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The Impacts of Achievement Goal Orientation and Academic Self-Efficacy on Academic Achievement

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ABSTRACT

Achievement goal orientation and self-efficacy are essential non-intellectual elements that influence students' learning process and academic achievement, and they are fundamental components of motivation and learning theory in a variety of contexts. The objective of this article is to discuss the nature and structure of achievement goal orientation and self-efficacy, as well as their function in academic achievement. This article will assist educators better understand the importance of achievement goal orientation and self-efficacy in education, as well as motivate educators to consider students' achievement goal orientation and academic self-efficacy beliefs in teaching in order to give more appealing and effective instruction. This will aid in the identification of more effective treatments to boost students' motivation levels, as well as the development of counselling strategies to address students' individual motivational challenges.

Keywords: Academic; achievement goal; self-efficacy; students

ACHIEVEMENT GOAL ORIENTATION

Achievement goals serve a significant role in the field of achievement motivation research. They help explain the motivation and objectives behind academic behaviour (Ames, 1992; Hunsu et al., 2023). According to achievement goal orientation theory, students' behaviours and achievements are influenced by their goals related to task competency or ego-related factors in academic settings (Renninger & Hidi, 2019). It refers to a framework that recognizes and drives actions leading to successful outcomes (Olaogun et al., 2021). Over time, Achievement Goal Theory (AGT) has been refined and conceptualized in various models (Holzer et al., 2022). The first achievement goal model initially comprised mastery and performance goals, representing a dichotomous structure (Ames, 1992). Subsequently, researchers introduced the distinction between performance-approach and performance-avoidance goals within the performance goal category, leading to a trichotomous model (Meece & Holt, 1993). Elliot & McGregor (2001) further expanded the framework by separating mastery goals into mastery-approach and mastery-avoidance goals, resulting in a 2x2 framework. This theory classifies achievement goals into four domains: mastery-approach goals, performance-approach goals, mastery-avoidance goals, and performance-avoidance goals. Mastery-approach goals involve engaging in academic activities to enhance understanding and master the subject matter, while mastery-avoidance goals are about avoiding concerns about inadequate learning (Datu et al., 2022). Aside from that, performance-approach goals describe students' motivation to improve and outperform, whereas performance-avoidance goals pertain to learners' desire to prevent being outperformed by others. Mastery-approach goals are a specific achievement goal that emphasizes continuous self-improvement in various academic tasks (Datu et al., 2022).

Researchers suggest that different goals in learning lead to different purposes and outcomes. For instance, in a study by Guo and Leung (2021) focusing on the academic achievements of Chinese Han and Miao students in mathematics, it was discovered that a focus on mastery orientation positively predicts academic achievement, while there is no significant relationship between performance approach and performance-avoidance goals in mathematics (Guo & Hu, 2021).

Another study by Nasiri et al. (2017) examined the relationship between achievement goal orientations, academic self-efficacy, and academic achievement among 175 first and second-year students from the Medical and Dentistry schools at Guilan University of Medical Sciences. The findings emphasized the importance of creating a conducive learning environment that promotes learning goals and discourages avoidance goals, as it significantly impacts students' academic outcomes.

In the context of online courses, achievement goal orientation also influences academic achievement. Yeh et al. (2019) found that students with higher master approach goals proactively predict their academic outcomes by utilizing various self-regulated strategies to enhance their learning and academic performance. On the other hand, students with higher mastery-avoidance goals are less inclined to adopt self-regulated learning strategies, leading to lower performance expectations.

In a study conducted by Wang & Rao (2022) in Mainland China, known for its Confucian-heritage culture and a collectivist society, the researchers examined urban, rural, and urban regions. The study findings yielded an important insight: Chinese students expressed diverse academic motivational goals. These goals encompassed the commonly studied academic achievement goals and various social motivations for engaging in academic tasks. Particularly notable were motivations for enhancing social status and fulfilling family-oriented responsibilities.

In another study by King & Mendoza (2020), they explored the spread of mastery and performance goals among classmates and whether classmates' achievement goals influence an individual's goals. The research results indicate that the mastery-approach, performance-approach, and performance-avoidance goals were contagious among classmates. However, mastery-avoidance goals did not exhibit a similar contagious effect.

Based on the above research models, numerous researchers have demonstrated that AGO is an essential predictor of academic achievement (Guo & Leung, 2021; Alhadabi & Karpinski, 2020). However, some studies hold different views. There are links between AGO and academic achievement, with several findings which shows a positive relationship (Miller et al., 2021; Guo & Leung, 2022; Alhadabi & Karpinski, 2020), while others have not (Guo & Hu, 2021; Holzer et al., 2022).

ACADEMIC SELF-EFFICACY

Self-efficacy, as described by Bandura (1997), refers to an individual's belief in their ability to effectively organize and carry out actions necessary to achieve specific outcomes. It entails a personal evaluation of one's competence in completing assigned tasks. Zamfir and Mocano (2020) emphasize the significance of self-efficacy as a fundamental concept in cognitive and social theory, reflecting an individual's confidence in their capacity to attain desired results. Suyuti and Ahmad (2022) assert that self-efficacy influences an individual's decision-making, performance, and level of dedication towards achieving goals. Notably, higher levels of self-efficacy have been associated with improved adaptation to everyday situations, as highlighted by Macakova and Wood (2022). Furthermore, self-efficacy has long been recognized as a predictive factor for academic achievement (Burgoon et al., 2012). In modern psychology, particularly in educational psychology, self-efficacy holds significant value and has been a

central focus of study for the past three decades (Cheng, 2020).

Bandura (1997) proposed the concept of ternary reciprocal determinism to explain the complex interaction between individual factors, behavior and environment. According to this theory, self-efficacy is the main individual factor in the ternary reciprocity determinism model, which affects individual behavior and is affected by the environment, and many studies support this viewpoint. Students of higher socioeconomic and cultural status are more likely to profit from the educational activities of social persuasion in the family background (Gebauer et al., 2020). Studying self-efficacy among different gender helps to understand how to promote women's learning in different subject courses (Aguillon et al., 2020). Once gender stereotypes about mathematics are formed, their mathematical self-concept will be affected negatively (Wolff, 2021). Sachitra & Bandara (2017) surveyed undergraduates with bachelor's degrees in business and discovered that women's academic self-efficacy is higher than men. There are significant differences in academic self-efficacy in different academic years. Gender moderates' academic self-concept and self-efficacy (Wang & Yu, 2023). But this effect is not invariant either. Hanham et al. (2021) found that gender does not significantly affect the relationship between variables in theoretical models. Gebauer et al. (2020) studied the impact on self-efficacy in the three socialization contexts of family, school, and peers. They found that multiple factors in different contexts determine students' academic self-efficacy. Parental influence can significantly impact children's academic self-efficacy, while teachers play a crucial role in fostering the development of students' academic self-efficacy. Additionally, peer groups tend to consist of individuals with similar educational interests, and it is within these groups that academic activities are more likely to take place.

Two crucial aspects of the definition of self-efficacy are: it represents an individual's belief regarding their capabilities, and individuals utilize their efficacy judgments when pursuing specific goals. Several scholars have demonstrated the self-efficacy about academic achievements (Klassen et al., 2018). ASE can make students have strong self-confidence, which is significantly correlated with achievement in educational background, and it's also a good predictor of academic achievement (Hanham et al., 2021; Nne & Ekene, 2021; Bhati et al., 2021). A study using structural equation modeling on academic self-efficacy and academic performance among medical students discovered that academic self-efficacy could predict academic performance (Hayat et al., 2020). The relationship between academic self-efficacy and achievement is not simplistic. ASE may mediate academic achievement (Alhadabi & Karpinski, 2020; Olivier et al., 2019) or even a reciprocity relationship between ASE and Academic achievement (Olivier et al., 2019). Williams (2010) also observed a reciprocal connection between self-efficacy and achievement in mathematical subjects among 33 countries.

Some motivational structures seem conceptually similar to self-efficacy but are not synonymous (Khine & Nielsen, 2022). Self-concept and self-efficacy are a group of similar but different concepts. Self-efficacy emphasizes the ability to decide, while self-concept emphasizes the sense of self-worth related to ability beliefs. Effectance motivation also differs from self-efficacy. It lacks the specificity of self-efficacy. Self-efficacy is also different from the concept of perceived control. Perceived control is merely one facet of self-efficacy, and individuals with a high sense of control may paradoxically exhibit lower self-efficacy because of individuals who believe they have control over their learning and performance may perceive learning as less significant and may not be motivated to invest time and effort.

Individuals assess their capabilities based on the particular area they are engaging in (Bandura, 2006). This domain of high-efficacy specificity has led to debates about the most appropriate scale for measuring self-efficacy, with expectations that scale differences may influence research findings. Darmayanti et al. (2021) found that the modified 'Academic Self-Efficacy Scale' (TASES) is a reliable and valid measurement item for evaluating learners'

academic self-efficacy in the Indonesian population. However, Chao et al. (2019) observed that English language self-efficacy could predict students' English and Chinese achievements, which differ from self-efficacy's domain specificity. If researchers focus on students' comprehensive academic achievements, they usually choose a general academic self-efficacy scale (Wu et al., 2020). Suppose they focus on a professional curriculum, such as they will choose a special curriculum-related self-efficacy scale (Burgoon et al., 2012). According to Cebu's (2023) study, it was discovered that societal and cultural expectations could influence the self-efficacy of Filipino students in college. The study also revealed a correlation between the academic year level and self-efficacy among college students.

Much research has proved that academic self-efficacy has a complex impact on academic achievement. Also, the previous research objects mainly focused on college students (Hanham et al., 2021), middle school students (Nne & Ekene, 2021), and primary school students (Olivier et al., 2019). There are few reports on the relationship and influence mechanism between ASE and the academic achievement of vocational university students (Sun, 2022). Therefore, the current study will focus on these gaps.

Academic self-efficacy scales are essential tools that help researchers assess this construct. Numerous studies using these scales developed by Bandura, called the Multidimensional Scale of Perceived Self-Efficacy (MSPSE; Bandura, 1989), explore the relationship between academic self-efficacy and various academic outcomes (Lei et al., 2022; Graham, 2022; Sun, 2022). Bandura's academic SE scale is lengthy, including nine distinct dimensions. This scale employed to assess self-efficacy may not be readily adaptable for studying self-efficacy in contexts outside the school domain (Klobas & Nigrelli, 2007).

Various researchers have developed specific self-efficacy scales tailored to particular populations or disciplines. For instance, Owen and Froman (1988) constructed the "College Academic Self-Efficacy Scale" (CASES) to measure self-efficacy among college students. Meza and Gonzá (2020) noted the lacking of instruments for assessing self-efficacy in academic writing within specific disciplines by developing and validating an academic disciplinary writing self-efficacy scale based on experience.

However, it is worth noting that some scholars argue for a general self-efficacy that can be applied across activities within the same domain or various domains (Bandura et al., 1980). Researchers have developed general self-efficacy scales to capture this broader sense of perceived self-efficacy (Jerusalem & Schwarzer, 1992; Schwarzer & Scholz, 2000). These scales aim to assess individuals' overall belief in learners' ability to adapt to stressful life events.

ACADEMIC ACHIEVEMENT

Academic achievement is the outcome of accomplished goals that were the objective of academic tasks (Steinmayr et al., 2014). Academic achievement encompasses diverse aspects within the broad field of education, making it a construct that covers different learning domains (Tan et al., 2019). In the social context, academic achievement is important as it determines an individual's educational prospects. Factors such as GPA and standardized tests like the SAT are crucial in shaping students' educational opportunities, including access to higher education (Rata & Tamati, 2021). Consequently, academic achievement has a lasting impact on individuals' vocational careers based on their attained educational degrees. Given its significance, higher education institutions have increasingly focused on investigating the factors associated with university students' academic achievement (Ariani, 2023). While academic achievement is a broad study area, researchers have often narrowed their focus to specific aspects, such as strategies to enhance academic performance or identifying predictors of success (Edwards et al., 2023; Abyadh & Abdel Azeem, 2022). Assessing academic achievement involves various methods, including grading systems, GPA calculations, and

standardized tests like the SAT, which enable educators to evaluate students' competency levels and serve as criteria for educational selection processes (Ion et al., 2022; Feraco et al., 2023; Schneider & Preckel, 2017).

While extensive research has been conducted on academic achievement, several understudied areas still offer further investigation and exploration opportunities. Previous extensive research has found that multiple factors influence academic achievement; among these factors are not only cognitive such as intelligence (Morales et al., 2020), but also non-cognitive constructs such as motivational (Sivrikaya, 2019), self-regulation (Elhusseini et al., 2022), mindset (Macnamara & Burgoyne, 2022), and social-emotional skills (Hachem et al., 2022) have gained recognition for their influence. In a study on German high school students, researchers simultaneously investigated the effect of intelligence and motivation on academic achievement in three domains. The findings indicate that motivation had stronger effects on achievement than intelligence (Steinmayr et al., 2019). Liu et al. (2022) tested the hypothesis of emotional non-cognitive structures in subject learning, reading literacy, and artistic achievement based on the OECD 2019 Suzhou data. They found that non-cognitive structures have a promoting effect on the above content. More research is needed to comprehend how these factors impact academic performance and to develop effective interventions targeting these areas. The intersection of different social identities on academic achievement can have unique and complex effects. Fuente et al. (2021) found that being a woman and extending to the higher age group in Colombia has negatively predicted achievement. However, further research is required to explore the intersectionality of these factors and how they interact to shape educational outcomes and to develop strategies that address the specific problems faced by learners with intersecting identities (Douglas et al., 2020). With the advancement of technology, research is needed on the impact of emerging technologies, such as online learning platforms, educational apps, adaptive learning systems, and virtual reality, on academic achievement. The Smart Mobile Learning (M-learning) application supported remote learning during the pandemic. Almaiah et al. (2022) used the technology acceptance model (TAM) to investigate the crucial driving factors affecting the adoption of mobile learning. They found that the acceptance of mobile learning was affected by awareness, IT infrastructure (ITI) and senior management support. Youssef et al. (2022) examined the impact of the usage of information and communication technology and digital skills on the academic achievement of French university students. The research results indicate that through innovation and collaboration, students' achievement is improved, and the acquisition of digital skills improves students' academic achievement. By understanding how these technologies can be effectively integrated into educational settings by addressing these understudied areas, researchers can get more insight into different factors affecting academic achievement and develop evidence-based strategies to promote educational success for all students.

THE LINK BETWEEN AGO, ASE AND ACADEMIC ACHIEVEMENT

Achievement goal orientation and academic self-efficacy are often studied in the context of education and academic achievement, representing different aspects of an individual's beliefs and motivations (Liu et al., 2022). Achievement goal orientation involves how individuals perceive and approach goals in academic settings.

The interaction between achievement goal orientation and academic self-efficacy is frequently observed in research. Lu et al. (2021) conducted a longitudinal study involving 316 first-year Chinese college students. They discovered that students with higher goal orientation tend to exhibit higher levels of academic self-efficacy and more feedback-seeking behavior. Furthermore, the initial level of seeking feedback positively correlates with academic performance, mediated by the linear progression of academic self-efficacy. Using structural

equation modeling, Ariani (2021) examined the relationship between achievement goal orientation and academic self-efficacy, revealing that mastery-approach goals (MApGs) can positively impact students' goal orientation.

Conversely, performance-avoidance goals (PAvGs) negatively affect goal orientation, while performance-approach goals (PApGs) have a positive effect. Another study by Chonsalasin and (2021) discovered that performance-approach and performance-avoidance goals positively correlated with self-efficacy among Thai students in engineering skills. On the contrary, Alhadabi & Karpinski (2020) found that self-efficacy was positively correlated with master-goal and performance-approach-goal and negatively correlated with performance-avoidance goals among American college students. Macakova & Wood (2020) found that a mastery-avoidance goal does not affect ASE, proving that previous researchers often choose a scale without a mastery-avoidance goal structure in their research on young students. Students with a performance goal orientation also possess high academic self-efficacy, which can serve as a buffer against potential negative effects (Hitches et al., 2022). Their belief in their abilities can help alleviate performance anxiety, enhance confidence, and promote adaptive coping strategies (Sabouripour et al., 2021) which can positively influence academic achievement by increasing motivation and engagement (Hayat et al., 2020).

Achievement goal orientation and academic self-efficacy can also affect academic achievement. ASE often mediates the effect of AGO or other motivational factors on academic achievement (Macakova & Wood, 2020; Zhang et al., 2022). Among the three relationships, performance-avoidance goals are a negative intermediary between SE and students' academic performance (Alhadabi & Karpinski, 2020). In contrast, according to Honicke (2019), academic self-efficacy is mediated through the relationships between mastery and performance approach goal orientation and achievement. Olaogun et al. (2023) investigated the role of self-efficacy in mediating the impact of mastery and performance goals on student achievement. They found that both types of goals significantly predicted self-efficacy for learning.

Furthermore, performance goals were found to be both a direct and indirect predictor of performance scores through self-efficacy. However, the reciprocal influence of performance on goal orientation has received limited attention (Magni et al., 2021). In a recent study, researchers explored that reciprocal relationships are mediated by self-efficacy. Academic self-efficacy can help to explain the underlying mechanisms through which motivational factors influence academic performance (Al-Abyadh & Azeem, 2022). Students with higher academic self-efficacy can enhance their goal-setting, motivation, and persistence. It also shapes their attributions for success and failure, with a greater likelihood of attributing success to their efforts and abilities (Hayat et al., 2020). Hence, learners will engage in adaptive learning strategies and effectively manage challenges. This, in turn, leads to improved academic performance and achievement (Hitches et al., 2022).

CONCLUSION

The impact of achievement goal orientation and academic self-efficacy on academic achievement is a very complicated process, with the outcomes modified by various contexts and research objects. The particular patterns of the impacts have yet to reach a consensus, and greater investigation in future studies is required. Educators should teach students with different personalities and learning objectives based on their aptitude, guide them to form a correct ability view, and carry out various activities to stimulate their learning interest, change traditional evaluation mechanisms, improve students' self-efficacy, and form a reasonable achievement goal orientation on the basis of understanding achievement goal orientation and self-efficacy.

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