

Linking extracurricular engagement to employability: The mediating role of career self-efficacy among minority undergraduates

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Abstract: Minority university students play an important role in advancing educational equity, making the enhancement of their employability particularly significant. This study empirically investigates how extracurricular activity participation (EAP) and career self-efficacy (CSE) influence the employability of minority undergraduates. This study is grounded in Social Cognitive Career Theory and employs a questionnaire survey method. Convenience sampling was adopted, and data were collected from three universities in Yunnan Province, China, one of the regions with the largest populations of ethnic minority students in the country. A total of 552 student responses were analyzed using SPSS and AMOS software. The results demonstrate that EAP has a significant positive effect on both CSE and employability. CSE also positively predicts employability and partially mediates the relationship between EAP and employability. These findings underscore the critical role of extracurricular learning experiences and psychological resources in strengthening minority students' employability and offer practical implications for higher education interventions.

Keywords: Career self-efficacy, Employability, Extracurricular activity participation, Minority university students, Social cognitive career theory.

1. Introduction

Enhancing employability has become a central concern in higher education as graduates navigate increasingly competitive labor markets [1, 2]. For ethnic minority university students, employability development is particularly vital due to structural disadvantages and limited access to career resources. Identifying mechanisms that strengthen their career readiness is therefore essential.

Extracurricular activity participation (EAP) provides learning opportunities that complement formal curricula. Prior studies show that EAP promotes key employability competencies, including communication, teamwork, and problem-solving skills [3, 4]. Such experiences enable students to apply knowledge in practical contexts and develop professional attributes valued by employers [5]. Career self-efficacy (CSE), defined as individuals' beliefs in their ability to perform career-related tasks [6], is a crucial psychological determinant of career development. Engagement in extracurricular activities enhances CSE through mastery experiences and social reinforcement [7, 8]. Students with higher CSE exhibit stronger motivation and improved employability outcomes [9]. Grounded in Social Cognitive Career Theory [10], recent research indicates that CSE mediates the relationship between learning experiences and career outcomes [11]. However, evidence focusing on ethnic minority undergraduates remains limited [12].

To address this gap, the present study investigates the relationships among EAP, CSE, and employability (EMP) among ethnic minority undergraduates. Drawing on Social Cognitive Career Theory (SCCT), this study proposes that EAP serves as an environmental learning input that enhances students' career self-efficacy, which subsequently contributes to employability development. The study

aims to (1) examine the levels of EAP, CSE, and EMP among minority university students; (2) analyze the direct effect of EAP on EMP; and (3) test the mediating role of CSE in this relationship. This research contributes to the literature by offering updated evidence on minority talent development and by providing implications for higher education practitioners seeking to enhance students' employment readiness.

2. Literature Review

2.1. Impact of Extracurricular Activity Participation on Employability

In increasingly competitive labor markets, employers prioritize soft skills, communication, teamwork, and leadership, which are often cultivated through extracurricular rather than curricular experiences [5, 13]. For undergraduates with limited work experience, participation in extracurricular activities functions as a key indicator of workplace competence and career readiness [14, 15]. Empirical studies demonstrate that such engagement enhances self-efficacy, career awareness, and transferable skills central to employability [16], while campus support systems contribute to gains in cultural awareness, critical thinking, and problem-solving [17].

Institutional structures, including curriculum design, career services, and student organization ecosystems, further shape employability development [18]. Yet scholars note that extracurricular participation may reinforce existing resource inequalities, with more advantaged students benefiting disproportionately [19]. Nevertheless, recent evidence confirms that extracurricular learning, organizational involvement, and internships substantially improve graduates' labor-market competitiveness [20]. Overall, extracurricular activities provide a critical pathway for building human and social capital relevant to employability [21]. Hypothesis 1 is postulated:

H₁: Extracurricular activity participation positively influences the employability of ethnic minority university students.

2.2. Impact of Extracurricular Activity Participation on Career Self-Efficacy

Research consistently shows that extracurricular participation is a key antecedent of career self-efficacy. Participation in student clubs and campus activities provides mastery experiences that strengthen students' confidence in their knowledge, skills, and ability to perform career-related tasks [22]. These successful performance experiences form the most influential source of self-efficacy development. Evidence from cross-cultural studies further demonstrates that the breadth of extracurricular involvement significantly enhances students' perceived career self-efficacy [23]. Interest and engagement in such activities also promote multiple forms of self-efficacy, including social and academic dimensions [24]. Extracurricular contexts additionally offer social persuasion and vicarious learning; students receive positive feedback, observe peers' successful actions, and gain social recognition, factors known to reinforce efficacy beliefs [25]. Moreover, leadership tasks, collaborative projects, and problem-solving challenges embedded in extracurricular activities broaden students' perceived competence, enhance their sense of control, and cultivate resilience and emotional regulation [26]. Overall, extracurricular involvement provides experiential and social resources that substantially elevate students' career self-efficacy. Hypothesis 2 is postulated:

H₂: Extracurricular activity participation positively influences the career self-efficacy of ethnic minority university students.

2.3. Mediating Role of Career Self-Efficacy

A substantial body of research identifies career self-efficacy as a core predictor of employability. Higher self-efficacy enhances students' confidence in career decision-making, job-search behavior, adaptability, and long-term career development [27]. Empirical findings consistently demonstrate that students with strong career self-efficacy exhibit greater initiative, persistence, problem-solving, and resilience in employment contexts [28]. High self-efficacy also facilitates effective job-search strategies and enhances innovative and adaptive capacities, thereby improving labor-market competitiveness.

Career self-efficacy also functions as a key psychological mediator. Rooted in Social Cognitive Career Theory, self-efficacy mediates the effects of learning experiences on career outcomes [10]. Evidence shows that self-efficacy explains how extracurricular participation, social support, and supervisory behaviors translate into employability gains [29]. Studies further confirm that extracurricular involvement enhances self-efficacy, which in turn strengthens employability, indicating a partial mediation mechanism [3]. Hypotheses 3 and 4 are postulated:

H₃: Career self-efficacy positively influences the employability of ethnic minority university students.

H₄: Career self-efficacy mediates the relationship between extracurricular activity participation and employability among ethnic minority university students.

3. Method

A quantitative survey design was used to investigate extracurricular activity participation, career self-efficacy, and employability among ethnic minority university students. Validated scales were applied, and reliability and construct validity were confirmed through Cronbach's alpha and CFA. Correlation and regression analyses examined direct effects, and mediation analysis tested indirect pathways. Data were analyzed using SPSS and AMOS.

3.1. Study Model

Guided by Drawing on Social Cognitive Career Theory, this study investigates the effect of extracurricular activity participation on ethnic minority university students' employability, with career self-efficacy as the mediating variable. The research model is illustrated in Figure 1.

3.2. Sample and Data Collection

In this study, convenience sampling was conducted at three universities in Yunnan Province, China, a region with one of the largest ethnic minority student populations nationwide. The sample included one public comprehensive university, one Project 211 institution, and one private undergraduate university. With assistance from student affairs offices and academic advisors, questionnaires were distributed to students who voluntarily agreed to participate. A total of 552 valid responses were obtained. Among the participants, 293 (53.08%) were male, and 259 (46.92%) were female. The sample comprised 118 freshmen (21.38%), 104 sophomores (18.84%), 142 juniors (25.73%), and 188 seniors (34.07%). Students majored in humanities and social sciences (46.92%) or science and engineering (53.08%). All participants were informed of the study's purpose, confidentiality, and the voluntary nature of participation before completing the survey.

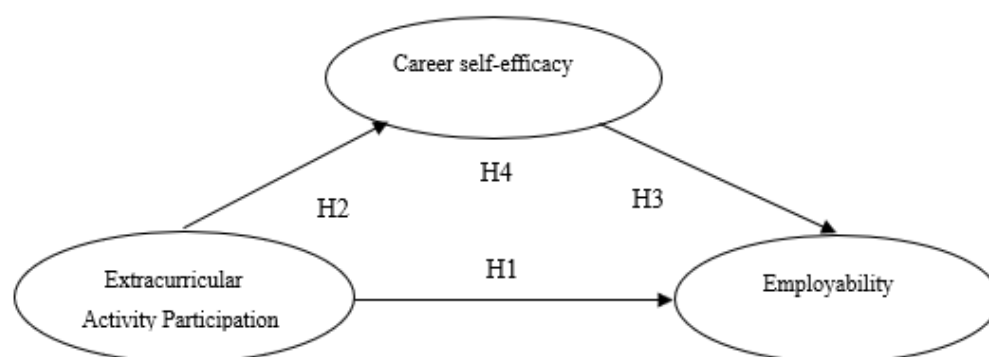


Figure 1.

Conceptual Framework.

Note: This figure illustrates the relationships among variables.

3.3. Research Instruments

3.3.1. Extracurricular Activity Participation (EAP)

In this study, extracurricular activity participation is operationally defined following Fu [30] and Qin [31] as the extent to which university students engage in organized, purposeful activities outside formal coursework to enhance their overall competence. Qin [31] developed a three-dimensional scale comprising involvement, club status, and social interaction, each measured by three items, for a total of nine items rated on a five-point Likert scale. Involvement reflects students' time and effort investment; club status indicates their hierarchical position within activity organizations; and social interaction captures the degree of interpersonal engagement with other participants. This study employed Qin's [31] Extracurricular Activity Participation Scale, adapted to fit the current research context. Reliability analysis showed Cronbach's α values of .791 (involvement), .809 (club status), .807 (social interaction), and .816 (overall scale), all exceeding the .700 criterion, demonstrating strong internal consistency. Confirmatory factor analysis results further support the scale's structural validity, with $\chi^2/df = 1.639$ (< 5), GFI = .985, AGFI = .971 ($> .900$), SRMR = .032, RMSEA = .034 ($< .080$), and NFI = .978, RFI = .967, CFI = .991, and IFI = .991 (all $> .900$). Factor loadings ranged from .690 to .822 ($> .500$), composite reliability values ranged from .793 to .812 ($> .700$), and average variance extracted (AVE) values ranged from .561 to .591 ($> .500$). These indices indicate satisfactory composite reliability and convergent validity, effectively distinguishing students' extracurricular participation levels for use in this study.

3.3.2. Career Self-Efficacy (CSE)

In this study, career self-efficacy is operationally defined following Betz and Hackett [6] as "an individual's belief in their capability to perform career-related behaviors, make educational and occupational choices, and persist in the process." Existing measures of career self-efficacy include multiple structural forms; however, based on the developmental characteristics of university students and the strong psychometric properties of the instrument, this study adopted the Career Self-Efficacy Scale developed by Lent et al. [32]. The scale consists of 8 items rated on a five-point Likert scale ranging from 1 ("strongly inconsistent") to 5 ("strongly consistent"), requiring respondents to self-evaluate the extent to which they can perform relevant career-related tasks. Regarding reliability, the composite reliability (CR) of the scale is .944, and the average variance extracted (AVE) is .676, both exceeding recommended thresholds and indicating satisfactory construct reliability and convergent validity. Confirmatory factor analysis (CFA) results further support the structure of the scale. Factor loadings met the .500 standard, and model fit indices demonstrated acceptable fit: $\chi^2/df = 4.279$ (< 5); GFI = .961 and AGFI = .930 ($> .900$); SRMR = .021 and RMSEA = .077 ($< .080$); NFI = .975, RFI = .966, CFI = .981, and IFI = .981 (all $> .900$). These results indicate that the career self-efficacy scale exhibits good model fit and structural validity in the present study.

3.3.3. Employability (EMP)

In this study, employability is defined following He and Lü [33] as an individual's capability to obtain suitable employment and to perform effectively at work. Employability includes five dimensions: self-development ability, interpersonal communication ability, employment self-confidence, practical ability, and adaptability. The College Students' Employability Self-Assessment Scale [33] was used, consisting of 26 items rated on a five-point Likert scale (7 items for self-development, 5 for communication, 5 for confidence, 5 for practical ability, and 4 for adaptability). Reliability results show that Cronbach's alpha values ranged from .863 to .914 across the five dimensions, and .945 for the full scale, exceeding the .700 criterion. CFA results demonstrated satisfactory factor loadings (.749–.801), all above the .500 benchmark. Composite reliability (CR) values for all dimensions exceeded .60, and average variance extracted (AVE) values met the .50 threshold, indicating good convergent validity.

Overall, the employability scale exhibits strong reliability, composite reliability, convergent validity, and satisfactory model fit.

3.4. Data Collection Procedure

The survey was administered online through institutional channels. Participants provided informed consent before participation. The pilot study ensured clarity, cultural relevance, and scale reliability. The formal questionnaire was then distributed across three universities, and responses were screened for completeness and validity. The study strictly adhered to confidentiality requirements and research ethics guidelines outlined by the National Research Council of Thailand [34].

4. Results

4.1. Descriptive Results

The mean score ($M = 3.328$, $SD = 0.612$) for extracurricular activity participation indicates that ethnic minority university students generally exhibit a relatively high level of engagement in such activities. Similarly, employability was found to have a mean score of 3.234 ($SD = 0.671$), while career self-efficacy demonstrated a mean score of 3.517 ($SD = 0.925$). Collectively, these descriptive statistics suggest that, within the present sample, ethnic minority university students tend to report levels of extracurricular activity participation, employability, and career self-efficacy that exceed the overall midpoint of the measurement scale.

4.2. Structural Equation Model

This study employs structural equation modeling to examine the overall model involving extracurricular activity participation, career self-efficacy, and employability. First, a main-effect model is tested to determine whether extracurricular activity participation exerts a direct effect on employability. Then, career self-efficacy is introduced as a mediating variable between extracurricular activity participation and employability to assess its mediating role in this relationship.

4.3. Correlation Analysis

The mean, standard deviation, and correlation coefficients for each variable are demonstrated in Table 1. Pearson correlation coefficients show significant positive relationships among the three variables. Extracurricular activity participation was positively correlated with career self-efficacy ($r = .408$, $p < .001$) and employability ($r = .535$, $p < .001$). Career self-efficacy was also positively correlated with employability ($r = .344$, $p < .001$). The correlation coefficients among the variables ranged from .344 to .535, with all coefficients below .800, indicating no high correlations. These results provide preliminary support for the hypothesized structural relationships.

Table 1.
Mean, standard deviation, and correlation.

Variable	1	2	3
Extracurricular Activity Participation	1		
Career Self-Efficacy	0.408***	1	
Employability	0.535***	0.344***	1
Mean	3.328	3.517	3.234
Standard deviation	0.612	0.925	0.671

Note: *** $p < 0.001$.

4.4. Mediation Analysis

The model controlled for gender, year of study, and academic major as background variables. According to the regression results presented in Table 2, Model 1 shows that higher levels of extracurricular activity participation (EAP) significantly predict higher employability (EMP) ($\beta = .528$, $p < .001$), supporting H1. Model 2 indicates that EAP also has a significant positive effect on career self-

efficacy (CSE) ($\beta = .408, p < .001$), supporting H2. In Model 3, CSE significantly enhances EMP ($\beta = .303, p < .050$), providing evidence for H3. Model 4 further demonstrates that both EAP ($\beta = .488, p < .001$) and CSE ($\beta = .099, p < .050$) jointly predict EMP. When CSE is added to the model, the effect of EAP on EMP remains significant but decreases from $\beta = .528$ to $\beta = .488$, suggesting that CSE partially mediates the relationship between EAP and EMP. Thus, H4 is supported, indicating that career self-efficacy plays a partial mediating role in the association between extracurricular activity participation and employability.

Table 2.
Regression Results for the Mediation Model (N= 552)

Predictor	Model 1		Model 2		Model 3		Model 4		
	EMP		CSE		EMP		EMP		
	β	t	β	t	β	t	β	t	VIF
EAP	0.528	14.921***	0.408	10.569***			0.488	12.614***	1.260
CSE					0.303	7.482***	0.099	2.540*	1.290
R^2	0.347		0.225		0.167		0.355		
Adj. R^2	0.340		0.216		0.157		0.346		
F	48.236***		26.334***		18.041***		42.680***		

Note: *** $p < .050$; ** $p < .001$.

Using PROCESS Model 4 with 5,000 bootstrap samples, according to Table 3, the mediating role of career self-efficacy between extracurricular activity participation and employability was tested. The direct effect was significant ($\beta = .528$, 95% CI [.452, .618]), as the confidence interval did not include zero. The indirect effect was also significant ($\beta = .044$, 95% CI [.009, .084]), indicating a valid mediation pathway. The total effect remained significant ($\beta = .579$, 95% CI [.503, .656]). These results demonstrate that career self-efficacy partially mediates the relationship between extracurricular activity participation and employability.

Table 3.
Mediation analysis.

Effect Type	Effect Value	Standard Error	LLCI	ULCI
Direct Effect	0.528	0.042	0.452	0.618
Indirect Effect	0.044	0.019	0.009	0.084
Total Effect	0.579	0.039	0.503	0.656

5. Discussion

The purpose of this study was to examine the effects of extracurricular activity participation on college students' employability and to test the mediating role of career self-efficacy. The findings demonstrate that extracurricular engagement is an important learning experience that contributes both directly and indirectly to employability, thereby supporting the social cognitive career theory framework [10].

5.1. Discussion of Findings

5.1.1. Effects of Extracurricular Activity Participation

Pearson correlation analysis showed significant positive associations among extracurricular activity participation, career self-efficacy, and employability. Extracurricular participation was positively correlated with career self-efficacy ($r = .408, p < .001$) and employability ($r = .535, p < .001$), indicating that students engaging more tend to exhibit stronger career confidence and better employment skills. All coefficients were below .800, indicating no multicollinearity. Regression analysis confirmed these findings. As shown in Table 4.20, extracurricular participation had a significant positive effect on employability ($\beta = .528, p < .001$), supporting the hypothesis that greater participation contributes to

higher employability. This aligns with research showing that engagement in structured activities enhances interpersonal competence, leadership, and adaptability.

5.1.2. Effects on Career Self-Efficacy

Extracurricular participation also significantly predicted career self-efficacy ($\beta = .408, p < .001$), indicating that campus engagement provides mastery experiences and social interaction that strengthen career-related confidence, consistent with Astin's [35] social cognitive theory. Students with higher self-efficacy levels generally show stronger motivation and persistence in career preparation.

5.1.3. Mediating Role of Career Self-Efficacy

Career self-efficacy significantly predicted employability ($\beta = .303, p < .05$). When career self-efficacy was included in the model, the effect of extracurricular participation on employability decreased from $\beta = .528$ to $\beta = .488$ but remained significant, indicating partial mediation.

PROCESS Model 4 with 5,000 bootstrap samples confirmed this mediating mechanism: direct effect = .528 (95% CI [.452, .618]); indirect effect = .044 (95% CI [.009, .084]); total effect = .579 (95% CI [.503, .656]). Since confidence intervals excluded zero, career self-efficacy partially mediated the link between extracurricular activity participation and employability. Since all confidence intervals excluded zero, the mediation was significant. This suggests that extracurricular participation enhances employability not only by developing skills directly but also by strengthening students' confidence in performing career-related tasks. Similar to the mediating role of professional identity in previous studies [36], career self-efficacy functions as a psychological mechanism that transforms learning experiences into employability outcomes. Students with higher confidence in their career abilities are better able to cope with uncertainty and show greater initiative during job searching and career development. Those actively developing such confidence through activity participation similarly benefit from enhanced career readiness. See Figure 2.

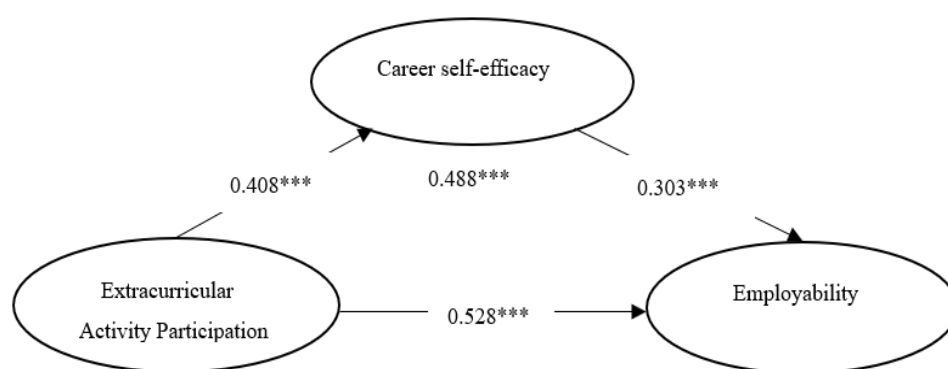


Figure 2.

Research results.

Note: *** represents the 5% level of significant.

5.2. Overall Interpretation

These findings enrich the literature by highlighting extracurricular activities as a crucial developmental context for minority university students. The results confirm that both behavioral engagement (participation) and psychological resources (self-efficacy) jointly shape employability, offering a new perspective on enhancing career development for this population.

6. Recommendations and Future Research

Based on the findings, several recommendations are proposed to strengthen extracurricular activity participation, career self-efficacy, and employability among ethnic minority university students. First, universities should expand inclusive extracurricular platforms, as participation in co-curricular activities has been shown to enhance students' social integration and skill development [37]. Establishing culturally relevant organizations and career-oriented clubs may further promote engagement, particularly for minority groups. Incentive mechanisms such as leadership certificates or credit recognition can also increase participation [35]. Second, strengthening career self-efficacy is essential because it mediates the relationship between learning experiences and career outcomes, consistent with Social Cognitive Career Theory [10]. Universities should provide structured mentorship, career workshops, and counseling services that enhance students' mastery experiences and career confidence [38]. Activities such as mock interviews and career simulations have been shown to significantly promote career self-efficacy [39].

Third, integrating employability training into academic and experiential curricula is crucial. Embedding communication, practical skills, and adaptability into coursework improves students' readiness for the labor market [40]. Partnerships between universities and industries can further enhance work-based learning opportunities through internships and service-learning [41]. This study has limitations. The cross-sectional design restricts causal inference, and self-reported data may involve social desirability bias. The sample, drawn from Yunnan minority students, may limit generalizability. Future research should adopt longitudinal or mixed-method designs and expand sampling across diverse minority groups. Additional variables such as social capital or career adaptability should also be considered. Intervention studies evaluating extracurricular or career-training programs are recommended. Overall, the findings reinforce that extracurricular participation and career self-efficacy play essential roles in shaping employability outcomes among minority university students, underscoring the need for institutional and policy support.

Institutional Review Board Statement:

This study received ethical approval from Dhurakij Pundit University, Thailand, on January 27, 2026, with approval number DPU_BSH 2701/2568.

Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

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