FACTORS AFFECTING LEARNING MOTIVATION AMONG PRESCHOOL EDUCATION MAJOR STUDENTS IN XI'AN CITY, CHINA

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Abstract: This study aims to explore the key factors influencing the learning motivation of preschool education major students in Xi'an City, China. Grounded in Self-Determination Theory, Social Cognitive Theory, and Vygotsky's Sociocultural Theory, a theoretical model incorporating five predictor variables—Professional Identity, Self-Efficacy, Student Engagement, Teaching Methods, and School Environment—was constructed. A quantitative research method was employed, using a questionnaire survey administered to 327 students from three universities in Xi'an City. Data were analyzed using descriptive statistics, correlation analysis, and multiple regression analysis. The results indicate that all five variables are significantly associated with learning motivation. Professional Identity demonstrated the strongest relationship ($r = 0.758$, $\beta = 0.291$), followed by Self-Efficacy ($r = 0.712$, $\beta = 0.268$), Student Engagement ($r = 0.703$, $\beta = 0.239$), Teaching Methods ($r = 0.685$, $\beta = 0.217$), and School Environment ($r = 0.621$, $\beta = 0.194$). Collectively, the five predictors explained 73.3% of the variance in learning motivation ($R^2 = 0.733$), indicating strong explanatory power of the model. As a correlational study, causal interpretations warrant caution. This study enriches the application of motivational theories in the context of preschool teacher education in China and provides practical insights for university administrators, teacher educators, and policymakers.

Keywords: Learning motivation, Preschool education major, Professional identity, Self-efficacy, Student engagement

1. Introduction

Learning motivation is a core psychological determinant of academic achievement, professional development, and career persistence among university students, especially for those majoring in preschool education (Ryan & Deci, 2017). It not only shapes students' mastery of pedagogical knowledge and practical skills but also influences their long-term commitment to early childhood education and the quality of future teaching practices (Han & Yin, 2016). A recent meta-analysis confirmed that high learning motivation correlates with enhanced academic performance and reduced professional attrition among pre-service teachers (Kyndt et al., 2023). In preschool education, where the curriculum is inherently experiential and practice-oriented, motivation plays an even more critical role in bridging theoretical learning and real-world teaching scenarios (Korthagen, 2017).

In China, the policy landscape has increasingly emphasized the development of high-quality preschool education. The National Vocational Education Reform Implementation Plan (State Council, 2019) and the 2024–2035 Master Plan on Building China into a Leading Country in Education (Ministry of Education of China, 2024) have explicitly called for strengthening preschool teacher training, promoting practice-oriented teaching, and enhancing students' professional competence. By 2025, China's preschool education sector had expanded to cover over

90% of school-age children, creating a growing demand for well-trained, motivated educators (Ministry of Education of China, 2025). Xi'an City, as a major educational hub in northwest China, enrolls a large number of preschool education students who will supply teachers for urban and rural kindergartens in Shaanxi Province and beyond. However, regional disparities in educational resources, limited career development pathways, and insufficient practical support have been identified as potential barriers to sustaining students' learning motivation (Zhou et al., 2024).

Despite these policy imperatives and practical needs, the reality of learning motivation among preschool education major students in Xi'an remains underexplored. Existing literature highlights that motivation is shaped by a combination of internal factors (e.g., professional identity, self-efficacy) and external factors (e.g., teaching methods, school environment) (Liu & Zhang, 2020). However, most studies focus on general teacher education or elite institutions, with limited empirical evidence from mid-sized cities like Xi'an, where resource constraints and regional characteristics may uniquely influence motivational dynamics (Wang et al., 2020). Preliminary observations indicate that while students initially show enthusiasm for the profession, their motivation often wanes due to unclear career prospects, passive learning experiences, and inadequate institutional support (Guo et al., 2022). These challenges echo international research findings that cite professional identity confusion, low self-efficacy, and rigid teaching methods as key barriers to sustained learning motivation (Pfitzner-Eden, 2016).

Existing academic literature provides a robust theoretical foundation for understanding motivational factors. International studies have consistently emphasized the critical roles of professional identity (Beijaard et al., 2004), self-efficacy (Bandura, 1997), student engagement (Fredricks et al., 2004), interactive teaching methods (Reeve, 2012), and supportive school environments (Thapa et al., 2013) in fostering learning motivation. Research in Chinese contexts reinforces these findings, showing that professional identity and self-efficacy are strong predictors of pre-service teachers' motivation (Zhang et al., 2021). However, although existing research has explored several factors affecting learning motivation, studies that simultaneously examine the combined influence of professional identity, self-efficacy, student engagement, teaching methods, and school environment—especially within the specific population of preschool education majors in Xi'an—remain scarce. This gap limits the development of targeted interventions to enhance motivation and improve the quality of preschool teacher training in regional contexts.

Therefore, conducting research on the factors associated with learning motivation among preschool education major students in Xi'an City is both timely and necessary. This study aims to fill this research gap by systematically investigating the interplay of professional identity, self-efficacy, student engagement, teaching methods, and school environment. By providing an evidence-based diagnosis of the current situation, the findings will be instrumental for university administrators designing supportive systems, teacher educators tailoring training programs, and policymakers formulating region-specific policies. This study enriches the theoretical application of motivational theories in Chinese preschool teacher education and offers actionable insights for local educational improvement.

2. Reseach Question

What are the factors that are associated with the learning motivation of preschool education major students in Xi'an City?

3. Research Objective

To identify the key factors associated with the learning motivation of preschool

education major students in Xi'an City and examine their relative importance.

4. Research Hypotheses

H1: Professional Identity is positively and significantly associated with the learning motivation of preschool education major students in Xi'an City.

H2: Self-Efficacy is positively and significantly associated with the learning motivation of preschool education major students in Xi'an City.

H3: Student Engagement is positively and significantly associated with the learning motivation of preschool education major students in Xi'an City.

H4: Teaching Methods is positively and significantly associated with the learning motivation of preschool education major students in Xi'an City.

H5: School Environment is positively and significantly associated with the learning motivation of preschool education major students in Xi'an City.

5. Conceptual Framework

The conceptual framework integrates key tenets from Self-Determination Theory (SDT), Social Cognitive Theory, and Sociocultural Theory. Professional Identity is grounded in SDT, as a strong professional identity can satisfy basic psychological needs for autonomy, competence, and relatedness, thereby fostering autonomous motivation. Self-Efficacy, rooted in Social Cognitive Theory, represents students' beliefs in their capability to execute required actions, which directly energizes learning behavior. Student Engagement, informed by the Job Demands-Resources model, encompasses behavioral, emotional, and cognitive involvement in learning activities. Teaching Methods, based on social constructivist principles, emphasize interactive, autonomy-supportive instruction that enhances intrinsic motivation. School Environment, drawing on Organizational Support Theory, reflects the institutional and relational context that can either facilitate or hinder motivation. The model hypothesizes that these five variables are positively associated with Learning Motivation.

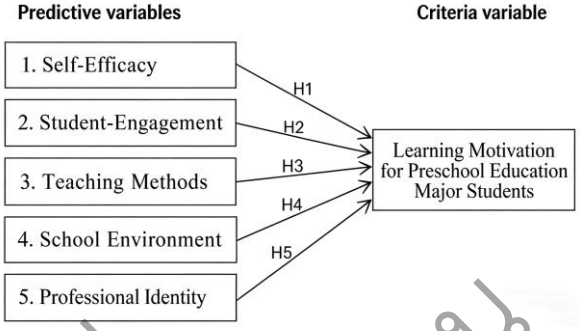

Figure 1 Conceptual Framework

Figure 1. Conceptual Framework. The framework hypothesizes that Professional Identity, Self-Efficacy, Student Engagement, Teaching Methods, and School Environment have direct positive relationships with Learning Motivation among preschool education major students.

6. Materials and Methods

6.1 Research Design and Variables

This study employed a quantitative, descriptive-correlational research design. The conceptual framework included five predictor variables: Professional Identity (X_1), Self-Efficacy (X_2), Student Engagement (X_3), Teaching Methods (X_4), and School Environment (X_5). The criterion variable was Learning Motivation. The study hypothesized significant positive associations between each predictor variable and the criterion variable.

6.2 Population and Sample

The target population consisted of 680 full-time preschool education major students from three universities in Xi'an City. A stratified random sampling method was used to select a sample of 327 students, proportionate to the size of each institution and distributed across different grade levels (freshman to senior) and university types (public and private). This ensured representation across diverse student backgrounds and learning experiences. The sample size was determined using a finite population formula (95% confidence level, 5%

margin of error), with an initial minimum requirement of 245 students; the expanded sample mitigated non-response bias and enhanced data reliability.

6.3 Research Instrument

A structured questionnaire was developed, comprising seven parts: (1) demographic information, (2) Professional Identity (9 items), (3) Self-Efficacy (9 items), (4) Student Engagement (9 items), (5) Teaching Methods (9 items), (6) School Environment (9 items), and (7) Learning Motivation (9 items). All Likert-scale items were rated from 1 (Strongly Disagree) to 5 (Strongly Agree). The questionnaire was validated by five experts (3 in preschool education, 2 in educational psychology), with Item-Objective Congruence (IOC) values ranging from 0.60 to 1.00. Reliability was established through a pilot test with 30 students, yielding the Cronbach's alpha coefficients presented in Table 1.

Variable	Number of items	Cronbach's α
Professional identity	9	0.89
Self-efficacy	9	0.91
Student engagement	9	0.88
Teaching methods	9	0.86
School environment	9	0.87
Learning motivation	9	0.90

Table 1. Reliability Coefficients of the Scales

To assess construct validity, a confirmatory factor analysis (CFA) was conducted on the six-factor model. The measurement model showed acceptable fit: $\chi^2/df = 2.18$, CFI = 0.94, TLI = 0.93, RMSEA = 0.06 (90% CI [0.055, 0.065]), SRMR = 0.04, supporting the distinctiveness of the scales. Furthermore, potential common method bias was examined using Harman's single-factor test. The unrotated factor solution yielded multiple factors, with the first factor accounting for only 34.5% of the total variance, indicating that common method bias was not a serious concern.

6.4 Data Collection and Analysis

Data were collected via paper-based questionnaires distributed with the assistance of university administrators. Completed questionnaires were screened for completeness and consistency, resulting in 327 valid responses. Data were analyzed using descriptive statistics (mean, standard deviation, skewness, kurtosis), Pearson's correlation, and multiple regression analysis using Jamovi 2.6.44 and Microsoft Excel 2019.

7. Results and Discussion

7.1 Descriptive Statistics

The analysis of 327 valid responses revealed moderate-to-high perceptions across all variables. Professional Identity received the highest mean score (M = 3.83, SD = 0.73), while Student Engagement scored the lowest (M = 3.71, SD = 0.77). The overall mean for Learning Motivation was 3.89 (SD = 0.72), indicating a generally positive level of motivation among the sample. Skewness values ranged from -0.21 to -0.09, and kurtosis values from -0.42 to -0.28, confirming that data distributions approximated normality and were suitable for inferential analysis.

7.2 Correlation Analysis

Pearson correlation analysis showed significant positive relationships between all predictor variables and the criterion variable. Professional Identity had the strongest correlation with Learning Motivation ($r = 0.758$, $p < 0.001$), followed by Self-Efficacy ($r = 0.712$, $p < 0.001$), Student Engagement ($r = 0.703$, $p < 0.001$), Teaching Methods ($r = 0.685$, $p < 0.001$), and School Environment ($r = 0.621$, $p < 0.001$). All correlations provided initial support for the research hypotheses.

7.3 Regression Analysis

Multiple regression analysis revealed that the five predictor variables collectively explained 73.3% of the variance in Learning Motivation ($R^2 = 0.733$, Adjusted $R^2 = 0.729$, $F = 241.638$, $p < 0.001$). All five variables emerged as significant positive predictors. Professional Identity was the strongest predictor ($\beta = 0.291$, $p < 0.001$), followed by Self-Efficacy ($\beta = 0.268$, $p < 0.001$), Student Engagement ($\beta = 0.239$, $p < 0.001$), Teaching

Methods (β = 0.217, p < 0.001), and School Environment (β = 0.194, p < 0.001).

7.4 Discussion of Hypotheses

H1: Professional Identity. The results supported the hypothesis that Professional Identity is positively associated with Learning Motivation. It showed the highest correlation (r = 0.758, p < 0.001) and the largest regression coefficient (β = 0.291, p < 0.001). This indicates that students who identify more strongly with the profession tend to be more motivated academically. From the perspective of Self-Determination Theory, professional identity likely satisfies basic psychological needs—seeing teaching as meaningful strengthens autonomy and relatedness. The high mean for "Preschool teaching is a meaningful profession" (M = 3.99) corroborates this. However, a lower score on career prospects (M = 3.69) suggests that unclear pathways may dampen the motivational effect. This aligns with Liu and Zhang's (2020) finding that professional identity mediates the link between teaching quality and motivation in Chinese preschool education students.

H2: Self-Efficacy. In line with Social Cognitive Theory, Self-Efficacy was the second-strongest predictor (β = 0.268, p < 0.001; r = 0.712, p < 0.001). Students' confidence in their ability to master tasks directly relates to higher motivation. The effort-belief item ("Hard work leads to good grades") received a high mean (M = 3.98), whereas confidence in active presentation (M = 3.61) was lower. This reinforces that self-efficacy is domain-specific; confidence in receptive tasks does not automatically translate to expressive tasks (Bas, 2022; Aytaç, 2021).

H3: Student Engagement. Engagement was a significant predictor (β = 0.239, p < 0.001; r = 0.703). Students who are behaviorally, emotionally, and cognitively engaged exhibit stronger motivation. Despite this positive association, Student Engagement registered the lowest mean (M = 3.71), with particularly low scores for pre-class preparation (M = 3.48) and in-class questioning (M = 3.54). This "high compliance, low initiative" pattern suggests that engagement quality may be more critical than mere compliance (Tran & Nagirikandalage, 2025).

H4: Teaching Methods. Teaching Methods contributed positively to learning motivation (β = 0.217, p < 0.001; r = 0.685). This finding is consistent with the social constructivist principle that interactive, autonomy-supportive teaching enhances intrinsic motivation. Students valued practical relevance (e.g., case-based learning, M = 3.93) but desired more diverse strategies (M = 3.61). This echoes research showing that providing meaningful choices and feedback supports autonomous motivation (Reeve & Shin, 2020; Murodullayeva, 2025).

H5: School Environment. School Environment was the weakest yet still significant predictor (β = 0.194, p < 0.001; r = 0.621). The result supports Organizational Support Theory: positive relationships with peers (M = 3.89) and instructors (M = 3.83) are motivational assets, but perceived inadequacy of material resources (M = 3.60) and administrative efficiency (M = 3.57) may limit the full motivational benefits. This "strong social support, weak infrastructure" pattern underscores the importance of both psychological and physical dimensions of the environment (Bas, 2025; Darling-Hammond et al., 2017).

Overall, the five predictors demonstrated robust associations with learning motivation. Given the cross-sectional, correlational design, these findings indicate predictive relationships but do not establish causality. The model's high explanatory power (R^2 = 0.733) nonetheless suggests practical and theoretical significance.

8. conclusion

This study concludes that Professional Identity, Self-Efficacy, Student Engagement, Teaching Methods, and School Environment

are significantly associated with the learning motivation of preschool education major students in Xi'an City. Professional Identity emerged as the strongest predictor, while School Environment was the most modest, although still meaningful. The findings provide empirical evidence from a mid-sized Chinese city, enriching the application of motivational theories in preschool teacher education contexts.

For practice, the following are recommended:

University administrators should strengthen organizational support by improving professional facilities, streamlining administrative services, and providing clearer career development pathways.

Teacher educators should adopt more interactive, practice-oriented teaching methods and design mentorship programs to boost students' self-efficacy and professional identity.

Policymakers should promote public recognition of preschool education's value, allocate resources for active learning initiatives, and standardize curriculum and assessment to reduce non-academic workload.

Future research could employ longitudinal designs to track motivational changes over time, incorporate qualitative methods for deeper insights, and explore mediating variables (e.g., psychological need satisfaction) or comparative analyses across regions and institution types.

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