

**Academic Buoyancy, Motivation, and
Academic Achievement of (First-Year)
College Students**

By:

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Abstract

The purpose of this study is to investigate the correlation between and among academic buoyancy, motivation, and academic achievement of first-year college students, whether academic buoyancy is a better predictor of academic achievement of first-year college students, and whether motivation is a better predictor of academic achievement of first-year college students. The study employed the descriptive survey method to describe academic buoyancy, and motivation as predictors of academic achievement of first-year college students. The sample of the study comprised of 250 (190 females. 60 males, 18.6 years, $SD = .87$) first year undergraduate students attending Faculty of Specific Education in Cairo University. The study utilized questionnaires and instruments to Academic Buoyancy Questionnaire, Motivation and Engagement Scale (MES-UC), and academic achievement Test. The correlation coefficient results revealed significant positive relationship between academic buoyancy and academic achievement ($r = .522$) and between motivation and academic achievement ($r = .502$). each of the independent variables made significant individual contributions to the prediction of **academic achievement**. The results indicated that the following beta weights which represented the relative contribution of the independent variables to the prediction were observed. **academic buoyancy** ($b = -.464$, $t = 12.445$; $P < 0.05$) and **motivation** ($b = -.524$, $t = 14.041$, $P < 0.05$).

Keywords: Academic Buoyancy, Motivation, Academic Achievement, First-Year College Students

Introduction:

Academic buoyancy is viewed as student's ability to bounce back from setbacks, challenges, and obstacles associated with routine school life, such as competing deadlines, examination pressure and poor grades (Martin & Marsh, 2008). This capacity is referred to academic buoyancy which is related to the question on how good a student is able to face academic difficulties (Martin and Marsh, 2009). Students who are highly buoyant will have great ability to overcome daily schooling challenges. Martin (2002) initially used the terms academic resilience and academic buoyancy interchangeably. Academic buoyancy is a significant element in assisting students to manage and face academic risks especially the risks which frequently and continuously occur in daily life (Martin and Marsh, 2009). These risks include the possibility of getting bad marks in evaluation or failed to submit assignment before the deadline. Research carried by Martin (2002, 2012) research on the links between motivation and engagement, academic achievement, and academic resilience led him to develop the academic buoyancy construct. Several motivational theories and constructs formed the theoretical basis for the academic buoyancy construct.

Previous researches indicate that academic buoyancy can be predicted by motivational beliefs (Martin, Colmar, Davey and Marsh, 2010; Martin and Marsh, 2006) and also acts as a predictor of students' academic outcomes (Marsh,

2007). Moreover, academic buoyancy has also been shown to predict student's engagement, student's achievement and stress level of students (Marsh, 2007; Putwain, Connors, Symes and Douglas-Osborn, 2012). For instance, Strickland (2015) conducted two studies to explore the relationships among academic buoyancy, motivation, and academic achievement of first-year college students. He explored whether academic buoyancy is a better predictor of academic success, as measured by college GPA, than SAT scores and scores on college administered placement tests was examined. In Study One (N=120), regression analysis indicated that academic buoyancy was a small but significant predictor of academic achievement ($R^2=.052$). Academic buoyancy was the only significant predictor of achievement among the variables explored. The findings from Study Two indicated that SATs were the strongest predictor of academic success, accounting for approximately 14% of the variance in students' GPA at the end of the first-semester of college and for approximately 12% of the variance in students' first-year cumulative GPA. The purpose of this study is to investigate the correlation between and among academic buoyancy, motivation, and academic achievement of first-year college students, whether academic buoyancy is a better students, and whether motivation is a better predictor of academic achievement of first-year college students.

Research Questions and Hypotheses of the Present Study

The following two research questions were posed and investigated in the study:

- 1- Are there correlation between academic buoyancy, motivation, and academic achievement of first-year college students?
- 2- Is academic buoyancy a better predictor of academic achievement of first-year college students?
- 3- Is motivation a better predictor of academic achievement of first-year college student?

The following hypotheses were tested:

- H1: there correlation between academic buoyancy, motivation, and academic achievement of first-year college students.
- H2: Academic buoyancy is a better predictor of academic achievement of first-year college students.
- H3: Motivation is a better predictor of academic achievement of first-year college students.

Materials and Methods:

The study employed the descriptive survey method to describe academic buoyancy, and motivation as predictors of academic achievement of first-year college students.

Sample: The sample of the study comprised of 250 (190 females, 60 males, 18.6 years, $SD = .87$) first year undergraduate students attending Faculty of Specific Education in Cairo University.

Measures: The study utilized questionnaires and instruments to Academic Buoyancy Questionnaire, Motivation and Engagement Scale (MES-UC), and academic achievement Test.

Academic Buoyancy Questionnaire: The Resilience Scale (RS) was used in this research to measure students' level of academic buoyancy (Wagnild & Young, 1993). Participants were asked to rate themselves for the 25 items (e.g., “I usually manage one way or another”) on a 7-point Likert scale (from 1, *strongly disagree*, to 7, *strongly agree*). Scores ranged from 25 to 175, with scores below 120 signifying low academic buoyancy, 125-145 suggestive of moderately low to moderate academic buoyancy and scores higher than 145 reflecting moderately high to high academic buoyancy. Cronbach's alpha was consistently high, ranging from .85 to .94, demonstrating good internal consistency.

Motivation and Engagement Scale (MES-UC). The MES-UC, a 18-item, seven-point Likert scale instrument, measures post-secondary students' motivation and engagement. Students rate themselves on a scale of 1 (Strongly Disagree) to 7 (Strongly Agree) on each item. Cronbach's alpha was consistently high, ranging from .82 to .90, demonstrating good internal consistency.

Academic Achievement Test: The results of students semester 's exam in psychology was adopted to measure students academic achievement.

Procedure .The participants were informed by the researcher regarding the purpose of the study. The instruments were distributed and participants were asked to fill in them.

Data Analysis .After checking the retrieved questionnaires to determine their suitability for analysis, and discarding

those with missing information, the data were collated and analyzed using IBM SPSS Statistics 20. Computations for descriptive statistics, correlations, and regression were done.

Results:

Correlation analysis:

Prior to carrying out the regression analysis it was first necessary to conduct bivariate correlation analysis to ascertain the relationships between the independent variables and the dependent variable.

The correlation coefficient results revealed significant positive relationship between academic buoyancy and academic achievement ($r = .522$) and between motivation and academic achievement ($r = .502$).

Table 1. Pearson correlation coefficients between academic achievement and the prediction variables

Variable	academic buoyancy	motivation
academic achievement	.522**	.502**

**Correlation is significant at $p < .001$

Regression analysis:

From the results display in table 2 above, each of the independent variables made significant individual contributions to the prediction of **academic achievement**. The results indicated that the following beta weights which represented the relative contribution of the independent variables to the prediction were observed. **academic buoyancy** ($b = -.464$, $t = 12.445$; $P < 0.05$) and **motivation** ($b = -.524$, $t = 14.041$, $P < 0.05$).

Table 2
Relative Contribution of the Independent Variables
to the Prediction of academic achievement

Predictor	Unstandardised Coefficient		Standardised coefficients	T-Ratio	
	B	SEB	Beta		
academic buoyancy	-.470	.038	-.464	12.445	<.05
motivation	-1.281	.091	-.524	14.041	<.05

Discussion:

The purpose of this study is to investigate the correlation between and among academic buoyancy, motivation, and academic achievement of first-year college students, whether academic buoyancy is a better predictor of academic achievement of first-year college students, and whether motivation is a better predictor of academic achievement of first-year college students. The correlation coefficient results revealed significant positive relationship between academic buoyancy and academic achievement ($r = .522$) and between motivation and academic achievement ($r = .502$). Regression analysis indicates that each of the independent variables made significant individual contributions to the prediction of **academic achievement**. The results indicated that the following beta weights which represented the relative contribution of the independent variables to the prediction were observed. **academic buoyancy** ($b = -.464$, $t = 12.445$; $P < 0.05$) and **motivation** ($b = -.524$, $t = 14.041$, $P < 0.05$).

Academic buoyancy has also been shown to predict student's engagement, student's achievement and stress level of students (Marsh, 2007; Putwain, Connors, Symes and Douglas-Osborn, 2012).

Conclusion:

The present study sought to extend the existent research by examining process in the academic domain with a focus on academic buoyancy, motivation, and academic achievement. Findings supported a reciprocal academic buoyancy and academic achievement on one hand, motivation, and academic achievement on the other, and thereby offer some guidance to practitioners and future researchers seeking to understand and address students' capacity to deal with academic adversity in the everyday course of school life.

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المخلص:

الهدف من هذه الدراسة هو التحقق من العلاقة المتبادلة بين الطفو الأكاديمي، الدافعية، والتحصيل الدراسي لطلاب الكليات في السنة الأولى، ما إذا كان الطف والأكاديمي متنبأ فضل بالتحصيل الدراسي لطلاب الكلية في السنة الأولى، وما إذا كانت الدافعية متنبأ فضل بالتحصيل الدراسي لطلاب الكلية في السنة الأولى. استخدمت الدراسة أسلوب المسح الوصفي لوصف الطف والأكاديمي، والدافعية كمنبئات بالتحصيل الدراسي لطلاب الجامعة في السنة الأولى. تكونت عينة الدراسة من ٢٥٠ (١٩٠ إناث، ٦٠ ذكور، ١٨.٦ سنة، انحراف معيارى قدره ٠.٨٧) من طلاب السنة الأولى في مرحلة البكالوريوس الذين يحضرون كلية التربية النوعية في جامعة القاهرة. استخدمت الدراسة الاستبيانات والأدوات: استبيان الطفو الأكاديمي، مقياس الدافعية والمشاركة (MES-UC)، واختبار التحصيل الدراسي. أظهرت نتائج معامل الارتباط علاقة إيجابية كبيرة بين الطفو الأكاديمي والتحصيل الدراسي ($r = 0.522$) وبين الدافعية والتحصيل الدراسي ($r = 0.502$). قدمت كل من المتغيرات المستقلة مساهمات فردية مهمة للتنبؤ بالتحصيل الدراسي. أشارت النتائج إلى أن أوزانبيت التالية والتي تمثل المساهمة النسبية للمتغيرات المستقلة للتنبؤ تم ملاحظتها. الطفو الأكاديمي ($b = -$) ($P < 0.05, t = 12.445, 0.464$) والدافعية ($b = -0.524, t = 14.041, P < 0.05$).