

Article

A Study on the Differences in Professional Identity of Early Childhood Education Pre-Service Teachers Before and After Educational Internships

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Abstract: This study aims to explore the changes in professional identity among early childhood education preservice teachers (PSTs) before and after their educational internships. Data were collected using questionnaires and analyses with paired sample *t*-test and repeated measures ANOVA. The results showed significant differences in the professional identity of early childhood education PSTs before and after the internship. After the internship, students' overall professional identity improved significantly, particularly in terms of professional emotions and values. During the internship, undergraduates with high self-evaluation experienced a significant improvement in their professional identity, particularly in their professional values. The study indicated that educational internships play a positive role in enhancing the professional identity of early childhood education PSTs, helping them to experience better professional emotions and develop sound professional values. It is recommended to strengthen the internship practice in early childhood education programs to cultivate students' professional emotions and values and to focus on students with high self-evaluation during internships to promote the formation and development of their professional identity.

Keywords: early childhood education; educational internship; professional identity; self-evaluation; sustainable development education

1. Introduction

Professional identity is defined as an individual's positive evaluation and satisfaction with the value of a particular profession. Numerous studies have demonstrated the close relationship between professional identity and individual career development [1]. It influences career selection and development, job stability, and personal job satisfaction. Numerous studies have demonstrated the level of professional identity within specific groups. For example, both job crafting and professional identity have independent and mediating roles between psychological contracts and teacher competency [2]. In the field of early childhood education, teachers' professional identity is particularly important in early childhood education because it directly affects their enthusiasm for work and teaching quality. The formation of teachers' professional identities depends not only on theoretical knowledge but also on the accumulation of practical teaching experience [3]. Research on influencing factors in professional identity also identifies significant factors through extensive quantitative analysis. For example, the learning environment and students' academic ability beliefs were proven to influence early childhood education PSTs' professional identity [4]. Key factors influence and adjust this long process of professional identity formation [5].

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As an important practical component of early childhood education programmers, educational internships subtly impact students' professional identity by allowing them to experience teaching work firsthand, effectively promoting the enhancement of professional identity [6]. Some studies have applied the Job Demands-Resources (JD-R) model to examine the effects of teaching internships on pre-service teachers, confirming that self-efficacy mediates the relationship between job resources and professional identity [7]. However, there is still a lack of research clearly comparing the professional identity of PSTs before and after educational internships, as well as among different self-evaluation groups. Therefore, this study aims to compare the changes in professional identity among early childhood education PSTs before and after educational internships.

2. Research Design and Implementation

2.1. Research Design

This study, drawing from a comprehensive literature on professional identity, examines the circumstances leading up to and following an early childhood education PST educational internship. Additionally, it incorporates trainee self-evaluation factors, as measured by the mature "Professional Identity Scale" questionnaire [8]. The independent variable includes the basic information about the research subjects and the trainees' self-evaluation level. The dependent variable is the total score of Professional Identity (PI), with dimensions such as Professional Awareness (PA), Professional Emotions (PE), Professional Commitment (PC), Professional Values (PV), and Professional Preparation (PP). The questionnaire contains 30 items using a 5-point Likert scale, with scores ranging from "strongly disagree" to "strongly agree." The overall reliability of the questionnaire is 0.969, and the validity of the KMO is 0.947, indicating good reliability and validity. Data were organized and analyzed to confirm the impact of educational internships on the professional identity of early childhood education PSTs.

2.2. Research Sample

The study targeted undergraduate students majoring in early childhood education at a certain university. Questionnaires were distributed to 212 students before the internship and 211 students after the internship. Due to some dropouts of research subjects, 188 valid questionnaires were finally included for statistical comparison. Before the survey, all participants were informed that their personal information would be anonymous and they had the right to refuse participation. It took approximately 10 minutes for participants to complete the scales in a quiet classroom. Data were collected from April 2023 to June 2023.

2.3. Data Analysis

Questionnaires were administered to students before and after the educational internship, and 188 valid questionnaires were collected. Data were statistically analyzed using SPSS 26.0, including descriptive statistics and paired sample *t*-tests. To determine the overall and dimension-specific levels of professional identity before and after the internship, descriptive statistics of the average values of professional identity levels for 188 early childhood education PSTs were conducted. To determine whether the improvements in professional identity dimensions before and after the internship were significant, paired sample *t*-tests were conducted.

3. Results

3.1. Average Values of Professional Identity Dimensions Before and After the Internship

The average overall professional identity score increased from 3.84 before the internship to 3.94 after (Table 1). Regardless of whether before or after the internship, all dimensions of professional identity exceeded the theoretical median of 3 points, indicating a

moderate to high level of professional identity among early childhood education PSTs. The order of dimensions remained consistent, with professional preparation being the highest, followed by professional cognition, professional values, professional emotions, and professional willpower. Each dimension's level increased after the internship, indicating the positive impact of the internship on professional identity.

Table 1. Average values of various dimensions of professional identity before and after internship.

	PA	PE	PW	PV	PP	PI
Before	4.01	3.82	3.31	3.84	4.09	3.84
After	4.05	3.96	3.41	4.04	4.14	3.94

3.2. Differences in Professional Identity Dimensions Before and After the Internship

The overall professional identity score after the internship was significantly higher than before ($t = -2.647, p = 0.009 < 0.05$), indicating a highly significant difference (Table 2). In particular, the dimensions of professional emotions ($t = -3.049, p = 0.003 < 0.05$) and professional values ($t = -4.660, p = 0.000 < 0.05$) demonstrated highly significant differences. However, the differences in the dimensions of cognition ($t = -0.877, p = 0.382$), willpower ($t = -1.692, p = 0.092$), and professional preparation ($t = -1.400, p = 0.163$) were not significant.

Table 2. Paired sample *t*-test results of various dimensions of professional identity before and after internship.

Professional Identity Comparison Project	M	SD	<i>t</i>	<i>f</i>	<i>p</i>
PA (before) – PA (after)	-0.036	0.561	-0.877	187	0.382
PE (before) – PE (after)	-0.138	0.622	-3.049	187	0.003
PW (before) – PW (after)	-0.100	0.810	-1.692	187	0.092
PV (before) – PV (after)	-0.193	0.567	-4.660	187	0.000
PP (before) – PP (after)	-0.054	0.527	-1.400	187	0.163
PI (before) – PI (after)	-0.100	0.519	-2.647	187	0.009

The *t*-test results indicate that educational internships have a significant impact on early childhood education PSTs' professional identity, particularly in terms of professional emotions and values. During the internship, students enhanced their emotional identification with the profession and their understanding of the values of early childhood education through practical teaching experiences. One possible explanation for the lack of significant improvement in cognition, willpower, and professional preparation could be the limited duration and depth of hands-on activities during the internship. Future studies may explore this relationship through qualitative data or extended internship models. This suggests that future internship designs should increase the duration and opportunities for practical experience to comprehensively enhance the professional identity of early childhood education PSTs.

3.3. Differences in Professional Identity Before and After the Internship Among Different Self-Evaluation Groups

For the overall professional identity score, the main effect of measurement time was not significant: $f(1185) = 1.775, p = 0.1884$, partial $\eta^2 = 0.010$ (Figure 1). The main effect of groups was significant, $f(2185) = 8.336, p = 0.000$. The interaction effect between time and groups was significant ($f(2185) = 3.275, p = 0.040$, partial $\eta^2 = 0.034$). On a second test of professional identity, the group with high self-evaluation had a significantly higher score ($f(1185) = 13.183, p = 0.000$, partial $\eta^2 = 0.67$), but there was no statistically significant difference between the moderate and high self-evaluation groups, though both scored lower than the very high self-evaluation group.

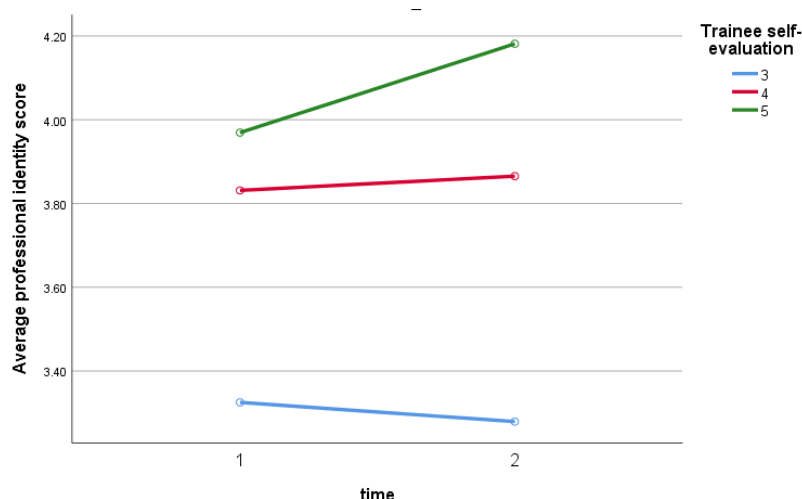


Figure 1. Changes in Professional Identity Scores for Groups with Moderate (3), High (4), and Very High (5) Self-Evaluations Before (T1) and After (T2) the Internship.

Among the dimensions of professional identity, each contributes differently to the overall score.

Differential testing of each dimension revealed significant differences in the pre- and post-test scores of professional values across different self-evaluation groups.

For professional values, the main effect of measurement time was significant: $f(1185) = 13.183, p = 0.000, \eta^2 = 0.067$ (Figure 2). The main effect of groups was significant: $f(2185) = 8.905, p = 0.000, \eta^2 = 0.088$. The interaction effect between time and groups was significant ($f(2185) = 5.427, p = 0.005, \eta^2 = 0.055$). Further simple effect analysis revealed that the professional values scores of the higher self-evaluation group significantly increased after the internship ($f(1185) = 22.263, p = 0.000, \eta^2 = 0.108$), whereas the differences in the other two groups were not significant.

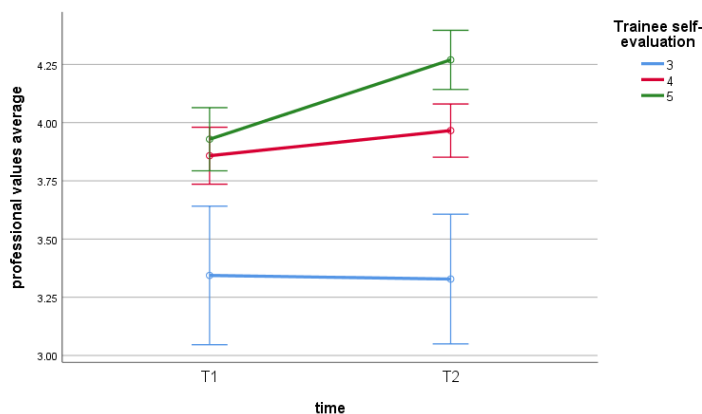


Figure 2. Changes in Professional Values Scores for Groups with Moderate (3), High (4), and Very High (5) Self-Evaluations Before (T1) and After (T2) the Internship.

4. Discussion

The results indicate that educational internships have a positive impact on the professional identity of early childhood education PSTs, especially in the dimensions of professional emotions and values. The significant improvement in the overall professional identity and specific dimensions suggests that internships provide students with valuable practical experiences that enhance their professional recognition and emotional connection to their future careers. The findings also highlight the importance of self-evaluation during internships, as students with higher self-evaluation showed greater improvements

in professional identity and values. These results underscore the need to strengthen internship practices in early childhood education programmers and provide targeted support to students based on their self-evaluation levels to further enhance their professional development [9].

Educational internships have a significant impact on early childhood education PSTs' professional identity, particularly the cultivation of professional emotions and the establishment of professional values. The design of educational internship courses should place greater emphasis on these two aspects. During their undergraduate education, students are generally well-prepared in terms of professional preparation and cognition, but theoretical learning does not significantly impact emotions and values. Educational internships serve as the primary channel for educational practice, building community relationships, and interacting with professional knowledge learning in schools [10]. Education internship courses can focus on cultivating professional emotions and establishing professional values. A review of research on the way universities train pre-service teachers concludes that interns' independent learning, teacher education institution guidelines, curriculum, assessment, and funding are all critical to universities ensuring the quality of internships [11]. In the design of educational internship courses, emphasizing the education of teacher ethics and morality and increasing the proportion of tasks and assignments related to professional emotions and values can contribute to the overall development of interns' professional values.

In the levels of professional identity before and after the internship, the dimension of professional willpower is the lowest among all dimensions, indicating that the current design of educational internship courses has not significantly improved the professional willpower of early childhood education PSTs. Professional willpower is important in determining whether practitioners can persevere in their work when encountering professional difficulties, and limited professional willpower levels may affect practitioners' well-being [12]. Identity threats to belonging, balancing life and work time, and teaching attrition are important factors influencing the retention of teachers [13]. Additionally, research on teacher attrition suggests that positive psychological capital is one of the factors influencing teacher retention [14], and professional willpower can help promote teacher retention. Research on the potential factors influencing professional willpower is necessary, as educational internships have not yet demonstrated a significant impact on enhancing it. For example, research has confirmed that feeling more creative has a positive effect on enhancing willpower [15]. Perhaps providing undergraduates with creative work during educational internships could improve this. In any case, suitable methods to enhance undergraduates' professional willpower still need to be discovered to reduce the attrition of early childhood education teachers.

In the absence of a unified standard for internship evaluation, self-evaluation is an important part of internship evaluation. The research results confirm that interns with high self-evaluation show more significant improvement in professional identity after the internship, particularly in the enhancement of professional values. Therefore, the supervising teachers at schools and internship bases should pay attention to the cultivation of these students. The overall improvement in professional values and identity implies a higher willingness to pursue a career in the field. Supervisors at schools and internship bases should prioritize their professional growth path, both during and after the internship, by assigning challenging tasks and fostering the development of various skills necessary for their professional growth. Through personalized guidance and support, their professional growth can be further enhanced.

5. Recommendations

Based on this current study, it is suggested that when developing a curriculum design, the factors of PI, PA, PE, PW, PV, and PP, should be focused and integrated. Because

these factors will foster students' professional development and growth. Therefore, systemic guidance on the internship process based on the factors concerned should be carefully implemented. From one of the key findings from this study, high self-evaluation is a significant factor which improved and cultivated students' professional development, hence, people involved should consider fostering intern students with a particular focus on this issue and practical and evaluation scale. Therefore, it is highly recommended that apart from an appropriate curriculum design, the proper training on the use of evaluation scale which covers PI, PA, PE, PW, PV, and PP, is beneficial for students' professional development and growth.

6. Conclusion

From the study, it is concluded that educational internships play a crucial role in fostering the professional identity of early childhood education PSTs. The positive changes observed in professional emotions and values after the internship emphasise the importance of practical experiences in teacher training programmes. Self-evaluation during the internships is also a very significant factor that can foster and promote students' development of their professional identity. Thus, the development of curriculum design which covers the following main factors; PI, PA, PE, PW, PV, and PP, is an essential pathway to the career success for students.

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References

1. Q. Zhao, "On the role of teachers' professional identity and well-being in their professional development," *Front. Psychol.*, vol. 26, Art. no. 913708, 2022, doi: 10.3389/fpsyg.2022.913708.
2. X. Hu, Y. Lv, M. Tan, and B. Hao, "Influence of early childhood teachers' psychological contracts on teacher competency: Chain mediating role of job crafting and professional identity," *Heliyon*, vol. 10, Art. no. e29130, 2024, doi: 10.1016/J.HELIYON.2024.E29130.
3. J. Y. Hong, "Why do some beginning teachers leave the school, and others stay: Understanding teacher resilience through psychological lenses," *Teach. Teach. Theory Pract.*, vol. 18, pp. 417–440, 2012, doi: 10.1080/13540602.2012.696044.
4. A. K. V. Olsen, I. G. H. Kjær, and K. S. Spieler, "Predictors of professional identity among early childhood teacher students," *Educ. Sci.*, vol. 14, Art. no. 589, 2024, doi: 10.3390/educsci14060589.
5. Armitage-Chan, "Manifestations of professional identity work: An integrative review of research in professional identity formation," *Stud. High. Educ.*, 2024, doi: 10.1080/03075079.2024.2322093.
6. K. Smith and L. Lev-Ari, "The place of the practicum in pre-service teacher education: The voice of the students," *Asia-Pac. J. Teach. Educ.*, vol. 33, pp. 289–302, 2005, doi: 10.1080/13598660500286333.
7. Z. Cai, J. Zhu, and S. Tian, "Preservice teachers' teaching internship affects professional identity: Self-efficacy and learning engagement as mediators," *Front. Psychol.*, vol. 13, Art. no. 1070763, 2022, doi: 10.3389/fpsyg.2022.1070763.
8. M. Moloney, "Professional identity in early childhood care and education: perspectives of pre-school and infant teachers," *Ir. Educ. Stud.*, vol. 29, no. 2, pp. 167–187, 2010, doi: 10.1080/03323311003779068.
9. J. S. Wu, G. Saba, A. Aiman, A. Adnan, and N. Sadia, "Relationship between teachers' professional identity and career satisfaction among college teachers: Role of career calling," *Front. Psychol.*, vol. 15, Art. no. 1348217, 2024, doi: 10.3389/fpsyg.2024.1348217.
10. K. Zeichner, "Rethinking the connections between campus courses and field experiences in college-and university-based teacher education," *J. Teach. Educ.*, vol. 61, pp. 89–99, 2010, doi: 10.1177/0022487109347671.
11. W. Eline, I. K. R. H. Ida, and D. Viviana, "How can universities ensure quality of practice in initial teacher education?" *Teach. Teach. Educ.*, Apr. 2024, Advance online publication, doi: 10.1016/j.tate.2023.104462.
12. K. Bernecker, M. Herrmann, V. Brandstätter, and V. Job, "Implicit theories about willpower predict subjective well-being," *J. Pers.*, vol. 85, no. 2, pp. 136–150, 2017, doi: 10.1111/jopy.12225.
13. D. J. Clandinin et al., "Early career teacher attrition: Intentions of teachers beginning," *Teach. Educ.*, vol. 26, pp. 1–16, 2015, doi: 10.1080/10476210.2014.996746.
14. S. R. V. Sheila and H. Casey, "The four-capital theory as framework for teacher retention and attrition," *Int. Educ. Stud.*, vol. 16, no. 6, pp. 21–32, 2023, doi: 10.5539/IES.V16N6P21.

15. H. M. Henderson, S. J. Kane, D. L. Zabelina, and J. C. Veilleux, "Creativity to prompt willpower: Feeling more creative predicts subsequent activated positive affect and increased willpower in daily life," *Psychol. Aesthet. Creat. Arts.*, Advance online publication, 2023, doi: 10.1037/aca0000566.

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