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Examining the Mediating Role of Self-Efficacy in the Relationship between Study Engagement, Professional Commitment, and Study Burnout among Private Undergraduate Students in China

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Abstract

This study examines the complex interactions among Chinese undergraduate students between study engagement, professional commitment, self-efficacy (SE) and study burnout. 100 undergraduate students in total were chosen at random to serve as research subjects. The Academic SE survey, the Learning Engagement Scale and the Learned Burnout Scale was used to examine the samples. SPSS version 26.0 was used to analyze the findings. The results highlight the function that SE plays as an intermediary and highlight the significance in preventing or escalating student study burnout. The research reveals complex relationships between increased degrees of professional dedication as well as study engagement and improved SE, which serve as a buffer towards the detrimental effects of study burnout. These revelations advance the knowledge of the psychological processes behind academic success and student well-being in higher education institutions. There is a discussion of the implications for educational policy and practice, with a focus on the value of encouraging SE and techniques for developing productive learning environments that support students' achievement and well-being.

Keywords: *Self-Efficacy, Study Engagement, Study Burnout, Undergraduate Students, Professional Commitment*

1. Introduction

Studying is a crucial aspect of college life and the primary responsibility of students. Generally speaking, academic and policy circles give growing consideration to the educational growth of students at colleges [1]. The Ministry of Education issued statistics indicating that by 2020, 28 percent of China's population will be enrolled in college, numbering 41.83 million. These university students are the driving force behind China's modernization and talent-driven development plan as well as their education has some bearing on the calibre of talent that China will produce in the future [2]. Examining psychological factors in educational settings can assist in enhancing comprehension of students thought processes at school, as well as promoting specific behavioural characteristics that play a significant role in shaping their adult personalities [3]. While the majority of students pass through this phase of their education without experiencing significant problems with their personal or academic growth, some can experience feelings and thoughts that cause them to lose interest in attending class and become school dropouts [4]. This is the outcome of environmental, personal and skill and/or strategy-related factors as well as a lack of ability to meet academic objectives. Promoting student well-being

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and academic achievement in higher education requires an awareness of the variables that affect student engagement, professional commitment and burnout. Engagement in the learning process is a crucial metric for assessing students' work [5]. College students who experience study burnout have a pessimistic mind-set and behaviour that stems from either a lack of enthusiasm in studying or excessive study pressure. There is a strong correlation between learner fatigue and educational participation [6]. SE is a dispersed attribute that is based on an individual's opinion of their abilities in particular situations [7]. It has been connected to a number of beneficial company results, such as improvements in productivity. In the context of education, SE describes the subject's confidence in their ability to learn and finish a task. It is a crucial factor in determining the student's capacity to adjust to new circumstances [8]. Thus, SE functions as a self-control mechanism that influences a student's behaviour in the classroom and decisions made in response to outside circumstances. Academic achievement and the student's behaviour also have an impact on SE [9]. Academic SE can be used to predict other variables like motivation, perseverance, commitment and interest in learning, as well as school performance. Academic SE is rarely utilized as an independent variable in studies on the mechanisms of influence; instead, it is employed as a mediating variable for other factors affecting academic accomplishment. Academic self-efficacy, which can be SE is a necessary subset of educational conviction and confidence in one's capacity to succeed in academic endeavours. It shows how the student views their chances of succeeding or failing on assignments linked to their learning. It consistently shows promise as a predictor of academic success [10]. The study [11] investigated the associations between psychological capital (PsyCap) and engagement as well as those between academic achievement, frustration and burnout among undergraduates. The significance of PsyCap and study in both groups expands on involvement as possible predictors of university students' efficiency, fatigue and boredom. Based on the results, it is possible to develop therapies that protect students from monotony and exhaustion while enhancing their educational achievement and engagement with learning by increasing their levels of optimism, hope, self-efficacy and resilience. The research [12] investigated how students' performance is influenced by their psychological health, affective commitment and self-efficacy. The study's findings indicate that emotional commitment among students is a major factor in performance at public colleges, but SE has no bearing on academic achievement. Additionally, the findings suggest that psychological health is a significant predictor of academic achievement in students. The investigation [13] attempted to examine the links between educator burnout, regulating emotions, resiliency and SE. The study's conclusions provided important new data. The resilience and self-efficacy of teachers showed a clear and negative correlation with teacher burnout. A significant result showed that the relationship between teacher exhaustion and handling emotions was mediated by teacher resilience, with the former influencing that group. The study [14] examined the significance of self-efficacy in examining the post-epidemic psychological fortitude and isolation of college students. The findings indicate that: psychological resilience is positively impacted by self-efficacy, psychological resilience is negatively impacted by loneliness and psychological resilience and loneliness are significantly influenced by self-efficacy. The research [15] investigated at how students studying tourism, hospitality and heritage management believe about their academic self-efficacy, dedication to their careers and quality of education. The results of the study showed a favourable correlation between students' commitment to a career in the field and their perceptions of the quality of their education along with their academic self-efficacy. The investigation [16] utilized the sub-dimensions of Viewed Limitations, in particular, can promote learning participation and self-efficacy. They looked at how SE moderated the relationship between educational participation and impressions of restriction.

To increase engagement and self-efficacy, learners, educators and administrators should consider the environment's levels of rehabilitative excellence, according to the study's findings. The study [17] intended to investigate how learning fatigue affects university students' online English learning experiences. Through an extensive inquiry survey, the study used the technique of structural equation modelling to examine the connections among academic confidence, instructor psychological assistance and the English online learning exhaustion in university students. This allows for the analysis and summarization of the ways in which they affect pupil satisfaction with online learning. The study's conclusions demonstrate that academic self-efficacy (ASE) mediates the relationship between students' English online learning burnout (EOLB) and educational satisfaction that modifies the teacher emotional support (TES) relationship. These relationships ultimately affect how students' online learning effect is expressed in areas like behaviour, cognition and emotion. The research [18] examined the possible mediation role of SE in the endurance and educational achievement link. The results of the study demonstrated a direct correlation among academic performance, SE and perseverance. The connection among academic success and resilience has been found to be mediated by self-efficacy, which helps to explain why adolescents tend to behave in adaptive ways. Practical ramifications for educational policies stem from these findings. The study [19] investigated the mediating roles of academic SE and perceived school climate (PSC) to examine the associations among undergraduates' achievement goal orientation and "academic engagement (AE)". The findings demonstrated a strong chain mediating effect of PSC and ASE, wherein AE was positively predicted for both target orientations. This study addresses the implications for future research and emphasizes the role that both personal and environmental factors play in supporting self-regulated learning among university students.

Numerous empirical studies have really revealed a mediocre connection among scholastic achievement and intellectual SE, so further research is required to determine the exact processes by which academic SE influences academic achievement. This study aims to explore the complex connection among Chinese undergraduate students between study engagement, professional dedication and study burnout. In particular, it explores how these linkages are shaped by the mediating function of SE, or the conviction that one is capable of succeeding in particular circumstances. This study aims to offer important insights into the psychological mechanisms underlying the experiences of private undergraduate students in China by investigating how SE influences the links between study engagement, professional dedication and study burnout. These understandings can help educators, administrators coupled with legislators to create focused interventions and support networks that will improve the academic performance as well as general well-being of students in this situation.

2. Materials and Methods

Undergraduate students of china were chosen at random to serve as study subjects. The College Individuals Learning Participation Scale, the Educational Fatigue Scale and the Educational SE questionnaires were used to examine the examples and the findings were analyzed. Survey questionnaires were used for collecting data, 120 questionnaires were distributed and 80 of the questionnaires were considered incomplete as well as they were eventually excluded, leaving 40 valid questionnaires in the final sample. Thus, 100 Chinese college students (48 men and 52 women, age: $M=18.99$, ranging from 17 to 27 years) constituted the final group of participants. Only those individuals who agreed to take part in the poll voluntarily are enrolled in the study. These were the requirements to be excluded: identified as having a cognitive disability or a severe mental disorder.

3. Procedure

The purpose of this self-developed questionnaire was to gather demographic data about the students, such as age and gender, as well as academic data like grades and college majors. The questionnaire was approved and modified to make sure the inquiries are relevant to the investigation at hand. The Likert scale included five points: 1 for "Strongly Disagree," 2 for "Disagree," 3 for "Neither Agree nor Disagree", 4 for "Agree" and 5 for "Strongly Agree" for all topics. Table 1 displays the dataset description.

Table 1: Dataset Description.

Demographic variable	Gender		Total (100)
	Male (48)	Female (52)	
Major			
Science and engineering	12	18	30
The liberal arts	18	14	32
skill	18	20	38
Scores ranking			
Below 20	12	15	27
20-40%	8	4	12
40-60%	11	7	18
60-80%	12	12	24
80-100%	9	10	19
Family location			
Cities and towns	20	30	50
Rural	27	23	50
Whether the only child or not			
Not the only child	32	25	57
The one-child	20	23	43
Class leader experience			
The class haven't been	28	18	46
The class have been	24	30	54

A 20-item learning burnout measure for college students was created, with each question falling into one of three categories: low self-esteem, improper behaviour and depressing mood. A five-point Likert rating system was employed. The degree of learning burnout increased with increasing score. The 12 questions on the Students' Learning Engagement Scale are organized down into three categories: inspiration, vitality and focus. The Likert scoring system with five points is used. The degree of learning engagement increases with increasing score. The academic SE measure for undergraduate students was created and it was separated into two categories: learning capacity and academic behavioural SE. There were eleven questions in total for each dimension. A 5-point Likert scale was employed for grading, the bigger the score, more significant the confident people feel about their academic abilities.

4. Statistical Analysis

SPSS version 26.0 was utilized for data compilation and analysis. This study examines the association among using statistical analysis, correlation analysis, descriptive data, a separate

sample T test, mediating impact test along with the one-way analysis of variance, involvement in learning, academic self-efficacy, vocational dedication and educational burnout in students.

5. Result and Discussion

i. Correlation Analysis

Table 2 displays the results of the descriptive statistics and correlation analysis for each variable. The findings demonstrate a substantial correlation between learning exhaustion, involvement in learning and academic self-confidence.

Table 2: Correlation Outcomes.

Factors	M + / - SD	Learning exhaustion	Involvement in learning	Academic self-confidence
Learning exhaustion	80.158 + / - 18.391	1.000	-	-
Involvement in learning	75.257 + / - 11.059	0.703 **	1.000	-
Academic self-confidence	55.152 + / - 14.632	0.915 **	0.635 **	1.000

P < 0.01

Learning engagement and academic SE have a strong positive connection; Academic SE and learning burnout are significantly correlated with one other and as the case with learning participation and development burnout have a significant negative correlation. Correlation analysis results indicated that academic SE, involvement in learning as well as learning exhaustion was appropriate candidates for mediating effect study. The findings of this correlation analysis show a substantial negative connection among learning exhaustion and college students' commitment to their studies.

ii. Independent -T-test

Using an independent-T test, this study examined how college students' degrees of burnout and involvement in learning varied according to several demographic parameters. Table 3 presents the findings of the T-test.

Table 3: Outcomes of the T-Test.

Features	Inspiration	Power	Engagement	Total learning engagement	
Gender	Male (48)	27.12 + / - 5.34	25.21 + / - 6.52	24.52 + / - 6.25	83.25 + / - 19.85
	Female (52)	28.21 + / - 6.21	27.25 + / - 6.51	22.52 + / - 5.21	78.82 + / - 16.53
	<i>t</i>	1.52	3.28	3.52	2.43
	<i>sig</i>	.24	.00	.03	.01
Home place	Rural (50)	27.02 + / - 6.32	24.22 + / - 5.06	20.90 + / - 5.40	78.58 + / - 14.82
	Cities and towns (50)	31.56 + / - 5.34	27.82 + / - 6.98	21.89 + / - 4.31	79.52 + / - 14.05
	<i>t</i>	1.85	1.03	1.83	2.83
	<i>sig</i>	.02	.03	.10	.03
Class positions	The class cadre (46)	32.57 + / - 6.57	26.20 + / - 7.54	27.82 + / - 6.24	79.13 + / - 18.42
	Not The class cadre (54)	27.43 + / - 5.18	28.32 + / - 8.56	21.02 + / - 4.82	78.40 + / - 16.80
	<i>t</i>	1.80	2.05	1.90	2.84
	<i>sig</i>	.01	.03	.07	.02

According to the findings, there are variations in college students' degrees of exhaustion and learning involvement based on factors such as race, familial area, class standing, level of education and party affiliation. Gender-wise, boys outperformed girls in terms of energy, focus and overall study involvement. In comparison to college students from cities and towns, at home, rural learners do much worse in every one of the characteristics of motivation, power and total involvement in learning. In general, introverted students and those living in rural areas have weak communication skills, are afraid to speak about their education and often do not dare to ask questions, which results in learning challenges and blind learning. Over time, a negative attitude toward learning becomes more apparent as learning burnout rises and learning engagement declines. College students who lead their classes in this capacity are motivated, energized and focused. In terms of learner engagement and components, students managing classes score substantially higher than non-class leaders. As instructors, they must have stronger coordinating, expressive and organizational skills, all of which can slightly enhance their students' learning capacities.

iii. Mediating Effect Test

In the academic setting, the relationship between SE and achievement can be mediated by learner engagement. The representation of the factors is shown in Figure 1.

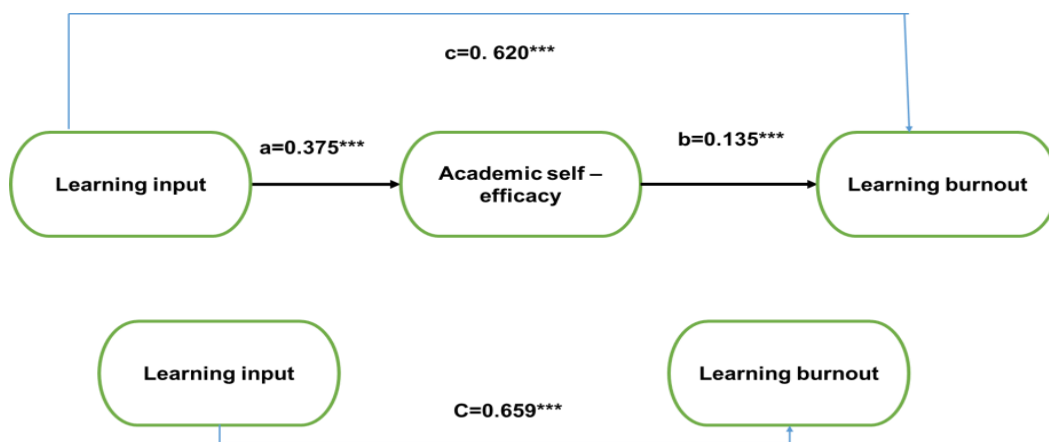


Figure 1: Mediating Effects of Factors.

Table 4 demonstrates that the mediating effect test's hypothesis is supported by a significant pair wise association between learning engagement, scholastic SE and educational burnout.

Table 4: Mediating Test Outcomes.

Factors	Method 1 Y = 0. 659 XX		Method 2 M = 0. 375 XX		Model 3 Y = 0.620 XX 0.127 XM	
	β .	t	β .	t	β .	t
Learning input	.659	25.536 ***	0.375	13.593***	.590	18.253***
SE	-	-	-	-	.135	2.154***
R ²	.635		.031		.058	

Method 1 indicates that $Y = -0.635 \times X$ is the linear regression equation connecting learning engagement with discovering fatigue, with a significant regression coefficient (C). Thus, academic SE is partially predicted by learning engagement. The second approach shows that the regression coefficient is significant and that the equation connecting involvement in

studying for intellectual SE. As a result, academic self-efficacy and educational interest are correlated. The third approach indicates that academic SE has a significant regression coefficient B and a predictive influence on learning burnout with confidence in school included as an intermediary factor.

iv. Variance Test

The degree of depression and educational engagement in college students was investigated using uni-variance analysis of variance. Table 5 depicts the outcomes of variance test.

Table 5: Outcomes of Variance Test.

Factors	Categories	Average	SD	F	Significant
Inspiration	Below 20%	28.52	7.25	9.89	0.00
	20- 40%	25.25	4.52	-	-
	40- 60%	23.72	6.59	-	-
	60-80%	31.32	6.32	-	-
	80-100%	33.61	6.52	-	-
Vitality	Below 20%	23.71	9.52	9.98	0.00
	20-40%	23.82	6.24	-	-
	40-60%	25.62	7.21	-	-
	60-80%	27.12	7.15	-	-
	80-100%	30.21	7.01	-	-
Concentrate	Below 20%	19.81	7.12	9.01	0.00
	20-40%	21.52	5.01	-	-
	40-60%	21.52	5.24	-	-
	60-80%	23.81	6.01	-	-
	80-100%	23.81	5.26	-	-
Overall burnout	Below 20%	64.21	18.25	22.58	0.00
	20-40%	65.82	11.52	-	-
	40-60%	59.82	13.21	-	-
	60-80%	53.56	12.89	-	-
	80-100%	48.21	12.02	-	-
Low sense of accomplishment Inspiration	Below 20%	19.81	4.05	-	-
	20-40%	18.89	4.01	-	-
	40-60%	17.21	5.01	-	-
	60-80%	16.35	4.25	-	-
	80-100%	14.89	4.02	-	-

According to this study, academic SE among college students plays a partially intermediate discovering along with burnout's relationship. It also suggests that providing students with solid pathways to actively taking actively in the educational process could encourage progression in learning, increase their sense of accomplishment and self-worth, and strengthen their academic self-efficacy, which in turn generates positive feedback and increases their investment in learning. Additionally, because these students are more motivated to learn, they are less likely to develop learning burnout.

6. Conclusion

Research revealed that there is a significant mediate outcome of learning engagement on the connection among academic success and academic SE, learning commitment was found to have a significant mediation impact on the association among academic achievement, self-

confidence in the classroom and educational commitment. Enhancing the degree of involvement in learning is a novel way to lower learning exhaustion and increase SE. This research will offer a solid theoretical foundation for college and university classroom improvement. The current study's findings increase the understanding of learning engagement and provide guidance for the creation of interventions aimed at enhancing college students' academic performance by illuminating the process through which their academic SE affects their academic achievement. Administrators in colleges and universities should fully recognize and value the unique characteristics of each student, assist students in creating realistic learning objectives, place more emphasis on process evaluation as well as enhance the comprehensive evaluation system to maximize each student's abilities and encourage academic SE over time. Universities should facilitate two-way communication between instructors and students to raise students' knowledge of self-directed learning that encourage greater initiative.

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