

MOTIVATION AND LEARNING STRATEGIES, AND ACADEMIC AND STUDENT SATISFACTION IN PREDICTING SELF-EFFICACY IN COLLEGE SENIORS

Stephen Madonna, Jr.
Saint Leo University

Vincent D. Philpot
Ft. Walton Beach, FL

This study examines motivational and learning strategies, and academic and student satisfaction, in college students. One hundred thirty-five college seniors were administered the Motivated Strategies for Learning Questionnaire (Pintrich, Smith, Garcia, & McKeachie, 1991), Academic Satisfaction Survey (Flores, 2007), and Online Course Survey (Walker & Kelly, 2007) in an online capstone course. Moderate correlations were reported between academic satisfaction and control of learned belief ($r = .343$) and student satisfaction and intrinsic motivation ($r = .361$). The multiple regression analysis indicates that three variables (controlled belief, self-regulation, and effort regulation) accounted for 31% of the common variance when predicting self-efficacy. These results did not support a relationship between self-efficacy and academic or student satisfaction, but did support evidence for a relationship between self-efficacy, perceived control, and self-regulated behaviors.

INTRODUCTION

Online courses have become a viable way for many students to obtain a college education in recent years. Both traditional university and 100% online programs have taken advantage of the flexibility it affords adult learners and working students. Recruiting and retaining students in these types of programs has sparked research in the areas motivation, learning techniques, and life skills necessary for success

(Jacobson & Harris, 2008). This study examines academic and student satisfaction and motivational and learning strategies in predicting self-efficacy in seniors in an online capstone course.

SELF-EFFICACY

Generalized self-efficacy is a dimensional concept that grew out of the work of Bandura in social cognitive theory (Bandura, 1989; Chen,

• **Stephen Madonna**, DL Department, Saint Leo University, 32223 Michigan Ave., San Antonio, FL 33576. E-mail: stephen.madonna@saintleo.edu

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Gully, & Eden, 2004). Judge, Erez, and Bono (1998) defined generalized self-efficacy as “an individual’s perception of their ability to perform across a variety of situations” (p. 170). Schunk and Zimmerman (2009) reported that people high in self-efficacy attack problems as challenges and have a sense of serenity in approaching difficult tasks. Students low in self-efficacy, on the other hand, might believe that they do not have the requisite skills to accomplish the task (Schunk, 1991). This ability directly impacts a person’s sense of accomplishment.

Academic self-efficacy can be defined as “individuals’ convictions that they can successfully perform given academic tasks at designated levels” (Schunk, 1991, p. 211). Self-efficacy has also been implicated in the study of academic achievement. Artino (2007) found that task value, self-efficacy, and prior experience are significantly related to overall student satisfaction. In a study by Lynch and Dembo (2004), student efficacy beliefs were one of the best predictors of final course grades or academic success. Robbins et al. (2004) analyzed more than 100 studies in a meta-analysis and found self-efficacy to be the strongest single predictor of academic performance.

The previous discussion suggests that self-efficacy; particularly academic self-efficacy is related to student satisfaction and academic satisfaction. In the next section, motivational and learning strategies are discussed in relation to self-efficacy.

MOTIVATIONAL AND LEARNING STRATEGIES

Expectancy theory focuses on outcomes as a function of behavior, and the value of the outcome. Expectancy theory is based on the individual’s ability to make appropriate judgments leading to a desired goal. If a goal is attractive and individuals believe that it is obtainable, they are more motivated to act on it. However, outcome expectations and goal value do not guarantee motivation and learning (Schunk,

1991). Perceived control is a variable related to self-efficacy (Schunk, 1991). Perceived control can be thought of as control over cognitive processes and self-regulated behaviors. Schunk (1991) found relationships between perceived control, self-regulated behavior, outcome expectations, and self-efficacy. Artino (2007) has reported a relationship between outcome expectations and task value to self-efficacy (Artino, 2007).

According Schunk (1991), self-efficacy is related to expectancy theory, but is not the same thing. “Self-efficacy theory differs from expectancy value formulations in its emphasis on students’ perceived control or “beliefs concerning their capabilities to learn and effectively employ the skills and knowledge necessary to attain the valued outcome” (Schunk, 1991, p. 211).

Wigfield (1994) suggests that choice plays a role in achievement value. He postulated that learners choose whether or not to become cognitively engaged in a task. Pintrich (2003) suggested that task value or the degree to which students place value on a task (e.g., find it interesting or important) is related to self-regulation, academic performance, and overall positive outcomes. Artino (2007) found that task value, efficacy belief, and prior experience were related to students’ overall satisfaction in online courses.

Self-regulators set goals specific to the task, use strategies to complete the task, and then monitor and adjust as necessary (Lynch & Dembo, 2004). Jacobson and Harris (2008) suggested that this process involves a cognitive component, as well as, motivation and a behavior directed at the final goal. Schunk and Zimmerman (2009) took a metacognitive approach to the definition of self-regulation, which involves evaluating and understanding one’s thought processes, evaluating results of their actions, and planning alternative paths to success. Thus, the self-regulation process operates on an evaluative feedback loop. Successful people are able to evaluate situations, stay focused, and draw from a repertoire of self-regulatory processes (Schunk & Zimmer-

man, 2009). Two motivational categories that have been associated with self-efficacy are intrinsic and extrinsic motivation (Pintrich et al., 1991).

Intrinsically motivated behaviors require no external reward or consequence and involve exploration of the environment out of curiosity, assimilation, and mastery (Pintrich & DeGroot, 1990). Extrinsic motivation, on the other hand, involves positive feedback and consequences as a motivational factor. According to Merriam and Brockett (1997), nontraditional students tend to be more intrinsically motivated. Self-regulation is an important skill in the development of self-mastery goals, as well as performance related goals (Jacobson & Harris, 2008). Thus, self-regulation is associated with an intrinsic goal orientation.

The present study examined the relationship between academic satisfaction and student satisfaction, and motivational strategies and learning in an attempt to determine which variables in combination best predicts self-efficacy in online college students. It was hypothesized that these variables in combination will successfully predict self-efficacy.

METHOD

Participants

One hundred thirty-five senior psychology students from a southeastern liberal arts university participated in this study. All students were psychology majors enrolled in an online senior level capstone course in psychology. The composition of the sample was 75% female and 25% male. The average age of the students was 34.19 years. Twelve percent of the students considered themselves to be of Hispanic origin. The racial make-up of the sample was 71.5% White, 23.5% Black, 2% Asian/Pacific Islander, 1% Native American, and 1% other. Twenty-two percent of the sample was single, 46% married, 11% in a committed relationship, 4% separated, and 17% divorced.

Materials

Academic Satisfaction Survey (AS). The academic satisfaction scale is an adaptation of the College Student Experiences Scale (Kuh & Siegel, 2000). The six items of the AS were chosen by Flores (2007) to measure academic success. The scale is administered in the form of a Likert scale ranging from “not very satisfied” to “very satisfied.” “The scale addresses areas of personal and social development, intellectual skills, and practical or vocational competence” (Flores, 2007, p. 49). Flores reported an alpha coefficient of .85. Reliability and validity of the scale were established by the original authors (Kuh & Siegel, 2000).

Online Course Survey (OCS) is an adaptation of the Liberal Studies Online Course Survey developed at the University of Oklahoma (Walker & Kelly, 2007). The scale purports to measure student satisfaction with online learning. The original scale has 17 items that are administered in a Likert format. Nine items were used in the present study. Questions pertaining to demographic data and program specific questions were omitted. Items 3, 4, 5, 6, 7, 10, 11, 12, and 13 were used in the current study. Items were scored in a Likert format similar to the original scale. Regression analysis of the original scale indicates an R^2 of .62, indicating that approximately 38% of the overall variance was accounted for when predicting overall satisfaction in online college students (Walker & Kelly, 2007).

Motivated Strategies for Learning Questionnaire (MSLQ) (Pintrich et al., 1991). The motivated strategies for learning questionnaire is “a self-report instrument designed to assess college students’ motivational orientations and their use of different learning strategies for a college course” (Pintrich et al., 1991, p. 3). The MSLQ has two sections: Motivation and Learning Strategies. There are 81 items comprising 15 different scales. From the motivation strategies intrinsic and extrinsic motivation, task value, control of learning belief, and self-efficacy were utilized. From the learning strategies scales, self-regulation, time and study environ-

ment, and effort regulation were utilized. Reliability was established via alpha coefficients for each subscale. Validity was established via confirmatory factor analysis.

Procedures

A packet of materials including an explanation of the study, a consent form, and the demographic questions and the three scales were posted in senior level capstone classes in psychology. Students were instructed that participation is voluntary and they may discontinue participation at any time. Participants were instructed to fill out the consent form and questionnaires and return the packet to the investigator via e-mail as an attachment (Microsoft Word or rich text file file). Questions regarding the study were answered via e-mail.

RESULTS

Correlations were calculated for the AS, OCS, and the subscales of the MSLQ.

Weak correlations were reported between the AS and the OCS [$r(133) = .244, p < .01$], and the task value [$r(133) = .276, p < .01$], and Self-regulation [$r(133) = .265, p < .01$] subscales of the MSLQ scale. A moderate correlation was found between AS and control of learning belief [$r(133) = .343, p < .01$] subscale of the MSLQ.

Weak correlations were also reported between OCS and task value [$r(133) = .292, p < .01$] and control of learning belief [$r(133) = .283, p < .01$]. A moderate correlation was found between OCS and Intrinsic Motivation [$r(133) = .361, p < .01$].

A number of intercorrelations were found within the MSLQ scale. The self-efficacy subscale was weakly correlated with intrinsic motivation [$r(133) = .232, p < .01$], extrinsic motivation [$r(133) = .213, p < .05$], and task value [$r(133) = .270, p < .01$]. Moderate correlations were reported between self-efficacy and control of learning belief [$r(133) = .403, p$

$< .01$], self-regulation [$r(133) = .414, p < .01$], and effort [$r(133) = .319, p < .01$]. Weak correlations were found between intrinsic motivation and Self-regulation [$r(133) = .228, p < .01$], and effort [$r(133) = .204, p < .05$]. Moderate correlations were found between intrinsic motivation and task value [$r(133) = .329, p < .01$] and control [$r(133) = .500, p < .01$]. Extrinsic motivation was moderately related to task value [$r(133) = .310, p < .01$]. Task value was weakly correlated to control [$r(133) = .292, p < .01$] and self-regulation [$r(133) = .222, p < .05$]. Task value was moderately correlated with effort [$r(133) = .312, p < .01$]. Control of learning belief was weakly related with self-regulation [$r(133) = .282, p < .01$] and effort regulation [$r(133) = .257, p < .01$]. Self-regulation is weakly correlated with Effort [$r(133) = .274, p < .01$] and moderately correlated with time [$r(133) = .336, p < .01$]. Time was moderately correlated with effort [$r(133) = .493, p < .01$].

Variables entered into the multiple regression were: grade point average, AS, OCS, intrinsic motivation, extrinsic motivation, task value, control belief, self-regulation, time study, and effort regulation. Multiple regression analysis indicated an R value of .561 with an R^2 value of .315 (Adjusted = .259) indicating that the variables in combination accounted for 31% of the common variance. Results of the ANOVA [$F(10,122) = 5.613, p < .01$] indicated that a significant portion of the variance was accounted for. Three variables: control belief ($\beta = .252, t = 2.66, p < .01$), self-regulation ($\beta = .263, t = 3.03, p < .01$), and effort regulation ($\beta = .182, t = 1.98, p < .05$) significantly contributed to the analysis when predicting self-efficacy.

DISCUSSION

Results of this study lend only limited support to the hypothesis that academic satisfaction, student satisfaction, and motivational and learning strategies predicted self-efficacy in this sample of students. Correlations indicated

TABLE 1
Regression Coefficients

Variable	Unstandardized Beta	Standardized Beta	t	Level of Significance
Self-efficacy	2.61			
GPA	1.22	.061	.765	.446
AS	.026	.011	.125	.901
OCS	.043	.027	.324	.746
Intrinsic motivation	.032	.016	.163	.871
Extrinsic motivation	.241	.157	1.862	.065
Task value	.033	.023	.243	.808
Control learning belief	.543	.252	2.66*	.01**
Self-regulation	.204	.263	3.036	.01**
Time study	-.045	.055	-.595	.553
Effort regulation	.282	.182	1.983	.05*

* $p < .05$. ** $p < .01$.

a number of weak to moderate relationships between academic satisfaction and student satisfaction, task value, self-regulation, and control of learning belief. Interestingly, academic satisfaction and student satisfaction were only weakly related. Weak to moderate relationships were also found between student satisfaction and task value, controlled learning belief, and intrinsic motivation. Task value was weakly correlated to student satisfaction lending only weak support to Artino (2007) who reported task value related to overall student satisfaction. The fact that intrinsic motivation was moderately correlated with overall student satisfaction is interesting in light of research by Merriam and Brockett (1997) who reported that nontraditional students tend to be more intrinsically motivated. Future research should address motivational styles and online learning.

Self-efficacy did not correlate significantly with academic satisfaction or student satisfaction in this sample. Weak to moderate correlations were reported between self-efficacy and all of the subscales of the MSLQ.

Results of the regression analysis yielded three variables in combination that accounted for 31% of the common variance. These vari-

ables included controlled learned belief, self-regulation and effort regulation. These results are consistent with Schunk (1991), who reported a relationship between perceived control, self-regulated behavior and self-efficacy.

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APPENDIX A

Correlations for the CESQ, LSOCS, and Subscales of the MSLQ Correlation Matrix

	CSEQ	LOSCS	Intrinsic	Extrinsic	Task	Control	Self-Reg	Time	Effort
Self-efficacy	.20	.153	.232*	.213*	.27**	.403**	.414**	.185*	.319**
CSEQ		.244**	.121	.06	.276**	.343**	.265*	.003	-.04
LSOCS			.361**	-.065	.292**	.283**	.112	.177	.150
Intrinsic				-.117	.329**	.500**	.228**	.169	.204*
Extrinsic					.310**	.069	.151	-.031	-.001
Task						.292**	.222*	.154	.312**
Control							.282**	.152	.257*
Self-Reg								.336**	.274**
Time									.493**

* $p < .05$. ** $p < .01$.