

# Academic Buoyancy: Developing a Model of Undergraduates' Everyday Academic Resilience

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## Background

Undergraduates face numerous challenges and pressures in pursuing a degree. In recent years there has been a trend in the Higher Education industry towards understanding and supporting students to successfully complete their training. This study explored variables which can be used to predict undergraduates' everyday academic resilience (i.e., academic buoyancy) and extends on research conducted with secondary students. Academic buoyancy has been defined as "students' ability to successfully deal with academic setbacks and challenges that are typical of the ordinary course of school life (e.g., poor grades, competing deadlines, exam pressure, difficult schoolwork)" (Martin & Marsh, 2008, p. 54).

**Objectives:** To test a first pilot of the hypothesised causal model explaining academic buoyancy by Martin and Marsh (2008), which predicts undergraduates' academic buoyancy using the variables of self-efficacy, anxiety, control, engagement and parental attachment (see Figure 1).

## Method

**Design and Setting:** This quantitative study utilised a cross-sectional analysis of undergraduates' self-reported data and was conducted in partial fulfilment of the requirements for the degree of Bachelor of Social Science (Psychology) (Honours). The battery of variables collected included participant demographic, psychosocial and educational variables.

**Participants:** 236 undergraduates (see Table 1) were recruited via internet-based snowball sampling. The final sample included 70 males (30%) and 166 females (70%), aged between 18 and 55 ( $M = 25.61$ ,  $SD = 8.88$ ). Fifty percent of the sample was single,

**Materials:** Participants completed an online questionnaire designed to measure undergraduates' academic buoyancy. The questionnaire contained 46 items and comprised 6 measures: academic buoyancy, self-efficacy, anxiety, uncertain control, engagement and parent-child relationships. Since the only research into academic buoyancy has been completed by Martin, Marsh and colleagues (2007, 2008), this study utilised the same measures which they employed in their research.

## Results

**Results:** Although all measures demonstrated non-normality, strategies employed to manage the non-normalised distribution did not resolve this, thus subsequent analysis was based on the raw data. Structural Equation Modelling (SEM) using AMOS was conducted to test the hypothesised model. In order to assess the goodness of fit between the data and model, maximum likelihood model estimation was used. In evaluating goodness of fit, multiple fit indices were considered. Post hoc modifications were performed on the basis of theoretical constraint and the resultant modification indices, to arrive at the final model. The resultant model shown in Figure 2 demonstrated a reasonable fit with the data as can be seen from the various goodness of fit indices presented in Table 2.

## Conclusions

This study was the first attempt to understand the relationship between key determinants of undergraduates' academic buoyancy. Undergraduates encounter manifold challenges, pressures and stresses in their pursuit of obtaining a degree. Some students falter and fall into maladaptive patterns of underachievement, while others adapt and realise their full potential. It would seem that academic buoyancy has an important role in explaining this. Despite limitations, the results support a theoretical model which can be used to predict undergraduates' academic buoyancy. Thus, strategies, programs, policies and interventions which target each of the implicated variables (self-efficacy, anxiety, control, engagement) provide means for educators and practitioners to address students' capabilities of effectively managing academic difficulties and pressures, and thereby maximise students' academic success. Directions for future research could include replication of this study with stratified-random sampling, multiple sources of data and a longitudinal design for more robust confirmation of the theory. Research aimed at developing and testing effective applications of these findings is also recommended.

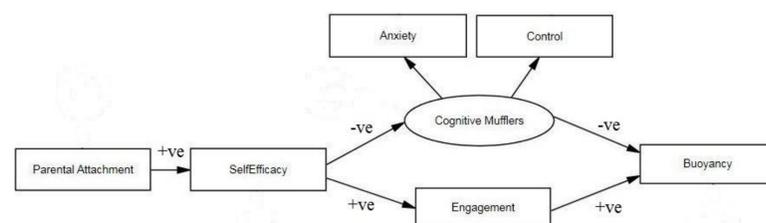


Figure 1. Hypothesised model of undergraduates' academic buoyancy.

Table 1  
Sample Demographics for Year of Study, Mode of Study and Average Grade ( $N = 236$ )

Year of Study	Mode of Study		Average Grade	
First	71 (30.1)	Internal 140 (59.3)	Fail	0 (0.0)
Second	42 (17.8)	Distance 60 (25.4)	Pass	43 (18.2)
Third	56 (23.7)	Mixed 36 (15.3)	Credit	101 (42.8)
Fourth	52 (22.0)		Distinction	80 (34.3)
Fifth	12 (5.1)		High Distinction	11 (4.7)
Sixth	3 (1.3)			

Note. Percentages are reported in parenthesis.

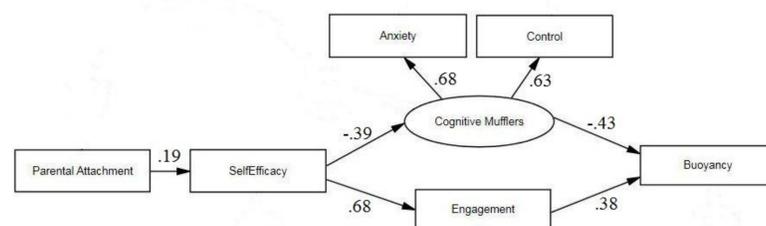


Figure 2. Model of undergraduates' academic buoyancy showing standardised regression weights.

Table 2  
Goodness of Fit Test Indices for the Modified Model

	GFI	AGFI	CFI	RMSEA
Fit to data if	> .90	> .90	> .95	≤ .08
Final model	.98	.93	.97	.08

Note.  $\chi^2(7, n = 236) = 17.99, p = .01$ . Fit to data indicates thresholds for adequate model fit for each test. Goodness-of-Fit Index (GFI), the Adjusted Goodness-of-Fit Index (AGFI), the Comparative Fit Index (CFI), and the Root Mean Square Error of Approximation (RMSEA).

## References

- Martin, A. J., & Marsh, H. W. (2008). Academic buoyancy: Towards an understanding of students' everyday academic resilience. *Journal of School Psychology, 46*(1), 53-83. doi: 10.1016/j.jsp.2007.01.002
- Martin, A. J., Marsh, H. W., McInerney, D. M., Green, J., & Dowson, M. (2007). Getting along with teachers and parents: The yields of good relationships for students' achievement motivation and self-esteem. *Australian Journal of Guidance & Counselling, 17*(2), 109-125. doi: 10.1375/ajgc.17.2.109

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