A Review of Achievement Goal Theory

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Abstract

This article provides an overview of achievement goal theory, detailing its structure and summarizing empirical research on the relationships between achievement goals and motivation, emotion, cognition, and behavior. Furthermore, it examines the multiple achievement goal model and proposes directions for future research in this field.

Keywords: achievement goal orientation, social goals, multiple goal model

1. Introduction

The theory of achievement goals has emerged as a prominent topic in motivation research in recent years, exploring motivation through the lens of social cognition. Achievement goals represent individuals' cognitive strategies and their perceptions of the purposes for engaging in specific achievement tasks. Furthermore, achievement goals constitute an integrated belief system concerning the purpose, significance, and criteria for success in these tasks. In a study by Dweck (1978) on primary school students' responses to academic setbacks, she identified two types of achievement goal orientation: learning goal orientation and performance goal orientation. This framework shifted the previous view that separated cognition and motivation, becoming a pioneering topic in motivation research from the social-cognitive perspective.

2. The Origin of Achievement Goal Theory

Achievement goal orientation theory represents a novel framework for understanding motivation, grounded in goal-setting theory, achievement motivation theory, attribution theory, and social cognitive theory.

2.1 Goal-Setting Theory

In 1968, Locke formally introduced goal-setting theory, building on prior research. He posited that goals serve as the foundation for individual behavioral motivation and that established goals dictate the level of effort individuals exert in their work. Goals not only guide behavior but also influence performance. Achievement goal theory can be viewed as an extension of this foundational framework (Wang Yanfei, 2002).

2.2 Achievement Motivation Theory

In its early development, Murray, Lewin, and McClelland, among others, formulated achievement motivation theory, also known as the theory of achievement motivation, based on Atkinson's expectation-value theory. This theory posits that individual achievement behavior arises from a conflict between approach and avoidance—specifically, the pursuit of success and the avoidance of failure. Individuals with high achievement motivation tend to select tasks of moderate difficulty, whereas those with low achievement motivation are more likely to choose either easy or very difficult tasks. This framework has significantly influenced subsequent research on achievement goals.

2.3 Attribution Theory

Nicholls' ability theory, proposed in the 1980s, serves as a foundational source for achievement goal orientation theory and is classified within attribution theory. He posits that ability is a crucial factor in understanding achievement motivation among various attributions related to achievement. Perceptions of ability and the absence thereof influence individuals' choices regarding task difficulty in achievement contexts. Individuals who recognize differences in ability strive for high performance as their behavioral goal, whereas those who lack such recognition focus on task completion or learning, viewing ability merely as a means to an end. The systematic classification of

ability attribution can be regarded as an early form of the distinction between two types of achievement goal orientation.

2.4 Social Cognitive Theory

Researchers within this framework conceptualize human motivated behavior as an expression of cognitive processes in social contexts. Human cognitive processes are associated with control, ability, goals, and value perceptions, all of which significantly influence the motivation process. Roberts asserts that the prevailing trend in motivation research emphasizes two cognitive processes that affect motivation: self-concept (including ability and control) and goal-value concepts. Influenced by social cognitive theory, three theories have examined motivational issues in the workplace from various perspectives: Self-Efficacy Theory, Subjective Competence Theory, and Achievement Goal Orientation Theory, with Subjective Competence Theory closely related to Achievement Goal Orientation Theory.

3. Achievement Goal Structure Development

3.1 Research on Achievement Goal Structure Based on Self-oriented Goals

3.1.1 The Dichotomy Theory of Achievement Goals

In the field of learning, achievement goals are primarily categorized into two types: mastery goal orientation and performance goal orientation. Mastery goal orientation, also known as learning goal orientation, task goal orientation, or task involvement, is characterized by students who view learning as an intrinsic goal and prioritize the development of their abilities. These students focus on understanding and mastering tasks. In contrast, performance goal orientation, referred to as ability goal orientation or ego involvement, is adopted by students who perceive learning as a means to demonstrate their abilities, often avoiding situations that may lead to failure or reveal low abilities. The fundamental distinction between these two orientations lies in their conceptualization of ability—specifically, whether ability is viewed as fixed or malleable (Jiang Jingchuan & Liu Huashan, 2004).

Psychologists argue that mastery goal orientation and performance goal orientation foster two distinct psychological frameworks for understanding and responding to achievement situations. This distinction is particularly evident in individuals' perceptions of ability and effort. First, individuals with mastery goal orientation typically adopt an incremental view of ability, considering it a developable trait that can be enhanced through effort and experience. In contrast, individuals with performance goal orientation generally adhere to an entity view of ability, perceiving it as a fixed and unchangeable trait. Second, individuals with mastery goal orientation believe that effort leads to success, viewing it as a means to activate existing abilities and develop the skills necessary for future task mastery. Conversely, those with performance goal orientation often fail to recognize effort as a method for developing the abilities required for task mastery, as they regard ability as a fixed trait. Furthermore, individuals with a performance goal orientation may interpret high levels of effort as indicative of low ability, reasoning that high-ability individuals can complete tasks with minimal effort (Ames et al., 1992).

3.1.2 Three-Point Theory of Achievement Goals

Subsequently, some researchers refined the categorization of achievement goals. Elliot et al. (1996) proposed a three-dimensional goal-oriented model that divides achievement goals into two primary categories: approach-oriented achievement goals and avoidance-oriented achievement goals. Although both orientations focus on performance outcomes, the former emphasizes demonstrating one's abilities and receiving positive evaluations from others, while the latter concentrates on concealing personal shortcomings to avoid negative evaluations. This new classification, which places significant emphasis on avoidance orientation, aligns with McClelland and Atkinson's descriptions of achievement motivation from the 1950s, exemplifying the convergence of empirical research and theoretical reasoning in educational psychology. This model is supported by a growing body of research indicating that self-oriented achievement goals (i.e., achievement goal orientation) effectively distinguish between approach and avoidance goals (Li Xiaodong, 2001), with differing impacts on academic help-seeking behavior. Additionally, significant differences in cognition and behavior exist among these three goal-oriented groups (Zhang Yongmei, 2001).

3.1.3 Quadrangular Theory of Achievement Goals

The quadrangular theory of achievement goals builds upon the three-point theory by further dividing mastery goals into approach and avoidance orientations. Elliot posits that competencies are central to the concept of achievement goals. Competencies can be examined from two key aspects: (1) Criteria, which typically include three dimensions: task criteria, assessing whether the individual meets the requirements of the task; self-standard criteria, evaluating whether the individual surpasses their previous performance; and criteria for others, determining whether the

individual outperforms peers within the group. Individuals possess varying achievement goal orientations that influence the criteria they use to evaluate success and failure. (2) Potency, which refers to the significance attributed to a particular achievement goal that an individual aspires to attain (i.e., the degree of preference for pursuing that goal). Competencies can be assessed in terms of both positive outcomes (i.e., success) and negative outcomes (i.e., failure). Elliot argues that since criteria and valence are both essential dimensions of competency, it is logical to construct a theoretical model of achievement goals represented as a 2×2 matrix (as shown in Table 1). Mastery approach orientation aligns with the definition of mastery orientation in the rule of thirds, while mastery avoidance orientation introduces a new dimension that emphasizes self-comparison due to a fear of declining abilities. For instance, older individuals may fear losing the desire to learn or may give up due to a perceived inability to master new skills. Similarly, students who have reached a high level of competence may experience anxiety over maintaining their performance. Elliot has confirmed the existence of learning-avoidance goals in prior studies. An empirical investigation of Elliot et al.'s quadrangular theory was conducted by Liang Guosheng (2002), verifying the existence of learning-avoidance goals and asserting that the quadrangular model of achievement goals is more comprehensive than both the trichotomous and dichotomous approaches.

3.1.4 Six-Point Theory of Achievement Goals

Elliot et al. (2011) proposed a 3×2 theoretical model of achievement goal orientation that encompasses six dimensions: task, self, and others. The task approach goal involves striving to meet the requirements of a task and overcoming challenges to complete it. In contrast, the task avoidance goal focuses on evading the inability to complete the task. The self-approach goal aims to exceed an individual's previous performance, while the self-avoidance goal seeks to prevent a decline in performance relative to prior achievements. The others-approach goal involves striving to outperform peers, whereas the others-avoidance goal aims to avoid being inferior to others. Elliot et al. (2011) assert that achievement goal orientation comprises both ability definition and ability valence. Ability definition refers to the criteria by which individuals assess their own capabilities, including self-standards, absolute standards, and interpersonal standards. Ability valence pertains to the emotional significance associated with ability; when individuals pursue performance goals, they experience positive valence (success), while attempts to avoid performance goals result in negative valence (failure). The pursuit of success fosters hope, excitement, and other positive emotions, reflecting the positive valence of ability, whereas the avoidance of failure elicits anxiety, worry, and other negative feelings, illustrating the negative valence of ability.

3.2 Research on Achievement Goals Based on Social Goals

Social goal orientation refers to individuals' perceptions of social expectations when engaging in achievement-oriented behaviors. It evokes moral intentions and the desire for praise, whether from others or oneself, thereby fostering sustained effort and strong perseverance in the face of challenging or uninteresting tasks. Since Maehr introduced the concept of social goal orientation in 1980, many researchers have argued that a comprehensive understanding of achievement goal orientation theory necessitates the incorporation of social goal orientation into its framework. Previously, social goal orientation had been largely overlooked in the literature.

Ford et al. categorize social goals into two types: social responsibility goals, which involve completing tasks in a timely manner and embodying a sense of morality, obligation, and responsibility; and social approval goals, which focus on valuing relationships and the desire for acceptance, recognition, and praise from others. Research examining the relationship between students' pursuit of social goals and academic performance found that social responsibility goals correlated positively with high academic performance, while social interaction (recognition) goals were associated with lower academic performance (Linnenbrink & Pintrich, 2002).

Furthermore, social goals are influenced by cultural factors. Blumenfeld's comparative study of Japanese and American students revealed that a significant proportion of Japanese students believe they study primarily to receive praise from their parents and teachers. While Western researchers often view social approval (recognition) goals as extrinsic motivations, these social goals may function as intrinsic motivations that enhance students' enthusiasm for learning and improve their effort and perseverance in Japan.

Social goals constitute an important aspect of achievement goals; however, their definition and empirical validation remain underdeveloped, partly due to cultural differences. Significant variations in social goals across different cultural contexts suggest that future research should focus on defining and empirically investigating social goals within the framework of the Chinese cultural context.

4. An Empirical Study of Achievement Goal Theory

Achievement goal theory was initially proposed and developed within the field of educational psychology. It emerges

from educational practices that emphasize students' learning and their pursuit of academic achievement from the outset. Empirical research guided by achievement goal theory is conducted in conjunction with specific educational practices in schools. Previous studies have demonstrated that motivation, emotion, cognition, and behavior significantly influence achievement goal orientation. Motivational processes encompass beliefs about ability and effort, self-efficacy, and interest/value; affective processes involve both positive and negative emotions (e.g., test anxiety, fear of failure); cognitive processes include deep processing, surface processing, metacognitive regulation, working memory, and attentional processes. Behavioral processes refer to positive actions such as effort, time allocation, and perseverance, as well as negative behaviors like self-sabotage and avoidance of academic assistance. Achievement outcomes are measured by grades in academic tasks (Linnenbrink & Pintrich, 2002).

4.1 Achievement Goal Orientation and the Motivation Process

Learning motivation significantly predicts achievement goal orientation (Shen Bodan, 2021). A notable positive correlation exists between achievement goals and the achievement motivation of secondary vocational students. Mastery goal orientation can forecast the motivation to pursue success, whereas performance goal orientation can predict the motivation to avoid failure (Jiao Chen, 2017). Mastery goals, achievement convergence goals, and achievement avoidance goals not only directly influence learning behavior but also exert an indirect effect through downward comparison (Bai Xuejun et al., 2013). Students whose grades are close to their targets exhibit greater confidence in their abilities, a heightened sense of academic self-efficacy, and a lower likelihood of experiencing academic burnout. Conversely, students whose grades fall short of their goals tend to experience diminished evaluations and rankings, resulting in higher levels of learning burnout (Shi Leishan, 2013). Mastery goal orientation can enhance the learning motivation of junior high school students, with the effectiveness of achievement goal orientation in fostering motivation being influenced by the type of course (Chen Lili, 2016).

4.2 Achievement Goal Orientation and the Cognitive Process

Mastery avoidance goals encompass both positive and negative components; the knowledge aspect fosters learning (Ames, 1992), while the avoidance aspect negatively impacts learning (Elliot, 1997). Previous studies indicate that students with mastery goal orientation employ deep processing and self-regulation strategies, such as integrating new material with past experiences and daily life to enhance understanding (Anderman & Young, 1994; Pintrich & Duncan, 1991; Lei et al., 2001). In contrast, grade-oriented students tend to favor shallow processing techniques, including rote memorization, note-taking, guessing, and repetitive writing (Ames & Archer, 1988; Dweck, 1988; Nicholls et al., 1984; Nolen, 1988). Furthermore, the nature of the task influences the cognitive strategies employed by students near their targets; when tasks are more challenging, students with grades close to the target utilize deep processing strategies, while those avoiding grades resort to superficial processing and disorganized learning styles (Elliot & McGregor, 1999). Achievement goal orientation also affects the content and operation of working memory; students with high scores approaching their goals take less time and exhibit a lower error rate on working memory breadth tests. The mastery of approaching goals can directly or indirectly predict the number of correct recalls. The relationship between mastery of approaching goals and working memory may be influenced by mediating variables, including processing strategies, metacognitive modulation strategies, interests, and self-efficacy (Liu Huijun, 2003).

4.3 Achievement Goal Orientation and the Emotional Process

The study by Linnenbrink and Pintrich revealed that the four dimensions of achievement goal orientation are associated with varying levels of anxiety. Specifically, mastery goal orientation is linked to low test anxiety, while mastery avoidance goal orientation is associated with high test anxiety. Furthermore, achievement approach goals correlate with higher state anxiety (temporary) and lower trait anxiety (stable). As the college entrance examination approaches, candidates who focus on mastering the task and adopt a mastery approach experience reduced anxiety levels. Conversely, high anxiety levels arise when candidates are concerned about their ability to grasp the material, particularly under mastery avoidance goal orientation (Liu Huijun, 2003). The researchers also found that mastery approach goals are more likely to evoke positive emotions such as happiness, excitement, and calmness, whereas they are not associated with negative emotions like sadness, anxiety, and nervousness. When individuals confirm their ability to achieve goals, mastery approach goals correlate with positive emotions such as relief, relaxation, and pride. However, failure to achieve these goals is related to anxiety and nervousness (Linnenbrink & Pintrich, 2002).

4.4 Achievement Goal Orientation and Academic Performance

The relationship between the two dimensions of achievement goal orientation and academic performance warrants further investigation, as strong academic performance cannot be solely attained through task interest and deep processing strategies. Moreover, neither performance approach goals nor mastery approach goals directly lead to

superior academic performance (Chen Song, 2011). Domestic studies have indicated that students who are close to mastery and high grades tend to compare themselves with stronger peers, while students with avoidance goals often compare themselves to peers who perform less well (Bai Xuejun, 2013). The mindset of striving to catch up with stronger peers encourages these students to invest more energy in their learning, suggesting that mastery and performance convergence are beneficial for improving academic performance, while grade avoidance hinders it (Jiang Jingchuan, 2004). Additionally, self-regulation indirectly influences academic performance (Li Jinbo, 2007).

Researchers categorized goal orientation into three subcategories: mastery orientation (i.e., learning goals), self-social orientation (i.e., achievement-tendency orientation), and work avoidance orientation (i.e., achievement-avoidance orientation) (Meece et al., 1988). They also classified strategy variables into active engagement and superficial engagement, examining the relationship between goal orientation and learning strategies among fifth and sixth graders. The results indicated that mastery orientation is significantly positively correlated with active engagement, while self-social orientation is positively correlated with low active engagement and superficial engagement. Work avoidance orientation showed a strong positive correlation with superficial engagement. Similarly, the researchers investigated the effects of goal orientation on information processing and memory in an experimental setting with fifth and sixth graders (Graham & Golam, 1991). Their findings revealed that achievement goal states significantly affect the level of information processing, with poor recall associated with both goal-oriented processes. Walker (2002) followed the research paradigm established by Graham et al. (1991), adapting it from a laboratory to an educational context, and reached similar conclusions.

There was a strong correlation between high mastery orientation and the use of deep cognitive and metacognitive strategies, while a weak correlation existed with superficial cognitive strategies (Somuncuoqlu & Yesim, 1999). In contrast, tendentious achievement goal orientation was strongly correlated with superficial cognitive strategies but not with deep cognitive and metacognitive strategies. Avoidant achievement goal orientation negatively correlated with deep cognitive and metacognitive strategies.

Research on the relationship between achievement goals and learning strategies has also been conducted in China. Researchers found significant correlations between achievement goals and learning strategies: mastery goals positively correlated with deep processing strategies and negatively correlated with avoidance strategies and self-worth protection strategies, while the correlation between achievement goals and learning strategies showed an opposite trend (Shi Kan & Wang Wenzhong et al., 1995). The researchers studied fifth and sixth graders and reached similar conclusions (Lei Li & Wang Ling et al., 2001). These findings align closely with those from international studies. There was a significant positive correlation between learning motivation, learning strategies, and academic performance (Liu Jiaxia & Shen Jiliang et al., 2000). Both learning motivation and learning strategies influence academic performance, albeit to varying degrees. Beyond having a direct impact on academic performance, learning motivation also indirectly affects it by shaping learning strategies.

Academic help-seeking is a self-regulated learning strategy through which students actively seek solutions to problems. The study explored academic help-seeking behaviors and found that students with a tendency toward achievement goal orientation and mastery goal orientation are likely to engage in instrumental help-seeking, utilizing limited assistance such as hints or clues to solve problems (Li Xiaodong, 2001). Conversely, students with avoidant achievement goal orientation tend to engage in executive help-seeking, seeking answers or quick task completion without attempting to solve problems independently or avoiding help altogether.

4.5 Research on the Relationship Between Achievement Goals and Self-Hindrance

Self-handicapping was examined as a negative defense strategy from the perspective of ability (Yngvar Ommundsen, 2001). It was found that the concept of a growth mindset was negatively correlated with self-hindrance, while a fixed mindset had a direct positive effect on self-hindrance. However, the perception of high ability could mitigate this positive effect. The researchers investigated the relationship between personal goal orientation, classroom goal structures, and self-obstruction strategies among primary and secondary school students learning mathematics (Midgley et al., 2001). Their findings indicated that avoidant achievement goals and performance-oriented classroom goal structures significantly predicted self-obstruction strategies. In contrast, classroom goal structures focused on mastery and learning orientations had a significant negative predictive effect on self-hindrance. Academic self-obstruction behaviors were less prevalent in high-mastery, low-achievement orientation classrooms, while such behaviors were more common in low-mastery, high-achievement orientation classrooms (Li Xiaodong et al., 2003). This suggests that students are more likely to adopt self-obstruction strategies in high-achievement orientation settings, consistent with the conclusions of Midgley et al. (2001).

4.6 Research on the Relationship Between Achievement Goal Strategy and Feedback Seeking

The types of feedback sought by participants with different goal orientations were examined (Ruth Butler, 1993). Participants were given the option to complete the next question for each task or to choose one of three types of feedback: (1) the three best answers to the task, (2) their actual scores, or (3) their ranking among all participants. It was found that those with a mastery goal predominantly selected the first type of feedback. At the beginning of the experiment, participants with performance goals tended to choose the third type of feedback. By the end of the experiment, only those subjects who received satisfactory ranking information continued to seek such feedback, while those who did not receive satisfactory ranking information tended to avoid seeking feedback. The research found that individuals with performance goals were more likely to seek feedback, as they valued it for improving performance; in contrast, achievers were more inclined to refuse feedback requests due to fear of exposing their shortcomings (Don VandeWalle, 2001).

5. Discussion of the Multiple Achievement Goal Model

Four models of multiple achievement motivations have been proposed, suggesting that the simultaneous pursuit of multiple goals can promote more positive learning behaviors (Harackiewicz et al., 1991).

5.1 Additive Goal Pattern

This model asserts that both mastery goals and achievement goals yield adaptive outcomes, including the use of cognitive strategies, positive attitudes toward tasks, and enhanced learning performance. Importantly, the adaptive effects of these two goals are independent and do not interact with one another.

5.2 Interactive Goal Pattern

Wentzel and Bouffard argue that reliance on a single objective does not yield optimal results; rather, the most favorable outcomes are achieved when both goals are employed. Midgley et al. have recently demonstrated that positive results are contingent upon elevated target levels.

5.3 Specialized Goal Pattern

This model posits that mastery goals and achievement goals exert distinct effects on various aspects of a task, and these two approaches are complementary (Antonio Valle et al., 2003). Although an individual may possess strong motivation to learn and actively engage in the learning process, relying solely on this motivational orientation can hinder satisfactory results unless there is also a desire to achieve good grades. A performance-oriented achievement goal positively predicts academic achievement but is not correlated with interest (Harackiewicz et al., 1997). Conversely, mastery goal orientation is positively correlated with interest but does not predict academic achievement. Consequently, the goal-specific model posits that mastery goals foster high intrinsic motivation, with scores approaching goals predicting high test scores, while achievement avoidance goals lead to both low intrinsic motivation and low test scores. Since mastery goals and achievement goals influence different outcomes, this model asserts that the benefits of pursuing multiple goals can only be realized when multiple outcome variables are examined simultaneously.

5.4 Selective Goal Pattern

The selective goal model emphasizes the individual's agency in goal selection, highlighting the cognitive evaluation process involved. This model argues that students do not pursue two types of goals simultaneously; instead, they adopt different goals depending on the context. By adapting their goals to suit various situations, students who can freely switch between goals gain a significant advantage. For example, they may aim for mastery in their daily studies but shift their focus to performance goals during exams.

Another critical aspect of the selective goal model is its assertion that achievement goals impact outcomes based on individual characteristics. While traditional researchers maintain that control over a goal can be achieved merely by establishing specific situations, Elliot et al. argue that this perspective neglects the individual's cognitive evaluation process. Researchers contend that mastery goal orientation is not universally adaptive (Bell & Kozlowski, 2002). They posit that a high mastery orientation is suitable for individuals with high ability but may not benefit those with lower ability. These findings suggest that there is no one-size-fits-all approach to enhancing the intrinsic interest of all students and that specific goals are effective for particular individuals. Thus, the selective goal model strongly supports the simultaneous pursuit of multiple goals. Learning goals and achievement goals typically coexist within an individual, with variations occurring among different individuals rather than within the goals themselves (Lian Rong et al., 2002). Individuals can hold multiple combinations of various goal orientations and levels (William Cron et al., 2001).

In summary, the selective goal model posits that the effects of different achievement goals vary across contexts and individuals. It is considered a synthesis of the additive, interactive, and specialized goal models, making it the most comprehensive framework. Recent studies further support this conclusion. Proponents of the selective goal model advocate for educators to implement multiple goal settings, enabling students to adjust their goals to find the optimal mode of adaptation based on the learning context and their individual circumstances.

6. Prospects for the Study of Achievement Goal Theory

In summary, future research on achievement goal theory should concentrate on the following areas:

6.1 Localization of Achievement Goals

Most research on achievement goal theory has originated in Western countries, raising questions about the cross-cultural applicability of the achievement goal model. Furthermore, studies in China primarily focus on primary and secondary school students, with limited attention given to college students. Therefore, the universality of the achievement goal model warrants further investigation. To address this gap, cross-cultural and cross-age longitudinal comparisons should be prioritized to examine the universality of achievement goals.

6.2 Empirical Studies on Learning-Avoidance and Social Goals

There is a notable lack of empirical studies on learning-avoidance goals and social goals, highlighting the need for further practical testing of these constructs.

6.3 Verification of Research Findings

Given the limited research results, it is essential to replicate and verify existing findings while also exploring the reasons for inconsistencies in research conclusions.

6.4 Integration of Paradigms

Various paradigms exist in studies supporting the selection of goal models. Most experimental studies utilize goal-setting methods while neglecting participant characteristics. Conversely, many related field studies rely on self-reported goals from participants without examining the influence of external goal-setting. Currently, it remains unclear whether goals possess stable traits akin to personality traits or if they fluctuate based on situational factors. Therefore, integrating experimental settings with self-reporting methods is crucial for future research, and the fundamental characteristics of goals should continue to be explored to identify intervention strategies that elicit specific goals in individuals.

6.5 Application of Achievement Goal Research

Strengthening the application of achievement goal-oriented research findings is imperative. Based on theoretical frameworks and experimental results related to achievement goals, it is necessary to integrate various disciplines and learning content, select appropriate variables, and conduct intervention research aimed at addressing specific challenges faced by students and teachers in educational practice. This approach will promote the integration of educational theory and teaching practice.

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Yan Gong was responsible for study conceptualization, writing, review and editing. Hua Li revised it.

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References

Ames, C., & Archer, J. (1988). Achievement Goals in the Classroom: Students' Learning Strategies and Motivation Processes. *Journal of Educational Psychology, 80,* 260-267. https://doi.org/10.24857/rgsa.v18n8-068

Ames, C., & Archer, J. (1992). Classrooms: Goals, Structures, and Student Motivation. *Journal of Educational Psychology, 84,* 261-271. https://doi.org/10 .1037/0022-0663.84.3.261

Bai, X.-J., Liu, X., & Liu, Z.-J. (2013). The Mediating Effect of Social Comparison Among Junior High School Students on the Relationship Between Achievement Goals and Academic Self-Efficacy. *Psychological Science, 6,* 1413-1420. https://doi.org/10.16719/j.cnki.1671-6981.2013.06.004

Barron, K. E., & Harackiewicz, J. M. (2001). Achievement Goals and Optimal Motivation: Testing Multiple Goals Models. *Journal of Personality and Social Psychology, 80,* 706-722. https://doi.org/10.1037//0022-3514.80.5.706

Bell, B. S., & Kozlowski, S. W. J. K. (2002). Goal Orientation and Ability: Interactive Effects on Self-Efficacy, Performance, and Knowledge. *Journal of Applied Psychology, 87*(3), 497-505. https://doi.org/10.1037//0021-9010.87.3.497

Butler, R. (1993). Effects of Task- and Ego-Achievement Goals on Information Seeking During Task Engagement. *Journal of Personality and Social Psychology, 65*, 18-31.

Chen, Lili. (2016). The Effect of Achievement Goal-Directed Feedback on the Learning Outcomes of Students with Different Efficacy Perceptions. *Nanjing Normal University.*

Chen, Song. (2011). A Study on the Motivational Effect of Achievement in Self-Regulated Learning. *East China Normal University*.

Dweck, C. S., & Leggett, E. L. (1988). A Social-Cognitive Approach to Motivation and Achievement. *Journal of Personality and Social Psychology, 54*, 5-12.

Elliot, A. J., & Harackiewicz, J. M. (1996). Approach and Avoidance Achievement Goals and Intrinsic Motivation: A Mediational Analysis. *Journal of Personality and Social Psychology, 176,* 628-644.

Elliot, A. J., Murayama, K., & Pekrun, R. (2011). A 3×2 Achievement Goal Model. *Journal of Educational Psychology, 103*(3), 632-648.

Graham, S., & Golan, S. (1991). Motivational Influences on Cognition: Task Involvement, Ego Involvement, and Depth of Information Processing. *Journal of Educational Psychology, 83,* 187-194.

Harackiewicz, J. M., Barron, K. E., Carter, S. M., Letho, A. T., & Elliot, A. J. (1997). Predictors and Consequences

of Achievement Goals in the College Classroom: Maintaining Interest. *Journal of Personality and Social Psychology, 73*(6), 1284-1295.

Jiang, J.-C., & Liu, H.-S. (2004). A Review of the Relationship Between Achievement Goal Orientation, Learning Strategies, and Academic Performance. *Psychological Science, 27*(1), 168-170. https://doi.org/10.16719/j.cnki.1671-6981.2004.01.049

Jiao, C. (2017). The Relationship Between Academic Self-Efficacy, Achievement Goals, and Achievement Motivation of Secondary Vocational Students. *Tianjin Normal University.*

Lei, L., & Wang, L. (2001). The Role of Goal Orientation in Self-Regulated Learning. *Acta Psychologica Sinica, 04*, 349-353.

Li, J., & Xu, B.-H. (2007). The Relationship Between Goal Orientation, Learning Strategies, and Academic Performance in Junior High School Students. *Studies of Psychology and Behavior, 03*, 199-203.

Li, X.-D., & Zhang, B.-S. (2001). The Relationship Between Achievement Goals, Social Goals, Self-Efficacy, Academic Performance, and Academic Help-Seeking. *Psychological Science, 24*(1), 54-58. https://doi.org/10.16719/j.cnki.1671-6981.2001.01.015

Li, X.-D., Lin, C.-D., Nie, Y.-Y., & Pang, A.-L. (2003). Classroom Goal Structure, Personal Goal Orientation, Self-Efficacy, and Value and Academic Self-Hindrance. *Psychological Science, 26*(4), 590-594. https://doi.org/10.16719/j.cnki.1671-6981.2003.04.004

Lian, R., Shi, W., & Meng, Y.-F. (2002). Research on the Relationship Between High School Students' Goal Orientation and Mental Health Status. *Psychological Development and Education, 1*, 67-70.

Liang, G.-S. (2002). Research on the Development Characteristics of Primary and Secondary School Students. Beijing: Master's thesis, *Capital Normal University.*

Linnenbrink, E. A., & Pintrich, P. R. (2002). Achievement Goal Theory and Affect: An Asymmetrical Bidirectional Model. *Educational Psychologist, 37*(2), 69-78. https://doi.org/10.1207/S15326985EP3702_2

Liu, H.-H., & Zhuang, M.-K. (2004). Multiple Objective Theory of Achievement Motivation. *Studies of Psychology and Behavior, 2*(2), 474-478.

Liu, H.-J., & Guo, D.-J. (2003). A Study on the Relationship Between Pre-Test Anxiety, Achievement Goals, and Test Scores. *Psychological Development and Education, 02*, 64-68.

Liu, J.-X., Xin, T., Huang, G.-Q., & Shen, J.-L. (2000). Research on the Relationship Between Learning Motivation, Learning Strategies, and Academic Performance of Middle School Students. *Educational Theory and Practice, 20*(9), 54-58.

Midgley, C., & Urdan, T. (2001). Academic Self-Handicapping and Achievement Goals: A Further Examination. *Contemporary Educational Psychology, 26*(1), 61-75.

Nicholls, J. G. (1984). Achievement Motivation: Conceptions of Ability, Subjective Experience, Task Choice, and Performance. *Psychological Review, 91*, 328-346.

Nolen, S. (1988). Reasons for Studying: Motivational Orientations and Study Strategies. *Cognition and Instruction, 5*, 269-287. https://www.jstor.org/stable/3233573

Peng, Q.-F., & Li, X.-W. (2004). Development and Prospect of Dweck's Achievement Goal Orientation Theory. *Advances in Psychological Science, 12*(3), 409-415.

Pintrich, P. R., & Duncan, T. (1991). Student Goal Orientation and Self-Regulation in the College Classroom. *Advances in Motivation and Achievement.*

Shen, B.-D. (2021). Research on the Relationship Between Learning Motivation, Achievement Goal Orientation, and Self-Regulation of Secondary Vocational Students. *Central China Normal University.*

Shi, K., Wang, W.-Z., Sun, J., & Maehr, M. (1995). A Preliminary Study on Students' Adaptive Motivation Model. *Psychological Development and Education, 1*, 8-13.

Shi, L.-S., Chen, Y.-M., Hou, X., & Gao, F.-Q. (2013). The Relationship Between Family Socioeconomic Status and Learning Engagement: The Mediating Role of Academic Self-Efficacy. *Psychological Development and Education, 01*, 71-78. https://doi.org/10.16187/j.cnki.issn1001-4918.2013.01.006

Valle, A., Ramon, G. C., Jose, C. N., Julio, G. P., Susana, R., & Isabel, P. (2003). Multiple Goals, Motivation, and

Academic Learning. *British Journal of Educational Psychology, 73*(1), 71-87.

Vandewalle, D. (2001). Goal Orientation: Why Wanting to Look Successful Doesn't Always Lead to Success. *Organizational Dynamics, 30*(2), 162-171.

Wang, W.-Z. (1996). Goal System of Students' Achievement Motivation. *Psychological Science, 19*, 207-210. https://doi.org/10.16719/j.cnki.1671-6981.1996.04.004

Wang, Y.-F. (2002). Research on the Achievement Goal Orientation of Enterprise Employees. Beijing: Ph.D. dissertation, *Chinese Academy of Sciences.*

William, C., John, W. S., & Vande Walle, D. (2001). The Role of Goal Orientation Following Feedback. *Journal of Applied Psychology, 86*(4), 629-634.

Yesim, S., & Ali, Y. (1999). Relationship Between Achievement Goal Orientations and Use of Learning Strategies. *Journal of Educational Research, 92*(5), 267-278.

Yngvar, O. (2001). Self-Handicapping Strategies in Physical Education Classes: The Influence of Implicit Theories of the Nature of Ability and Achievement Goal Orientation. *Psychology of Sport and Exercise, 2*(3), 139-156.

Zhang, Y.-M., Guo, C.-Y., & Fang, P. (2001). Situational Experimental Research on Achievement Goal Classification. *Psychological Science, 24*(1), 22-25. https://doi.org/10.16719/j.cnki.1671-6981.2001.01.006