

Psychological Education and Academic Development: Evidence on Student Motivation from the Perspective of Self- Determination Theory

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Abstract. This study examines the role of psychological education in promoting academic development among first-year students at vocational colleges from the perspective of Self-Determination Theory (SDT). A questionnaire survey was administered to collect data from two cohorts of vocational students (n = 127) enrolled in E-commerce and Financial Services and Management programs. The study investigated their learning motivation, challenges, and coping strategies through qualitative analysis. The instrument assessed students' learning states, motivational fluctuations, perceived challenges, coping strategies, sources of external support, and career identity. Data analysis employed both quantitative coding and qualitative thematic analysis. Findings indicate that students exhibiting higher levels of autonomy, competence, and relatedness demonstrated greater engagement in academic development and adapted more effectively to the university environment. Conversely, a significant number of students expressed confusion, lack of motivation, or disengagement from learning, underscoring the necessity for targeted psychosocial interventions. Grounded in pragmatism, this study contributes to the understanding of how psychosocial education can addresses motivational deficits and promotes students' sustainable academic development.

Keywords: psychosocial education, pragmatism, self-determination theory, academic development, higher education

1. Introduction

In recent years, a growing emphasis on students' holistic development has led to the increasing prevalence of psychological education in primary, secondary, and higher education institutions as a strategy for enhancing emotional well-being and alleviating academic stress. Research has confirmed that approaches grounded in Self-Determination Theory (SDT), it can address students' motivational deficits by satisfying needs for autonomy, competence, and relatedness. However, current research predominantly focuses on the direct impact of psychological education on academic performance or remains confined to the level of emotional regulation. Empirical exploration of how psychological education influences the dynamic processes of student academic development—such as stimulating learning motivation and fostering adaptive learning strategies—remains scarce. A systematic analysis of 'process-oriented academic development' is particularly lacking, leaving the

underlying mechanisms that link psychological education to academic growth incompletely understood and thus creating a critical research gap.

Psychoeducation is gaining increasing attention as a strategy to enhance emotional well-being and academic growth. Rooted in Self-Determination Theory (SDT), psychoeducation addresses motivational deficits by fulfilling three fundamental psychological needs: autonomy, competence, and relatedness [1]. Nevertheless, empirical evidence specifically examining how psychoeducation influences students' academic development—as opposed to merely academic achievement—remains limited. This study, therefore examines the associative mechanisms between psychological education and student academic development. Specifically, it investigates how fulfilling these three fundamental psychological needs through psychological education enhances students' engagement and adaptability during learning processes, thereby addressing the empirical evidence gap regarding process-oriented academic development. The research employs survey questionnaires to analyze student academic development data. The findings are expected to provide practical insights for psychological educators and offer guidance for future research on psychological education in relation to academic development.

2. Literature review

Self-Determination Theory (SDT) provides a robust theoretical framework for analyzing student motivation and patterns of academic development. The theory posits that autonomy, competence, and relatedness are three fundamental psychological needs. When these needs are met, they foster intrinsic motivation and engagement; conversely, their frustration leads to diminished motivation and reduced learning participation [1]. Further research confirms that autonomy-supportive teaching enhances engagement, while learning environments that are both intrinsically goal-oriented and autonomy-supportive improve student learning outcomes, academic performance, and long-term persistence [2,3].

Within educational practice, SDT has been widely applied to guide pedagogical reforms. In the Chinese context, Shi has made a particularly influential contribution by advocating for career mental health curriculum reform grounded in Self-Determination Theory [4]. She argues that psychological education should not remain marginalized but be redesigned to actively cultivate autonomy, enhance competence, and foster relational support, thereby linking mental health to students' holistic development. This approach shifts the focus of psychological education from a remedial role to an active one in academic growth. Additionally, Han and Li propose that activation strategies can promote deep learning by stimulating intrinsic motivation, while Li and Mo emphasize the role of digital and personalized interventions in supporting adolescents' physical and mental health [5,6]. These studies demonstrate the diverse applications of Self-Determination Theory in educational reform and innovation.

Despite the existing research fully acknowledging the significance of SDT-guided psychological education for student development, notable gaps persist. While these studies affirm the pivotal role of SDT-based psychological education in student development, most tend to focus on specific interventions, mental health, or career identity. Few studies explicitly analyze how SDT-based psychological education systematically promotes academic development based on empirical evidence. To address this gap, this research will explore how psychological education enhances students' learning motivation and adaptability, adopting an empiricist approach to connect SDT-based psychological education with the practical realities of student development.

3. Methods and methodology

This study employed a survey-based approach to explore the role of psychological education in promoting academic development, thereby investigating the influence of Self-Determination Theory (SDT) on students' academic growth. The research sample comprised 127 first-year students from vocational colleges, drawn from programs in E-commerce and Financial Services and Management programs. The survey focused on multiple dimensions of academic development, including students' perceived learning states, motivational fluctuations, academic challenges, coping strategies, external support (from family, teachers, and peers), career identity, and environmental influences such as the classroom and campus atmosphere. The questionnaire items were designed around several core dimensions of academic development. These included: students' perceived learning states (e.g., enthusiasm for classroom participation, frequency of self-directed learning), motivational fluctuations (e.g., changes in learning drive during the semester and their causes), academic challenges (e.g., difficulties with course content or time management), coping strategies (e.g., proactively seeking help or adjusting study plans when encountering difficulties), external support (encouragement from family, guidance from teachers, peer assistance, and its effectiveness), career identity (level of recognition for their major and future career expectations), as well as environmental factors like classroom interaction atmosphere and the provision of school psychological services. The questionnaire incorporated both closed-ended items (e.g., 5-point Likert scales) and open-ended questions (e.g., "Describe your most significant recent academic challenge"), a design intended to balance quantitative data with qualitative insights.

This study adopted an empiricist methodology, emphasizing objective, measurable, and generalizable findings. This approach reveals patterns and mechanisms of how SDT-based psychological education influences academic development through the coding and quantification of student responses. Such an approach systematically examines survey data, reduces subjectivity, and ensures findings reflect broader trends rather than isolated cases [7]. Concurrently, open-ended questions provide supplementary qualitative insights, which help to contextualize quantitative results (e.g., identifying specific triggers for motivational fluctuations from student narratives). Data analysis further integrated SDT's three core needs to systematically examine relationships among motivational states (e.g., the strength of intrinsic motivation), psychological support (e.g., the adequacy of autonomy support), and aspects of academic development (e.g., challenge-coping abilities) as reported by students. This process provided empirical evidence for the mechanisms through which psychological education influences academic growth.

4. Results and discussion

This study analyzed questionnaires completed by 127 first-year vocational college students. The following findings, derived exclusively from valid responses, reveal students' perspectives on academic development, motivational states, coping strategies, external support, career identity, and perceptions of the learning environment. Using empirical methods, researchers subjected the questionnaire data to coding and quantitative analysis to identify group-level patterns, providing empirical support for interpreting students' learning trajectories through Self-Determination Theory (SDT).

From an SDT perspective, autonomy serves as a crucial driver of academic growth [1]. The survey revealed that approximately 31% of students used positive terms such as "perseverance" and "effort" to describe their learning state. They generally demonstrated higher autonomy and perceived control over their learning, which in turn was associated with greater resilience and

academic engagement. However, about 33% of students described their learning experiences using terms such as "confusion" and "helplessness", indicating unmet autonomy needs that led to diminished learning motivation. Another 37% of students exhibited neutral states, indicating fluctuating motivation quality. This finding is consistent with Shi's conclusion that traditional mental health courses in Chinese vocational colleges often fail to effectively stimulate students' intrinsic motivation [4]. Consequently, curriculum reform should integrate autonomy-supporting practices to help students develop a sense of self-determination during the learning process.

A sense of competence is another key factor in SDT. The survey found that nearly 49% of students perceived course difficulty as their primary challenge, while 24% cited unclear career planning, and 6% admitted to lacking interest. Notwithstanding these difficulties, 70% of students reported employing adaptive coping strategies, such as adjusting study plans or seeking help from teachers and peers. In contrast, only 2% adopted maladaptive coping strategies like avoidance or disengagement from learning. SDT posits that competence support enhances intrinsic motivation, thereby sustaining student engagement [1]. This corroborates Jang et al. findings, which demonstrated that combining autonomy support with structured guidance strengthens students' sense of competence and promotes sustained participation [2]. Similarly, Han and Lee emphasized in their study of Chinese engineering education that cognitive activation teaching enhances intrinsic motivation by cultivating competence [5]. Beyond SDT, Schun(Schunk) and DiBenedetto also highlighted self-efficacy as a mediator between perceived competence and academic persistence, suggesting that psychological education should not only address immediate challenges but also systematically cultivate students' self-efficacy—their belief in their capacity for success [8]. From an empiricist perspective, the high proportion of students adopting adaptive strategies indicates that psychological education can effectively leverage group-level trends. Conversely, the minority opting for avoidance strategies reflects a vulnerable group within the learning environment, one that necessitates targeted interventions.

Relatedness, a crucial dimension of SDT, manifests primarily through interpersonal relationships, career identity, and environmental factors—all of which play pivotal roles in learning motivation. Surveys reveal that 80% of students cited family encouragement as their primary motivator, while others mention reliance on teacher feedback or peer influence. This is consistent with Niemiec and Ryan, who noted that a sense of relatedness enhances learning engagement [9]. Wentzel similarly emphasized the importance of supportive relationships for academic motivation [10]. In terms of career identity, approximately 80% of students held positive attitudes toward their majors and expressed optimism about their futures, while 19% were neutral and only 1% were dissatisfied. Students with strong identity demonstrated greater resilience and engagement, resonating with Li's assertion that internalized motivation is crucial for students preparing to enter the labor market [11]. Within the Self-Determination Theory (SDT) framework, career identity reflects the integration of extrinsic goals and intrinsic values, which is key to sustaining long-term motivation. Regarding environmental factors, 63% of students affirmed the positive impact of classroom atmosphere and its management. This finding corroborates Vansteenkiste et al. conclusion that supportive environments promote learning persistence and is also consistent with Chen and Hu's research on curriculum reform enhancing adaptability [3,12]. Skinner et al. further indicated that classroom emotional climate predicts student engagement trajectories, suggesting that institutional reforms should prioritize relational and motivational support [13].

Overall, the findings provide robust validation for the assertions of Self-Determination Theory (SDT): autonomy, competence, and relatedness are critical for academic development. Students with higher satisfaction in these three domains demonstrated stronger engagement and adaptation,

whereas those with unmet needs exhibited signs of confusion, helplessness, or disengagement. Employing an empiricist framework, this study systematically quantified student experiences, thereby translating individual perceptions into measurable patterns. For instance, the finding that nearly one-third of students reported motivational confusion is not an anecdotal observation but a statistically significant indicator of systemic gaps in current educational practices. Moreover, SDT provides a robust theoretical framework for interpreting motivational dynamics, while empiricism ensures that empirical evidence can guide policy and practice. Together, they point to the necessity of redesigning psychological education to enhance autonomy, foster competence, and build relatedness, in order to promoting sustainable academic development.

5. Conclusion

This study investigated how autonomy, competence, and relatedness, as conceptualized within Self-Determination Theory (SDT), influence the academic development of first-year vocational college students. Analysis of data from 127 freshmen revealed significant variations in learning motivation. While approximately one-third of students demonstrated strong learning motivation, while others reported feeling “confused” and experiencing motivational fluctuations. Nevertheless, the study found that the majority of students adopted constructive strategies, such as adjusting study habits or seeking support, although a small group exhibited avoidance or withdrawal.. Family encouragement, teacher feedback, peer influence, and career identity further fostered sustained learning engagement. Findings indicate that the fulfillment of autonomy, competence, and relatedness promotes positive coping strategies and sustained engagement among first-year vocational students. Conversely, insufficient support for these needs was associated with motivational confusion and behavioral withdrawal. Furthermore, this study demonstrates the value of an empiricist approach in translating individual experiences into group-level patterns. This, in turn, enables educators and policymakers to identify areas most in need of support and develop evidence-based interventions. Psychopedagogy should be viewed not merely as a remedial tool but as an active driver of academic development and a vital force for propelling student learning progress. Grounded in self-determination theory, students exhibit greater autonomy when afforded more choices and opportunities for expression in the classroom. They develop a greater sense of competence when teachers provide clear, timely feedback. Similarly, they experience a greater sense of belonging when positive peer relationships and supportive teacher-student networks are established. Consequently, students who are initially unmotivated can gradually shift from passive to active engagement, thereby sustaining their commitment to learning and achieving better academic outcomes. Future research could employ longitudinal designs or mixed-methods approaches to further explore how psychological education sustains learning motivation across diverse educational settings.

This study is subject to several limitations: First, the sample was drawn exclusively from two programs at a single vocational college, which limits its size and scope. This may restrict the generalizability of conclusions and hinder comprehensive reflection of academic motivation patterns among students from different regions and types of vocational institutions. Second, the cross-sectional survey design captured only students' academic status and psychological perceptions at a single point in time, thereby failing to track the dynamic changes in motivation and academic development over time. This limits the ability to ascertain the long-term effects of psychological education on academic performance. Third, data collection relied exclusively on student self-report questionnaires. Although the questionnaire's reliability and validity were established, subjective biases (such as cognitive distortions regarding self-motivation or social desirability bias) may still

exist. The study lacked supplementary validation from objective data sources like classroom observations or teacher evaluations. Given these limitations, future practice should aim to integrate psychological education with rigorous empirical research. Such an approach can provide educators with actionable strategies and robust evidence to support students in achieving stable and sustained academic development.

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