted. This means that they came to SQU with high academic value assigned to their studies. This value has led them to believe that no matter how difficult tasks are, they are capable of achieving them. Further support of this interpretation came from Atkinson's (1964) theory. Atkinson argued that the resultant tendency to approach or avoid an achievement activity is a function of the strength of the tendency to approach, minus the strength of the tendency to avoid the task. If the tendency to approach is stronger, the person will approach the task, if the tendency to avoid is stronger, the person will avoid it. Taking this into consideration, all SQU students (at least when accepted) develop only the tendency to

approach. Future research needs to investigate whether SQU students' value changes while students progress in their studies and how this may affect students' achievement. Future research may also need to focus on investigating why SQU students lower the value they place on their SQU education after being enrolled for a few semesters. Perhaps one limitation of this study is that the results cannot be generalized to other institutions, as SQU students were granted admission to SQU based on top achievement in high school, unlike most other undergraduate institutions.

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