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# Internship Experiences and Self-Efficacy Development in Chinese College Students: A Comprehensive Analysis

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## **Abstract**

*Internships play a crucial role in integrating academic knowledge with practical application in the ever-changing field of modern education. This research investigates the factors that determine college students' (CS) desire towards entrepreneurship by analyzing the developments behind student internships influence the effects of student entrepreneurial attitude (SEA), objective norms (ON), actual behavioral responsibility (ABR), entrepreneurial studies (ES), and entrepreneurial self-efficacy development (ESD) on college students' mindset to start their businesses. Total of 525 genuine responses acquired from the survey were analyzed using SPSS. The analysis included multiple linear regression analysis, regulation and slope assessment. The results indicate that SEA, ON, ABR, ES and ESD positively influence college students' self-efficacy perspectives. The examination of regulation and slope indicates that Internship development (ID) reduces the impact of SEA, ON, ABR and ESD on the entrepreneurial behaviors of college students. Nevertheless, the utilization of ID did not influence the effect of ES on the Entrepreneurship mindset (EM). The discussion explores the consequences of these discoveries for the progress in long-term entrepreneurship and internship programs, including educational and practical elements.*

**Keywords:** *Internship experience, self-efficiency development, college student*

## **1. Introduction**

Internship experiences play a pivotal role in shaping the professional trajectory of college students, providing them with a bridge between academic knowledge and real-world application [1]. It delves into the symbiotic relationship between internship experiences and the development of self-efficacy in college students [2]. Understanding how internships contribute to the enhancement of self-efficacy is essential for educators, employers and policymakers seeking to optimize the educational journey for students. As college students navigate the dynamic landscape of internships, they encounter a myriad of opportunities and challenges that transcend traditional classroom settings [3]. It explores the multifaceted impact of internships on self-efficacy development, examining how hands-on experiences, mentorship and exposure to real-world scenarios influence students' confidence in their abilities. By synthesizing both qualitative and quantitative data, it seeks to unveil the nuanced mechanisms through which internships contribute to self-efficacy, shedding light on the factors that amplify or hinder this developmental process [4]. This has implications for academic institutions striving to enhance their experiential learning programs but also offers valuable insights for employers

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aiming to recruit and cultivate a workforce equipped with knowledge and self-assurance [5]. In an evolving professional landscape, understanding the intersection of internship experiences and self-efficacy development becomes imperative for fostering the holistic growth and preparedness of college students as they transition from academia to the professional realm [6]. This study examines the determinants of students' mindset towards entrepreneurship by analysing the impact of student internships on student outcomes.

This study was divided into four sections: related works, methodology, results, and discussion and conclusion.

## **2. Related Works**

The study [7] investigated the connection between teaching self-efficacy perception and experience sources among CS pursuing physical education. It examined the varied experiences affect their confidence in the classroom, in addition to providing insights on the elements influencing educators' self-efficacy in a learning environment.

The connection between internships and students' job prospects was examined in the research [8]. They evaluated the students' employment preparation and emphasized the value of internships in improving employment opportunities. It clarified the role internships play in preparing students for the job market.

The author [9] examined the connections between engineering internships and self-efficacy in tasks related to creativity. They focused on the effects of internships on students' creativity and self-assurance in engineering projects.

The effect of a publication internship on the research and writing self-efficacy of online doctorate students was examined in the article [10]. They explored the impact of internship participation on students' self-efficacy in research and writing, offering valuable perspectives on the efficacy of an experiential learning methodology.

A mixed-methods evaluation of internship and service-learning pedagogies was conducted by the author [11]. Their research analyzed these methods' efficacy and provided information about educational advantages. They offered useful perspectives on experiential learning techniques.

The study [12] examined the effect of experiential learning on the self-efficacy of undergraduate exercise physiology students using pilot research. They investigated the relationship between students' confidence in their experiential learning experiences and their level of self-efficacy in the academic subject, providing insights into the potential benefits of experiential learning in improving self-efficacy.

The research [13] investigated the effects of self-efficacy, personal expectations and satisfaction on student interns aimed to apply for employment. It focused on psychological aspects of career choices in metropolitan environments and provided insights into these aspects affect students' plans to apply for jobs.

The author [14] examined the relationship that exists between nursing students' self-reported competence, self-efficacy and professional identity throughout their internship. They emphasized the mediation role of self-efficacy to connect professional identities with perceived skills within the nursing students during their internship.

The article [15] examined the relationship between overall self-efficacy, job search self-efficacy, and the level of experiences related to international mobility using a time-lagged methodology. The study improved our knowledge about the effects of international mobility on self-efficacy and job search abilities by providing insights into how these traits change over time.

The study [16] was to evaluate engineering students' perspectives on their internship experiences. To achieve their objective, the process of validating a "Work Experience Questionnaire (WEQ)" was conducted on a group of students who took part in "industrial internship programs" provided. An examination was conducted to validate the appropriateness of the model WEQ in the sample used in the research. The findings indicated that the model had a good match with the sample, and both "convergent and discriminant validity" were established.

## 2.1 Hypothesis

**H1:** *The relationship between CS' EM and their SEA is moderated by ID.*

**H2:** *The association between CS' EM and their ON is moderated by ID.*

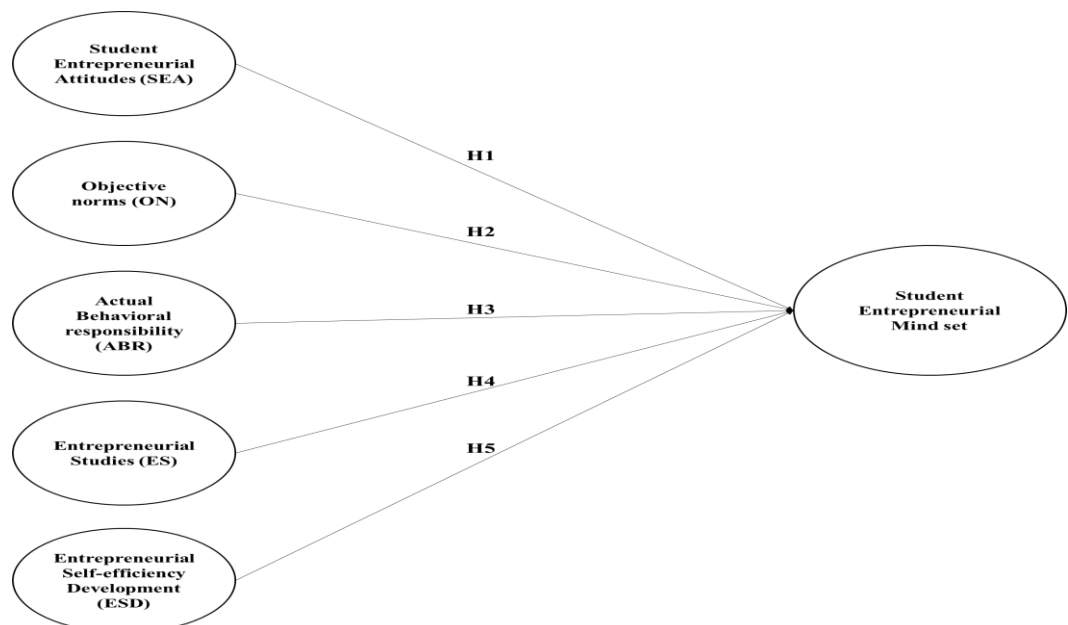
**H3:** *The relationship between CS' ABR and their EM is moderated by ID.*

**H4:** *The relationship between CS' EM and their ES is moderated by ID.*

**H5:** *The relationship between CS' EM and their ESD is moderated by ID.*

## 3. Methodology

The research's methodological methods are described in the subsequent following sections, which encompass tools development, sample strategy, data analytical tools employed and assessment of conventional technique bias. Figure 1 displays the conceptual framework of this research.



**Figure 1:** Proposed Framework.

### **3.1 Tools Development**

Early contact with entrepreneurship concepts throughout the early phases of student development may have a crucial role in cultivating their entrepreneurial performances. The placement of this research in the students is crucial as it will yield essential experimental findings to enhance the significance of internships in promoting entrepreneurship among students. To evaluate the suggested theoretical framework of the study, a survey approach was developed to simplify the gathering of data and analysis. However, they were modified to align with the specific circumstances of this research. The factors were chosen to construct the study (Figure 1) examined in the study as they will enhance the accomplishment of the paper's goals.

The three questions that made up each construct were evaluated using a 5-point Likert scale, where the top represents a disagreement while the bottom indicates agreement. The research reduced the total amount of inquiries per variable to 3 items to enhance the consistency of the earlier employed items and to create an efficient and expedient tool that is easier to administer. The device is comprised of two distinct portions. The initial section of the report focused on the construct items examined, while the second half included an overview of the respondents' fundamental details. The essential data encompassed age, gender, education, prospective goals, and the educational institution attended by the student. To ensure that the respondents fully understood the inquiries in the tool, the tool was translated from English to Chinese. To guarantee the preservation of the actual importance of items in the survey was conducted to identify and rectify any deviations or distortions. Back translation involves converting the survey back into its actual language and then comparing the two actual language versions to identify any contradictions between them. An important quality of well-designed research is its comprehensiveness therefore we tested the survey with 100 students in a testing and pre-testing study to make it achieved that standard.

Nevertheless, the findings from the pre-testing and testing examinations were not integrated into the outcomes. The text highlights the initial signs of potential difficulties with the suitability and effectiveness of the suggested approaches and tools. The researchers are inspired to conduct testing and pre-testing for several reasons. These include determining the suitability of study tools, assessing the practicality of the full-scale study, recognizing practical obstacles associated with the suggested approaches, gathering initial data, and evaluating data analysis approaches. The results of the pre-testing facilitated the revision of certain questions, hence enhancing the quality of the tool. The research acquired ethical evaluation and authorization by institutional standards. The researcher communicated to the respondents that their participation in this investigation was optional and as a result, everyone who responded voluntarily took part in the survey. All respondents supplied and informed permission, with a specific focus on the confidentiality of their data. It was made clear that their information would not be shared with any unauthorized third parties and it would be used for this research. Hence, the assurance of both privacy and confidentiality of their information was provided.

### **3.2 Sample Strategy**

The researchers utilized the easy sampling methodology to get statistics from the participants. The practical sampling methodology is considered a “non-probability sampling” method that focuses on selecting a population that is inexpensive and easily accessible. The survey tool was uploaded to the internet and its hyperlinks were shared through social media platforms like WeChat and QQ. The utilization of social media was advantageous due to its convenient accessibility to participants who are regularly active on online platforms. The data collection

spanned a duration of two (1.5) months, specifically from April to June 2023. A total of 525 genuine replies were documented and later utilized for data analysis. The researchers chose to utilize the 525 samples obtained since this number surpasses the minimum number of samples 380 necessary. This clearly illustrates the sufficiency and representativeness of the 525 samples utilized for the statistics assessment.

### 3.3 Analysis and Data Analytical Tools

We employed the "Statistical Package of Social Science (SPSS-26)" to do data processing and analysis. In addition, we utilized Hayes's process software for SPSS Model 1 to conduct slope analysis, statistical analysis, scale consistency examination, correlation coefficients, conventional technique bias, and multiple linear regression analysis (MLRA).

### 3.4 Conventional Technique Bias (CTB)

To assess the presence of conventional technique bias in this research, we utilized "Harman's single-factor" approach to investigate the existence of conventional technique bias resulting from self-report measurements. The findings show that the CTB obtained by "Harman's single-factor" examination is 20.824%, which is smaller than the suggested threshold of 52% for total variance. In addition, the "Person correlation evaluation" reveals that there is never a significant bivariate connection among the concepts, as shown in Table 1. Therefore, the CTB is not detected in this investigation.

**Table 1:** Statistical Analysis.

	Mean	SD	1	2	3	4	5	6	7
SEA	3.980	1.020	1	-	-	-	-	-	-
ON	3.930	0.978	0.420***	1	-	-	-	-	-
ABR	4.318	1.262	0.189**	0.129***	1	-	-	-	-
ES	4.029	1.041	0.195***	0.564***	0.423*	1	-	-	-
ESD	3.924	1.003	0.565***	0.564***	0.651***	0.231***	1	-	-
ID	4.051	1.048	0.217**	0.155*	0.231***	0.126**	0.162**	1	-
EM	4.151	0.956	0.545***	0.542***	0.125***	0.545***	0.545***	0.725***	1

\*\*\*p < 0.001, \*\*p < 0.01, \*p < 0.05

### 3.5 Characteristics

This research examined 525 genuine replies in China, consisting of 321 female students (61.14%) and 204 male students (38.86%). Most of the students participated in undergraduate degrees (N = 336, 64%) and master's degrees (N = 165, 31.43%) programs. Simply 24 students, accounting for a mere 4.57% of the total, were registered in the PhD program. The research's demographic is predominantly young, with 337 participants falling between the 18-21 age range. Furthermore, there were 93 participants, representing 17.71% of the total, who were between the ages of 22 and 25. Additionally, there were 92 participants, making up 17.52% of the total, who were between the ages of 26 and 30. Only three participants were over the age of 30. Out of the total number of respondents (N = 260), an important number (49.52%) expressed a strong inclination towards exploring entrepreneurship in the future. Furthermore, a total of 175 participants (equivalent to 33.3% of the sample) expressed uncertainty regarding their aspirations to pursue entrepreneurship in the future. A total of 84 participants, accounting for 16% of the total, expressed their doubtfulness of pursuing entrepreneurship in the future.

## 4. Result and Discussion

### 4.1 Statistical Analysis

Table 1 presents the statistical data, including means, SD and correlations, for the components in this research. The results suggest a positive correlation between all variables, namely ES, ON, ABR, ES, ESD, ID and EM. The averages and SD of every variable align with the anticipated course of this study.

### 4.2 Dependability evaluation

Based on prior research, we conducted dependability tests, such as factor analysis exploratory, utilizing principal components analysis to determine the factor loads of the variables. To further evaluate the dependability of the factors included in our study, we carried out composite dependability tests (CDT), Cronbach's alpha (CA), and mean-variance extractor (MVE). Table 2a and Table 2b show that the tests achieve the necessary criteria for construct factor loadings ( $<0.600$ ), CA and CDT (0.700) and AVE variance ( $<0.500$ ). Therefore, the findings indicate the dependability and consistency of the concept in this investigation.

**Table 2a:** Dependability Evaluation.

Category	Code	Statement	Loading factor
SEA	SEA1	Entrepreneurship offers valuable benefits.	1.338
	SEA2	Entrepreneurship presents an appealing career option.	1.280
	SEA3	Entrepreneurship provides satisfaction and fulfillment.	1.281
ON	ON1	Support from friends and family motivates me to pursue entrepreneurship.	1.135
	ON2	Engaging in entrepreneurship will bring happiness and pride to friends and family.	1.199
	ON3	Friends and family believe that choosing entrepreneurship is a wise decision.	1.167
ABR	ABR1	Starting my own business seems manageable to me.	1.265
	ABR2	I am capable of developing and handling the steps for business formation.	1.272
	ABR3	I possess the necessary expertise and knowledge for the business I wish to pursue.	1.245
ES	ES1	Entrepreneurship programs enhance my skills to tackle challenges and make decisions.	1.194
	ES2	Entrepreneurial programs provide insights into the nature and attitudes of successful entrepreneurs.	1.168
	ES3	Entrepreneurship programs equip me with financial skills essential for entrepreneurial activities.	1.189
ESD	ESD1	I am confident in my ability to succeed as an entrepreneur.	1.176
	ESD2	I possess the confidence to navigate challenges as an entrepreneur.	1.195
	ESD3	I am self-driven and motivated to accomplish all entrepreneurial tasks.	1.142
ID	ID1	Internships, in my opinion, will equip me for a good career placement.	1.140
	ID2	Internships have the potential to positively influence my entrepreneurial dreams.	1.190
	ID3	I would prefer to undertake an internship during school holidays.	1.165
EM	EM1	I possess a strong desire to pursue entrepreneurship.	1.094
	EM2	My intention to start my own business is quite specific.	1.145
	EM3	Entrepreneurship is my goal, and I am determined to become an entrepreneur in the future.	1.222

**Table 2b:** Dependability Evaluation.

Variables	CDT	CA	MVE
SEA	1.319	1.25	1.240
ON	1.209	1.15	0.928
ABR	1.289	1.25	1.167
ES	1.219	1.15	1.026
ESD	1.212	1.25	1.014
ID	1.207	1.05	1.006
EM	1.197	1.13	0.990

### 4.3 Moderated Hypotheses Evaluation

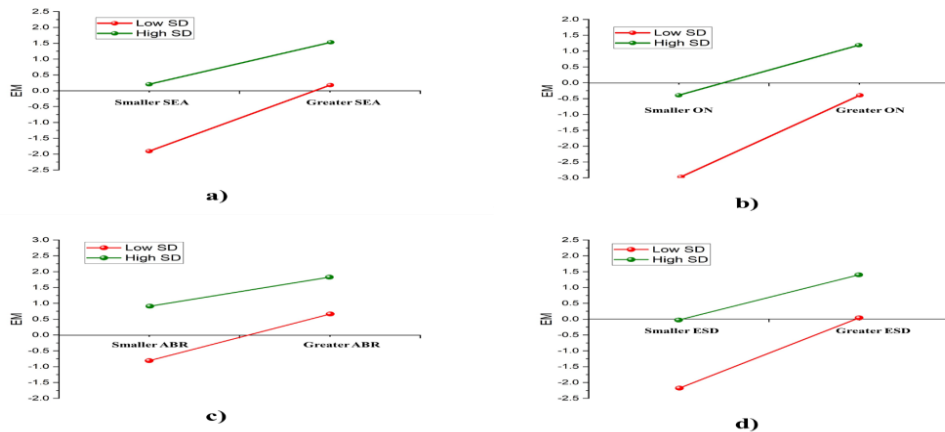
To evaluate hypotheses H1–H5, we employed an SPSS to analyze the moderating impacts of ID on the interactions between CS' EM and SEA, between CS' ON and EM, among CS' ABR and EM, between CS' ES and EM, as well as between CS' ESD and EM. Initially, we chose Framework 1 from the “Hayes templates” to examine the moderating effects of ID on the previously described connection between “independent factors and dependent variables”. A moderation analysis was conducted using a bootstrapping approach with 6000 samples, a “confidence level” of 97% for the interval, and bias correction. The outcomes show that EM has a significant and destructive effect on the connection between CS' SEA and EM ( $\beta = -0.2015$ ), between CS' ONs and EM ( $\beta = -0.1968$ ), between CS' ABR and EM ( $\beta = -0.1369$ ), and between CS' ESD and EM ( $\beta = -0.1855$ ). Nevertheless, we observed no significant impact of ID on the correlation between CS' ES and EM ( $\beta = -0.0095$ ) (Table 3). Therefore, the findings provide support for hypotheses H1-H3 and H5, while rejecting hypothesis H4.

**Table 3:** Hypotheses Assessment.

Hypothesis	Testing	Random coefficient		T	Significance	ULCI	Bootstrapping Output	
		Regular	Error					
H1	SEA * ID → EM	-0.2015	0.0715	-2.6821	0.0076	-0.0513	-0.3324	Accept
H2	ON * ID → EM	-0.1968	0.0765	-3.1794	0.0016	-0.0929	-0.3934	Accept
H3	ABR * ID → EM	-0.1369	0.0494	-2.7702	0.0058	-0.0398	-0.2341	Accept
H4	ES * ID → EM	-0.0095	0.0683	-0.1298	0.8968	0.1254	-0.1431	Reject
H5	ESD * ID → EM	-0.1855	0.0710	-2.8160	0.0051	-0.0604	-0.3393	Accept

In addition, we utilized basic slope analysis to gain a deeper understanding of the moderating effect on the relationship between “independent and dependent variables”, as seen in Figure 2. It illustrates that the slopes are significantly sharper for low ID, suggesting that the factors (SEA, ON, ABR, and ESD) have a greater influence on the resulting variable (EM) comparison to high ID. It signifies that when the degree of ID improves, the intensity of the relationship between the independent variables (namely, SEA, ON ABR, and ESD) and the dependent variable (EM) will decrease.





**Figure 2:** Moderation effects of a) sea, b) on, c) ABR, and d) ESD.

In addition, we establish the range of outcomes for the moderating factor (ID) where the predicted variables exhibit either significant or non-significant slopes, using a threshold of  $p < 0.05$ . This further supports the findings by providing additional evidence. The results demonstrate that the influence of ID on the correlation between SEA and EM is substantial until the ID reaches a threshold. If the value keeps increasing, the moderating impact of ID on the connection between SEA and EM will be eliminated. The regulating effect of ID on the connection between ON and EM is substantial until the value of ID. If the value rises beyond that, there shall be no regulating impact of ID. The influence of ID on the association between ABR and EM is substantial until the ID. If the value keeps increasing, the moderating function of ID will be eliminated.

#### 4.4 Discussion

This research examines the factors affecting entrepreneurial behavior among undergraduates and highlights the significance of promoting entrepreneurship to generate long-lasting employment opportunities and mitigate financial inequalities across generations. The study examines the influence of ID on the development of EM in university students. The findings demonstrate that SEA, ON, ABR, ES, and ESD have a direct influence on students' entrepreneurial intentions. Importantly, a favorable EM correlates with other studies that highlight the importance of mindset and attitude in enabling students to think and behave like successful entrepreneurs. Family and friends are shown to be crucial in shaping EM, as evidenced by OB. Similarly, the immediate influence of perceived behavioral control on EM supports the concept that adequate education and training may provide students with the essential skills to oversee enterprises.

The study emphasizes the pivotal significance of ES in shaping students' entrepreneurial desires. The statement suggests that combining regular classroom instruction with entrepreneurial experience can inspire students to participate in entrepreneurial pursuits. Moreover, ESD is recognized as a crucial factor that affects EM, underscoring the importance for educational institutions to focus on the enhancement of students' self-confidence in entrepreneurship. The study presents the innovative idea of ID and determines to be a substantial moderator for SEA, ON, ABR, and ESD. This suggests that managed internship programs could improve the predictive ability of these characteristics on EM. Nevertheless, the analysis indicates that ID does not have a substantial moderating effect



on the influence of ES on entrepreneurial development. It means that although internship programs can improve certain aspects related to entrepreneurship, they may not add to the impact of entrepreneurial studies on students' goals.

## 5. Conclusion

This research examined the factors that develop university students to engage in entrepreneurial activities, focusing on the ID in influencing the effects of SEA, ON, ABR, ES and ESD on students' EM. The study has verified that student engagement and EM are influenced by characteristics such as self-efficacy beliefs, outcome expectations, academic belongingness, emotional support and educational support. The moderating analyses, which are the main innovation of this paper, have shown that ID can enhance the influence of SEA, ON, ABR and ESD on EMs. These findings provide officials and professionals, particularly university authorities, the opportunity to partner and cooperate with entrepreneurs in the business sector to develop high-quality student internship initiatives and regulations that can encourage students to participate in such programs. This is crucial as it may have a significant influence on molding their future business objectives and achieving success as entrepreneurs.

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