



Effects of approach to learning and self-perceived overall competence on academic performance of university students



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ABSTRACT

This study integrated self-perceived overall competence and approaches to learning in predicting academic motivation and performance of university students. The sample comprised 462 undergraduate students in Hong Kong, who were invited to complete a set of measurements. Results of the pathway analyses confirmed our hypothesized model. In particular, deep and surface approaches to learning directly and indirectly influenced grade point average (GPA), whereas the effect of self-perceived overall competence on GPA was fully mediated by academic motivation. The findings of this study advance the literature on higher education by revealing the importance of self-perceived overall competence on academic success.

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1. Introduction

“Education is the most powerful weapon which you can use to change the world.”

[Nelson Mandela]

Education is an important means to empower individuals. Among the various stages of educational training, higher education is regarded as the “engine of development in the new world economy” (Castells, 1994, p. 14). Tertiary education is a source of tremendous potential for the social, economic, and cultural development of the country (Barnet, 1990). Accordingly, factors that influence academic success and motivation of students have often been the focus of educators and policy makers.

Educators have attempted to develop a systematic framework for understanding academic performance in higher education. A meta-analysis of 109 studies investigated the relationship between psychosocial and study skill factors (PSFs) and academic outcomes in tertiary education (Robbins et al., 2004). PSFs refer to the contextual and social factors (e.g., perceived social support, institutional selectivity, and financial support), as well as the motivational factors (e.g., academic achievement motivation). The findings of this research reveal that academic achievement can be better predicted by combining both psychosocial and motivational factors in the model (Robbins et al., 2004).

Similarly, a recent meta-analytic study treated study habits, skills, and attitudes as “the third pillar supporting collegiate academic performance” because these three cognitive constructs, taken collectively, are the key and critical factors in determining one’s academic success (Credé & Kuncel, 2008, p. 425). In their proposed model of academic performance determinants, other than cognitive factors, the researchers also included non-cognitive factors such as personality, interests, and prior experience to capture a full picture of the determinants of academic performance. In sum, these two meta-analytic studies pinpoint the importance of including personality, cognitive (e.g., approach to learning) and motivational factors (e.g., academic motivation) in the examination of academic performance of undergraduate students. In light of previous research, a conceptual model that integrates both cognitive factors and personal characteristics is therefore proposed in this study to systematically examine their effects on academic performance of university students. In particular, we hypothesize that cognitive factors and personal characteristics are predictive of academic success through academic motivation (see Fig. 1). In the following sections, the effects of personal characteristics and cognitive factors on academic motivation and academic performance will be reviewed.

1.1. Effects of personal characteristics on academic motivation and academic performance

Personal characteristics have been shown to be one of the crucial influencing factors of academic achievements of university students (Noftle & Robins, 2007). A meta-analytic study (Poropat, 2009) with a cumulative sample size over 70,000 participants reported small to medium correlations between personality traits and academic performance in secondary and tertiary education. A study by Tomas and

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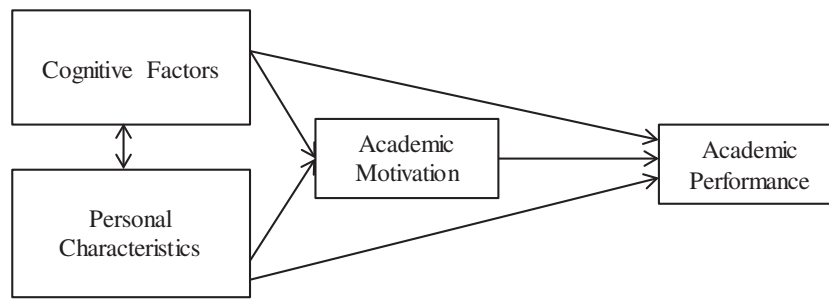


Fig. 1. The proposed conceptual model for understanding the relationships among cognitive factors, personal characteristics, academic motivation, and academic performance.

Adrian (2003) revealed that personality traits accounted for nearly 15% of the variance in examination grades. A three-year longitudinal study by Chamorro-Premuzic and Furnham (2003) provided further evidence to support these findings. In particular, neuroticism and conscientiousness predicted the overall examination scores of British university students, accounting for more than 10% of unique variance in overall examination marks. In addition to academic performance, personal characteristics, such as persistence, self-directedness, and self-transcendence, are also predictive of academic motivation of college students (Tanaka, Mizuno, Fukuda, Tajima, & Watanabe, 2009).

The above-mentioned findings illustrate the direct effect of personal characteristics on academic performance and motivation. Yet, some researchers argued that academic motivation can also directly influence academic performance. In the present study, academic motivation is defined as a type of intrinsic motivation, which refers to the motivating force that is derived from the interests, pleasure, and satisfaction obtained from participating in academic activities (Vansteenkiste, Lens, & Deci, 2006). Students who are academically motivated have a strong desire to perform well in universities, are more eager to learn, enjoy the learning-related activities, and believe that education and knowledge are important. Therefore, individuals with higher academic motivation are more likely to achieve better learning outcomes and academic success than those with lower academic motivation (Clark & Schroth, 2010; Komarraju, Karau, & Schmeck, 2009; Turner, Chandler, & Heffer, 2009).

The effect of academic self-efficacy on academic performance was widely examined in past studies (e.g., Pajares, 1996; Zimmerman, 2000). However, according to Pajares and Miller (1994), self-efficacy refers to a “context-specific assessment of competence to perform a specific task” (p. 194), implying that this construct only captures one dimension of competence (i.e., an evaluation of one’s capabilities). It is therefore suspected whether the overall competence, which includes self-efficacy, self-concept, outcome expectations, and expectancy beliefs (Schunk & Pajares, 2005), would be a better predictor of academic motivation and performance. To advance the literature on higher education, this study assessed the effect of self-perceived overall competence on academic motivation and performance.

Self-perceived overall competence is defined as a personal characteristic that reflects one’s global expectation or belief in his/her ability to accomplish tasks (Eccles & Gootman, 2002; Lerner et al., 2005; Schunk & Pajares, 2005). Lerner et al. (2005) demonstrated the importance of self-perceived overall competence in positive youth development. Past laboratory and longitudinal studies have demonstrated that self-perceived competence in the academic domain is predictive of undergraduates’ learning and achievement (Fazey & Fazey, 2001) and motivation (Harter, Whitesell, & Kowalski, 1992; Vallerand & Reid, 1984). In addition, some researchers stressed that other types of competence beliefs may also be related to students’ academic success. For example, social competence at school could facilitate learning outcomes through promoting positive interactions with teachers and peers (Wentzel, 1991a, 1991b). Accordingly, this study aimed to test the effect of self-perceived overall competence on academic motivation and

performance. To the best of our knowledge, past literature on academic performance has mainly focused on academic self-efficacy, and no study has yet examined the influence of self-perceived overall competence on academic motivation and performance. This study will therefore advance the literature by revealing the important role of self-perceived overall competence in academic success.

According to the cognitive evaluation theory (CET; Deci & Ryan, 1985, 1990), a sub-theory within Self-Determination Theory, the level of autonomous academic motivation is dependent on one’s perception of academic competence and self-determination. When university students do not feel competent in their study, their academic motivation will decrease, whereas when they perceive themselves with a high level of academic competence, their academic motivation is maintained or even enhanced (see Elliot & Dweck, 2005 for a review). In addition, Fortier, Vallerand, and Guay (1995) suggested that the effects of academic competence perceptions on academic performance might be mediated by academic motivation. In light of past findings reviewed above, two hypotheses are generated:

H1. Self-perceived overall competence is positively correlated with academic performance.

H2. Academic motivation mediates the effect of self-perceived overall competence on academic performance.

1.2. Effects of approach to learning on academic motivation and academic performance

Approach to learning refers to the ways or methods the students apply to their study, and it is strongly associated with academic performance (Marton & Säljö, 1976). Biggs and colleagues divided approach to learning into two categories, namely, deep approach to learning and surface approach to learning (Biggs, 1987; Biggs, Kember, & Leung, 2001). Students who adopt deep approach are more likely to engage in an active learning and searching for the meaning of the learning materials, while those who prefer surface approach tend to use a more superficial way of learning and mainly focus on memorizing the learning materials for tests or examinations. Previous research demonstrated that approach to learning is predictive of academic outcome (Chamorro-Premuzic & Furnham, 2008; Diseth, 2003; Snelgrove & Slater, 2003). In particular, deep approach to learning was found to be positively correlated with academic achievement, whereas surface approach was negatively related to examination results.

Moreover, approach to learning is strongly linked to academic motivation, which in turn affects academic success. The relationship between approach to learning and academic motivation has been well-documented in the literature. For example, university students who applied deep approach to learning reported increased achievement motivation, whereas those who did not systematically seek the meaning of learning materials exhibited low levels of academic motivation in their study (Busato, Prins, Elshout, & Hamaker, 2000). Research on goal orientations also sheds light on the relationship between approach

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