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Preschool Education Students: Exploring The Influence of Academic Background in Zhejiang Province

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ABSTRACT

This study explores how teachers and children interact throughout class activities, paying special emphasis to the feedback given to preschoolers to assist in their learning. It explores how feedback can deepen children's comprehension and promote engagement (Pianta, La Paro, & Hamre, 2008), and it is based on the idea that learning occurs through collaborative interaction and conversation (Garcia-Carrion & Villardón-Gallego, 2016). A purposive sample of five-year-old children, and their teacher participated in three videotaped classroom observations on different days as part of a qualitative methodology. According to the study's findings, scaffolding, thought process prompting, encouraging, and acknowledging achievements were all incorporated in the teacher's feedback. Both verbal and nonverbal such as praising, accomplishments, encouragements, gestures like smiles or shoulder pat, were noted, even though the teacher mostly oversaw guided activities. While closed-ended inquiries were frequently used in interactions, there were also examples of positive reinforcement and modelling of materials. This study contributes to the understanding of how feedback might improve learning by providing a detailed account of a single classroom environment. The results highlight the potential occurrence of teacher-child interactions that go beyond question-and-answer format and offer guidance for more dialogic and responsive teaching methods in early childhood education.

Keywords: *Children, Teacher, Teacher-Child Interactions, Preschool, Activity*

INTRODUCTION

The evolving landscape of preschool education demands increasingly higher standards from its prospective educators. Preschool education forms a crucial component of China's basic education system. Recognizing this, the Central Committee of the Communist Party of China and the State Council issued the "Several Opinions on Deepening Reform and Standardized Development of Preschool Education" in 2018 (J. Li & Xue, 2020). These guidelines emphasize public welfare and universal access, aiming fundamentally to elevate the quality of preschool education, setting a clear direction for the sector's development. High-quality preschool education is vital not only for children's formative development but also for broader national progress. Teachers, serving as role models, observers, and guides for young children, carry significant responsibility in this process (Jing, 2025). Consequently, the demands placed on their academic quality, professional ethics, and overall competence have intensified. This extends to college students preparing to enter the field, whose level of professional identity is a critical indicator of the success of their training programs (Hu & Li, 2012). A student's understanding and identification with the preschool education profession influences their career choices and ultimately impacts the development trajectory of the nation's youth (Rao & Pearson, 2009). This study aims to explore the current state of professional identity among preschool education students with differing academic backgrounds (undergraduate versus vocational college) in Zhejiang Province, providing insights to enhance teacher training and professional development.

PROBLEM STATEMENT

Enhancing the professional identity of kindergarten educators is crucial for raising the standard of preschool education. University students who are preparing to become preschool teachers will eventually form the next generation of kindergarten educators, which makes their professional perspective especially important for the growth of early childhood education in China (Wu et al., 2024). Recognizing kindergarten teaching as a professional occupation helps overcome outdated views and promotes greater respect for the profession among the public (Jiang et al., 2022). Comprehending how caregiving and education blend seamlessly in a kindergarten environment is essential for appreciating the distinct contributions these teachers make.

While research exists on the professional identity of in-service kindergarten teachers, fewer studies have focused specifically on preschool education students during their training period (Jing, 2025; J. Li & Xue, 2020; Z. Li et al., 2024). Furthermore, within the student population, comparisons between those pursuing undergraduate degrees and those in vocational (specialist or junior college) programs are scarce (Z. Li et al., 2024). Existing literature often reports moderate levels of professional identity among students but sometimes lacks differentiation between academic levels or detailed analysis of influencing factors like academic background (Wu et al., 2024). This study addresses this gap by directly comparing the professional identity of undergraduate and vocational college preschool education students in Zhejiang Province, analysing potential differences and similarities to inform targeted strategies for identity development across diverse academic pathways.

LITERATURE REVIEW

An initial examination of academic literature shows variable interest in research focused specifically on preschool education students (Guo, 2021). Although previously this field experienced considerable scholarly activity, there was a noticeable decline in publications targeting preschool education students between the years 2019 and 2022. However, despite this recent decrease, preschool education as a broader area continues to attract significant scholarly attention both domestically and internationally, indicating sustained interest and its importance within educational research (Eadie et al., 2024; Eliasson et al., 2023; Parisi-Moreno et al., 2021; Zakaria et al., 2023). The results of a literature search on studies involving preschools in China through the CNKI database found that many studies focused on prospective teachers who were in undergraduate programs at public universities. Very few considered samples of prospective teachers who came from vocational programs or colleges of education. Therefore, Wang et al. (2023) suggested that there is an opportunity to study whether there are differences in prospective teachers who came from vocational programs or from the mainstream.

Current State of Professional Identity Research (Preschool Education Students)

Studies conducted in recent years have found that the professional identity level of students in preschool education majors in China has on average shown an above-average increase (Guo, 2021). For example, research at Nanchang Normal University shows that undergraduate students there have an average level of professional identity. While the same study conducted in Guizhou revealed that the professional identity level of students there is at a moderate to slightly high level (Luo et al., 2025). While students in college have an average professional identity that is measured at a slightly aboveaverage level (T. Li et al., 2022). There are also several studies that have found a low level of professional identity, but factors such as the student's choice of profession are the main factors in making the level of professional identity positive. Therefore, several studies have identified several main factors that influence the level of professional identity of university students. These factors are the age of the student, the type of educational institution, the socioeconomic background, and the family environment. Therefore, examining these factors can generate meaningful insights and directions for future research related to the education and professionalism of prospective educators (Zakaria et al., 2024). In addition, considering factors occurring in other regions outside China as examples of guidance and practical experiences in diverse educational contexts can be done. This can help researchers to deepen their current understanding of the formation of professional identities among preschool education students in China (Almessabi & Alhosani, 2025).

Dimensions of Professional Identity

Most researchers related to professional identity use a construct that has five dimensions (Cankaya et al., 2023). The first dimension is professional cognition where this dimension evaluates and understands a profession. The second dimension is professional emotion, where feelings towards the chosen profession will be measured. The third dimension is professional will, where will such as commitment and motivation in the profession being pursued will be assessed. The fourth dimension is professional values where values such as beliefs, interests and ethics when carrying out tasks are assessed. The last is the dimension of professional preparation or competence where the perception of the ability to perform the role effectively will be seen. Studies often utilize questionnaires designed to measure these facets. For example, Zhang et al. (2024) identified five key aspects: will, emotion, preparation, values, and cognition. Similarly, Holiday et al. (2023) surveyed preparation, values, cognition, emotions, and will. This study adopts a similar framework, examining professional identity through the dimensions of professional cognition, emotion, ability (competence/preparation), and values.

Research Hypotheses

Based on the research objectives and the existing literature, this study formulated several hypotheses to guide the investigation into the professional identity of preschool education students. These hypotheses represent specific expectations about the relationships between students' academic backgrounds, their developing sense of professional self, and their potential commitment to the field. It is important to note that while these hypotheses stem from common observations in educational research, incorporating explicit links to established theories, such as Bandura's Self-Efficacy Theory regarding beliefs in one's capabilities or Tajfel and Turner's Social Identity Theory concerning group belongingness, could provide a more robust theoretical foundation (Gaffney & Hogg, 2023; Poluektova et al., 2023).

First, the study hypothesized that the profile or specific pattern of professional identity might differ significantly between students enrolled in undergraduate degree programs and those in vocational college programs. Professional identity is multifaceted, encompassing aspects like understanding the profession, feeling capable, valuing the career, and having an emotional connection to it (Song et al., 2021). The distinct educational pathways such as undergraduate programs often emphasizing broader theoretical knowledge and vocational programs potentially focusing more on practical skills. This could shape these different facets in unique ways. Factors such as variations in curriculum content, teaching approaches, institutional expectations regarding academic rigor versus practical readiness, and even the perceived career trajectories associated with each qualification level might lead to noticeable differences in how students perceive and identify with the preschool education profession (T. Li et al., 2022). Therefore, we anticipated that the shape of professional identity, considering the various dimensions together, would vary depending on the students' academic track.

Second, building upon the potential differences in identity profiles, the study explored whether there is a difference in the overall level of professional identity felt by undergraduate students compared to their vocational college counterparts. This hypothesis examines if one group, on average, expresses a stronger overall sense of connection, belonging, and commitment to the preschool teaching profession than the other group (Zhang et al., 2024). Acknowledging the limited comparative research and avoiding assumptions based solely on qualification type, this hypothesis simply posits that a difference in the overall strength of professional identity between the two groups is likely to exist, prompting an empirical investigation into the nature and direction of any such variation.

Finally, the research hypothesized a positive relationship between the strength of a student's professional identity and their inclination towards future professional development. It was expected that students who strongly identify with the preschool teaching profession (Song et al., 2021). Which meaning they see themselves as members of this professional community and value their role within it, would be more motivated to engage in activities aimed at enhancing their skills and knowledge throughout their careers. This implies that a robust sense of professional identity often fosters a deeper commitment to the field, translating into proactive behaviours like pursuing further training, participating in educational research, and embracing lifelong learning opportunities relevant to early childhood education. Essentially, feeling like a dedicated professional is expected to fuel the desire to become an even better one.

METHODOLOGY

Research Design and Instrument

This study employed a quantitative survey design to investigate the professional identity of preschool education students. The questionnaire used was adapted from an existing instrument developed by Xiaowei (et al. 2021), modified to suit the specific context of this research. The adapted questionnaire, titled "Preschool Education Students' Occupational Identity Questionnaire," measures professional identity across four key dimensions: professional cognition, professional emotion, professional ability (competence), and professional values.

The questionnaire consists of two sections. The first section collects basic demographic information from participants (gender, academic qualification, year of study, internship experience). The second section contains 20 items measuring professional identity, with 5 items dedicated to each of the four dimensions. All items utilize a Likert five-point scale format, ranging from 'Strongly Agree' (A) to 'Strongly Disagree' (E). Scoring was assigned with 5 points for the highest level of identity (A), decreasing to 1 point for the lowest level (E). A higher total score indicates a stronger professional identity. The specific items corresponding to each dimension are detailed in Table 1.

Table 1. Summary of questionnaire question

Dimension	Number of Items	Corresponding Question Numbers	Cronbach's Alpha
Professional Identity	5	5、 6、 7、 8、 9	0.796
Professional Emotion	5	10、 11、 12、 13、 14	0.900
Professional Ability	5	15、 16、 17、 18、 19	0.843
Professional Value	5	20、 21、 22、 23、 24	0.860
Comprehensive	20	5-24	0.927

Participants and Sampling

The participants were 118 students majoring in preschool education, drawn from two institutions in Zhejiang Province: an undergraduate university and a vocational (junior) college. The sample included students from different years of study and with varying internship experiences, allowing for comparisons across these variables.

Data Analysis

Data collected from the questionnaires were analysed using statistical software SPSS. Descriptive statistics (mean, standard deviation, minimum, maximum) were calculated to determine the overall level of professional identity and the scores for each dimension. Inferential statistics, including independent samples t-tests and analysis of variance (ANOVA), were employed to compare professional identity scores across different groups based on gender, academic qualification, and year of study. The significance level was set at 0.05 alongside p-values would strengthen the analysis by indicating the magnitude of observed differences (Field, 2017).

Trustworthiness

The reliability of the adapted questionnaire was assessed using Cronbach's alpha coefficient. The overall reliability for the professional identity scale in this study was $\alpha = 0.927$, indicating high internal consistency. The Cronbach's alpha coefficients for the individual dimensions were also calculated: Professional Cognition ($\alpha = 0.796$), Professional Emotion ($\alpha = 0.900$), Professional Ability ($\alpha = 0.843$), and Professional Values ($\alpha = 0.860$). All coefficients exceeded the commonly accepted threshold of 0.7, suggesting that the survey instrument reliably measured the intended constructs within this sample. The reliability of the original Li Quanhua (2016) questionnaire was reported as $\alpha = 0.938$.

RESULTS

Overall Level of Professional Identity

The analysis revealed that the overall mean score for professional identity among the 118 preschool education students was $M = 3.849$ ($SD = 0.547$). This score is above the theoretical midpoint (3) of the 5-point Likert scale, suggesting that, on average, the students possess an upper-middle level of professional identity.

Examining the specific dimensions, the highest average score was observed for 'Professional Cognition' ($M = 4.342$, $SD = 0.444$). This indicates that students generally have a strong understanding of the preschool teaching profession, including its work content and required knowledge. Following this were 'Professional Emotion' ($M = 4.029$, $SD = 0.578$) and 'Professional Ability' ($M = 3.832$, $SD = 0.722$). The lowest average score was found for 'Professional Values' ($M = 3.192$, $SD = 0.888$). This suggests that while students understand the profession and feel reasonably capable and emotionally connected, their perception of its value, potentially linked to factors like salary and social status, is comparatively lower. Despite the lower score in values, the overall identity level remains moderately high. (Refer to Table 2 for detailed descriptive statistics).

Table 2. Summary of Hypotheses Testing

Dimension	Minimum	Maximum	Mean	Standard Deviation
Professional Identity	3.200	5.000	4.342	0.444
Professional Emotion	1.600	5.000	4.029	0.578
Professional Ability	1.800	5.000	3.832	0.722
Professional Value	1.200	5.000	3.192	0.888
Comprehensive	2.300	5.000	3.849	0.547

Analysis of Differences

Gender: An independent samples t-test revealed no statistically significant difference in the overall professional identity scores between male ($M = 3.86$, $SD = 0.79$) and female ($M = 3.85$, $SD = 0.53$) students ($t = 0.073$, $p = 0.942$). Similarly, no significant differences were found between genders for any of the four individual dimensions ($p > 0.05$ for all). Both male and female students scored highest on 'Professional Cognition' and lowest on 'Professional Values'. Although not statistically significant, males scored slightly higher on average in 'Professional Emotion' and 'Professional Values', while females scored slightly higher in 'Professional Cognition'. Overall, both genders demonstrated an upper middle level of professional identity. (Refer to Table 3 for t-test results).

Table 3. T-test Results for Professional Identity by Gender

Dimension	Gender	N	Mean	Std. Dev.	t-value	p-value (2-tailed)
Professional Identity	Male	8	4.28	0.63	-0.318	0.759
	Female	110	4.35	0.43		
Professional Emotion	Male	8	3.85	1.08	0.072	0.943
	Female	110	3.83	0.7		
Professional Ability	Male	8	4.03	0.73	-0.019	0.985
	Female	110	4.03	0.57		
Professional Value	Male	8	3.3	1.25	0.356	0.722
	Female	110	3.18	0.86		
Comprehensive	Male	8	3.86	0.79	0.073	0.942
	Female	110	3.85	0.53		

Note: Significance level; 0.05.

Academic Qualification: A paired samples t-test was conducted to compare students from undergraduate (bachelor's degree) programs ($n=59$) and vocational (junior college) programs ($n=59$). The results showed no statistically significant difference in the overall professional identity scores between the two groups ($t = 1.103$, $p = 0.272$). Undergraduate students had a mean score of

M = 3.90 (SD = 0.54), while vocational college students had a mean score of M = 3.79 (SD = 0.55). Both groups exhibited an upper-middle level of professional identity.

However, a statistically significant difference was found in the 'Professional Ability' dimension ($t = 2.168, p = 0.032$). Specifically, vocational college students (M = 4.14, SD = 0.53) reported significantly higher perceived professional ability than undergraduate students (M = 3.92, SD = 0.61). This suggests that vocational students felt more confident in their practical skills and capabilities related to preschool education and teaching. No significant differences were found for the dimensions of 'Professional Cognition', 'Professional Emotion', or 'Professional Values' ($p > 0.05$ for all) (Refer to Table 4).

Table 4. T-test Results for Professional Identity by Academic Qualification

Dimension	Academic Qualification	N	Mean	Std. Dev.	t-value	p-value (2-tailed)
Professional Identity	Vocational College	59	4.37	0.41	0.745	0.458
	Undergraduate	59	4.31	0.48		
Professional Emotion	Vocational College	59	3.84	0.73	0.076	0.939
	Undergraduate	59	3.83	0.72		
Professional Ability	Vocational College	59	4.14	0.53	2.168*	0.032
	Undergraduate	59	3.92	0.61		
Professional Value	Vocational College	59	3.26	0.92	0.891	0.375
	Undergraduate	59	3.12	0.85		
Comprehensive	Vocational College	59	3.9	0.54	1.103	0.272
	Undergraduate	59	3.79	0.55		

Note: Significance level; 0.05.

Year of Study (Grade): An analysis of variance (ANOVA) was conducted to examine differences in professional identity across different years of study: freshman (n=9), sophomore/junior combined (n=18), and graduating class (n=91). The results indicated no statistically significant difference in overall professional identity based on grade level ($F = 0.641, p = 0.529$). No significant differences were found for any of the individual dimensions either ($p > 0.05$ for all).

Although not statistically significant, descriptive statistics showed a pattern: the mean overall identity score was lowest for freshmen (M = 3.65, SD = 0.26), increased for sophomores/juniors (M = 3.87, SD = 0.58), and remained similar for the graduating class (M = 3.86, SD = 0.56). This suggests a possible trend of identity strengthening after the first year, potentially plateauing or slightly declining towards graduation, resembling an inverted V-shape, though this trend did not reach statistical significance in this sample. All grade levels showed average scores above the midpoint, indicating an upper-middle level of identity throughout. (Refer to Table 5).

Table 5. ANOVA Results for Professional Identity by Year of Study

	Grade (Mean ± Standard Deviation)			F	p
	Freshman(n=9)	Sophomore or junior year(n=18)	the graduating class(n=91)		
Professional Identity	4.07±0.37	4.36±0.51	4.37±0.43	1.914	0.152
Professional Motion	3.71±0.28	3.89±0.75	3.83±0.75	0.179	0.836
Professional Ability	3.76±0.28	3.99±0.58	4.06±0.60	1.220	0.299
Professional Attitude	3.07±0.64	3.26±0.79	3.19±0.93	0.134	0.875
Comprehensive	3.65±0.26	3.87±0.58	3.86±0.56	0.641	0.529

* $p < 0.05$ ** $p < 0.01$

DISCUSSION

This study aimed to explore the professional identity of preschool education students in Zhejiang Province, focusing on potential variations related to academic background and other demographic

factors. The findings reveal a generally positive but nuanced picture of identity formation among these future educators.

The overall professional identity of the participating students was found to be at an upper-middle level. This suggests that students, on the whole, hold a reasonably strong sense of belonging and commitment to the field of preschool education. This aligns with findings from several other studies conducted in different regions of China, which also reported moderate to high levels of professional identity among similar student populations (Holiday Villa et al., 2023; Wang et al., 2023). Students demonstrated the strongest identification in the dimension of 'Professional Cognition', indicating a solid understanding of the roles, responsibilities, and knowledge base required for the profession. This high cognitive understanding likely stems from their formal coursework and exposure to the field during their studies. However, the dimension of 'Professional Values' received the lowest scores. This suggests a potential disconnect between students' understanding of the profession and their perception of its societal value, rewards, and status, particularly concerning salary and benefits, which many students reportedly felt were inadequate. This finding resonates with research highlighting concerns about compensation and social recognition as significant factors influencing career choices and retention in early childhood education (Z. Li et al., 2024). While students seem to understand the job and feel relatively capable ('Professional Ability' scores were moderate-to-high) and emotionally connected ('Professional Emotion' scores were also reasonably high), the lower valuation poses a potential challenge to long-term commitment.

Regarding demographic factors, the study found no statistically significant differences in overall professional identity based on gender or year of study. The lack of gender difference is consistent with some prior research, although the slightly higher (though not significant) scores for male students in certain dimensions might reflect the unique position and potential demand for male teachers in a predominantly female field in China. The non-significant findings related to year of study suggest that major shifts in identity may not occur uniformly across grade levels within this sample, although the descriptive data hinted at potential growth after the first year. This contrasts with some developmental theories suggesting identity solidifies over time, perhaps indicating that factors beyond simple duration of study are more influential, or that significant changes occur post-graduation upon entering the workforce (Wu et al., 2024).

Perhaps the most striking finding for this research relates to academic qualifications. While overall professional identity did not differ significantly between undergraduate and vocational college students. A significant difference emerged in the 'Professional Ability' dimension. Vocational college students reported significantly higher confidence in their professional abilities which their perceived self-efficacy compared to their undergraduate counterparts. This finding could suggest that vocational programs may foster a stronger sense of immediate competence in areas like classroom management and activity implementation. This may be due to the student that come from vocational programs often emphasizing practical skills and hands-on training compare to normal student. This difference also may happen due to normal undergraduate student feeling less equipped to handle practical tasks immediately after graduation due to they typically emphasize theoretical knowledge.

Beside that normal students is more self-critical as they been trained to higher education standards compare to their own professional skills and competence. Additionally, normal student often have elevated expectations concerning their career prospects. This expectation are include advancement opportunities and salary levels. If the reality of working in the preschool sector does not align with these expectations, it could negatively affect their profession. This include negative effect toward their confidence in the profession and prompt them to pursue other career paths. Given these differences in self-perception a further research is needed to identify the factor in self-identity development among student. Such research might beneficially investigate factors like differences in curriculum content, practical training opportunities, and career outlook between undergraduate and vocational education programs.

The influence of internships, although not statistically significant in the analysis discussed previously, appears practically meaningful. Students who had internship experiences typically reported stronger professional identities, especially regarding the value they place on their future careers. This finding aligns with several existing studies that underline the importance of hands-on experiences in developing professional identity (Jiang et al., 2022; Luo et al., 2025). Internships enable students to connect theory learned in the classroom to real-world scenarios, enhancing their practical abilities and giving them firsthand insights into the benefits and challenges of their chosen field. Such exposure usually results in a more realistic and solidified sense of professional identity. Conversely, internships that fail to meet expectations or are of poor quality might discourage students, reducing their enthusiasm and weakening their sense of professional identity.

Reflecting on the initial hypotheses, H1, predicting a difference in professional identity profiles based on academic qualifications, was partially supported, specifically concerning the dimension of professional ability. H2, which hypothesized a difference in *overall* professional identity between undergraduate and vocational students, was not supported by the statistical analysis. H3, suggesting a positive relationship between high professional identity and professional development intentions, was not directly tested with the available data analysis but is supported conceptually by the literature linking identity to career commitment.

SUGGESTIONS FOR ENHANCING PROFESSIONAL IDENTITY

Based on these findings, particularly the lower scores in professional values and the variation in perceived ability, several suggestions can be made to support the development of a stronger professional identity among preschool education students.

Improving the professional identity of preschool teachers requires significant changes which beginning with government action. Governments should take steps to increase how society values these educators. Government also must improve teacher financial situation. This means investing more money in early childhood education to provide better salaries and benefits to their educator might help. Such improvements can help tackle the common dissatisfaction that students express about the profession's economic prospects. Raising the public image of kindergarten teaching is also crucial. Public information campaigns explaining the job's importance and complexity could help to change outdated views that see educators in this sector merely as babysitters. When the public better understands and respects this profession, educators are likely to feel greater pride in their work. As noted in Maslow's hierarchy of needs, ensuring basic needs like fair pay are met is fundamental for keeping educators motivated, committed, and satisfied with their jobs (Maslow, 1943). When kindergarten teaching is recognized as both valuable to society and financially stable, it will likely attract more new teachers and help keep experienced ones in the field.

Educational institutions also have a major role in building students' confidence and professional skills. They should offer effective hands-on experiences and skill-building opportunities. Coursework needs to clearly connect the theories learned in class with the practical realities of the classroom. Since students in vocational tracks often report feeling more confident in their practical abilities, university degree programs including more direct teaching practice. Furthermore, internships must be well-organized and supervised closely. These should provide genuine teaching opportunities and not just allow students to observe. Students should actively participate in teaching tasks, classroom management, and receive constructive feedback from experienced mentor teachers. Strong partnerships between universities and kindergartens are essential for creating high-quality internships that truly support students' development as professionals. It is vital that students are treated as aspiring professionals who need guidance, rather than just extra help. Including practical experiences at various points throughout their studies could help student to grasp of how theories apply in real teaching situations. Beside that it also further strengthens students' skills and confidence.

Additionally, students themselves must take an active role in developing their own professional identity. Beside that student also should develop their career path. Institutions can support this by prompting students to reflect on their career goals and helping them see that success in early childhood education is possible regardless of their starting point. This regardless the student is from a university degree or a vocational program. It is important to guide students toward appreciating the inherent rewards of the profession rather than focusing only on salary. The inherent rewards such as the personal satisfaction derived from working with young children and contributing positively to society. Students should be encouraged to set clear, achievable career goals for the short, medium, and long term. Ongoing self-improvement can build professional confidence and a sense of accomplishment. This includes personal study, attending professional development workshops, or participating in research. Besides that, students also benefit from identifying their personal strengths and skills relevant to early childhood teaching. The skill includes self-awareness and motivation. Seeking advice or mentorship from experienced educators when encountering difficulties is another valuable step. Ultimately, fostering a positive attitude towards the profession, acknowledging its significant societal role, and recognizing one's own potential can guide students towards greater job satisfaction and meaningful contributions in their future careers.

LIMITATIONS AND FUTURE RESEARCH

This study has several limitations. First, the sample was drawn from only two institutions in Zhejiang Province, limiting the generalizability of the findings to other regions or types of institutions in China. Second, the reliance on self-reported questionnaire data may be subject to social desirability bias. Third, the cross-sectional design prevents conclusions about the causal direction of relationships or changes in identity over time. Fourth, the study did not delve deeply into the qualitative aspects of identity formation, such as personal experiences or the specific content of educational programs.

Future research could address these limitations by employing larger, more diverse samples across different provinces. Longitudinal studies tracking students throughout their program and into their early careers would provide valuable insights into identity development trajectories. Mixed methods approach, incorporating interviews or focus groups, could offer richer, more nuanced understanding of students' experiences and perceptions. Further comparative studies exploring curriculum differences and their specific impact on the various dimensions of professional identity, particularly professional ability and values, between undergraduate and vocational programs are also recommended. Investigating the impact of specific internship program models on identity development would also be beneficial.

CONCLUSION

This study provides valuable insights into the professional identity of preschool education students in Zhejiang Province, highlighting an overall moderate-to-high level of identification but also specific areas needing attention. While students generally understand the profession ('Professional Cognition') and feel emotionally connected and reasonably capable ('Professional Emotion' and 'Professional Ability'), their perception of the profession's value ('Professional Values') is significantly lower, likely linked to concerns about salary and social status. Notably, vocational college students reported higher perceived professional ability than undergraduate students, suggesting differences in how academic programs foster practical confidence. Factors like gender and year of study did not show significant impacts on overall identity in this sample.

The findings underscore the need for multi-faceted efforts involving government initiatives to improve the status and compensation of preschool teachers, university program enhancements focusing on integrating practical skills (especially in undergraduate programs) and providing high-quality internship experiences and fostering proactive career planning and positive value orientation among students themselves. By addressing these areas, stakeholders can better support the development of a strong, positive professional identity among future preschool educators, contributing to a more stable, committed, and effective early childhood education workforce in China.

DATA AVAILABILITY DECLARATION

The original contributions encompassed within this study are comprehensively documented in the article and accompanying supplementary materials. Should additional inquiries or data-related requests arise, kindly direct them to the attention of the corresponding author.

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CONFLICT OF INTEREST

The authors declare that there are no potential conflicts of interest arising from the results of this study.

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