

## Development of a Comprehensive Model to Enhance Role Compliance in Fine Arts Education Students at Public Universities of Nanning City, China

\* Xin Bai <sup>1</sup> and Tzu-Shan Cheng <sup>2</sup>

<sup>1</sup> Guangxi Arts University, China

<sup>2</sup> Stamford International University, Bangkok, Thailand.

\*Corresponding author, E-mail: 842952649@qq.com

Received 2025-04-08; Revised 2025-06-08; Accepted 2025-06-12;  
Published online: 2025-06-24

### Abstract

The purpose of this study was to enhance role compliance among fine arts education student-teachers during their educational internship phase at public universities in Nanning City, China. A mixed-methods approach was employed, combining quantitative surveys and qualitative literature review. The quantitative phase included a stratified random sampling method to select 412 fine arts education student-teachers, and structural equation modeling was conducted using SPSS and PLS. The qualitative phase involved a systematic literature review to provide a comprehensive understanding of the theoretical background and existing research on role compliance. The study identified the impact mechanisms of educational collaboration, teacher learning, role mindfulness, and role identity on role compliance. The results indicated that educational collaboration, role mindfulness, and role identity are key factors in enhancing role compliance. Specifically, educational collaboration significantly influenced teacher learning ( $\beta = 0.657$ ,  $p < 0.001$ ), role mindfulness ( $\beta = 0.468$ ,  $p < 0.001$ ), and role identity ( $\beta = 0.293$ ,  $p < 0.001$ ). Role mindfulness positively influenced role identity ( $\beta = 0.281$ ,  $p < 0.001$ ) and role compliance ( $\beta = 0.314$ ,  $p < 0.001$ ). Role identity also positively influenced role compliance ( $\beta = 0.227$ ,  $p < 0.003$ ). The study recommends that universities and internship schools optimize educational collaboration models and strengthen the cultivation of teacher learning, role mindfulness, and role identity to further enhance role compliance among fine arts education student-teachers. This not only improves the quality of educational internships but also lays a solid foundation for the future professional development of teachers.

**Keywords:** *Comprehensive Model, Role Compliance, Fine Arts Education Students, Public Universities, Educational Internship.*

---

### 1. Introduction

In contemporary education, the issue of teacher professional ethics has garnered increasing attention (Campbell, 2013; JJ Rweyemamu, 2021). Teachers, as crucial guides in students' development, significantly influence their values and character formation (Betweli, 2020; Rweyemamu & Kamugisha, 2022). However, recent occurrences of unethical behavior among teachers, such as corporal punishment and academic misconduct,

have raised societal concerns regarding the quality of teacher education (Arnold & Mwila, 2022; Betweli, 2020; Mfaume & Bilinga, 2017; Mwesiga & Philipkireti, 2018). Against this backdrop, enhancing the role compliance of fine arts pre-service teachers becomes particularly vital, as they will be the future backbone of the education sector, and their professional conduct will directly impact educational quality.

The role compliance of fine arts pre-service teachers during their educational internship phase is crucial for their future professional behavior and adherence to ethical standards (Anangisye, 2010; Bicheva & Varivoda, 2016; Maxwell & Schwimmer, 2016). Role compliance involves not only the recognition of educational norms and professional responsibilities but also the development of professional identity and growth (Bicheva & Varivoda, 2016; Maxwell & Schwimmer, 2016). However, research on the factors influencing the role compliance of fine arts pre-service teachers, especially during the internship phase, remains limited.

This study employs a mixed-methods approach to investigate the factors influencing the willingness of fine arts pre-service teachers to engage in role compliance during their educational internship phase. The specific research objectives are as follows:

- 1.To describe the current status of role compliance among fine arts pre-service teachers.
- 2.To identify the factors influencing role compliance.
- 3.To explore how educational collaboration between universities and internship schools affects the role compliance willingness of fine arts pre-service teachers.

Through stratified random sampling, 350 fine arts pre-service teachers were selected as the target sample, and quantitative analysis was conducted on the collected data. The findings indicate that educational collaboration, role mindfulness, and role identity are key factors influencing role compliance, while teacher learning does not play a mediating role.

During the internship phase, the educational collaboration perceived by fine arts pre-service teachers between universities and internship schools significantly impacts their role compliance willingness. This collaboration provides rich learning resources and promotes professional growth through multi-faceted interactions. Additionally, the psychological states of pre-service teachers, such as role mindfulness and role identity, play a crucial role in this process. Role mindfulness enables pre-service teachers to be more focused and responsive to educational situations, while role identity enhances their sense of belonging and responsibility towards the teaching profession.

## **2. Literature Review**

The term "collaboration" originates from Ancient Greek. Himmelman (2002) defines it as a process where organizations exchange information, share resources, and

achieve common goals through risk-sharing. Agosto et al. (2013) emphasize that true collaboration creates outcomes exceeding individual contributions. Jiangbo (2021) proposed three dimensions of collaboration: strategic, organizational, and knowledge-based.

Mindfulness, rooted in Eastern Buddhism, involves non-judgmental awareness of the present moment (Hayes & Shenk, 2004). Research conceptualizes it as a skill, trait, state, or cognitive process. While some argue mindfulness can be enhanced through training (Baer et al., 2004; Bishop et al., 2004), others view it as a malleable psychological trait (Abdul Kadir et al., 2021). Despite diverse operationalizations, mindfulness broadly encompasses attention, acceptance, flexibility, and self-awareness (Van Dam et al., 2018).

Effective collaboration between nurses and interdisciplinary teams ensures integration of mindfulness interventions and knowledge sharing (Joy, 2024). In education, collaboration among leaders, teachers, and stakeholders is critical for implementing mindfulness, with collective commitment driving sustainability (Lee et al., 2024). A survey of 750 teachers in Istanbul Province confirmed that a collaborative school climate significantly enhances principals' and teachers' mindfulness (Tabancali & Öngel, 2022).

Based on the above reasons, the following hypotheses were established.

**H1:** Educational collaboration positively influences role mindfulness.

Initially part of teacher development research, teacher learning emerged as an independent field in the 1980s amid global teacher education reforms (Crook, 2012; Forde et al., 2006; McLean, 1999). Teacher learning is deeply connected to teaching practice, social context, and personal beliefs (Helleve, 2010; Richardson, 1996; Tam, 2015). Through gradual engagement in teaching practice, teachers accumulate knowledge (Adler et al., 2005; Goodman & Adler, 1985). Caires & Almeida (2005) identified five dimensions of teacher learning for pre-service teachers: professional socialization, emotional support, and professional development, among others, examining their experiences during practice.

Teacher learning is shaped by the teaching environment. The educational ecosystem is a self-sustaining unit where administrators, teachers, students, and community members interact synergistically to support education (Perry & Booth, 2024). However, Rytivaara et al. (2024) highlight gaps in research on teacher collaboration and its link to professional development. Another study argues that collaboration within teacher communities fosters a developmental environment, while cooperation between teachers and community members enhances professional growth (Karsenty et al., 2024).

Based on the above reasons, the following hypotheses were established.

**H2:** Educational collaboration positively influences teacher learning.

The concept of "Identity" has its origins deeply rooted in sociology and psychology (Erikson, 1994; Turner & Oakes, 1986; Wenger, 1999). Some scholars conceptualize identity as the way individuals understand their own theories, attitudes, and beliefs, imbuing meaning to themselves as they occupy various roles (Bucholtz & Hall, 2005; Burke & Stets, 2022; Chong & Low, 2009; Lutovac et al., 2024). Existing research underscores that the development of Role identity is a continuous and dynamic process (Abouzeid et al., 2024; Akkerman & Meijer, 2011; Beauchamp & Thomas, 2009; Mehdizadeh et al., 2024; Rojas et al., 2024). In this process, teachers engage in reflection, blending their existing teaching experiences, beliefs, and new teaching encounters to form and continually adjust their role identity (Abouzeid et al., 2024; Akkerman & Meijer, 2011; Mehdizadeh et al., 2024; Sengul, 2024).

Through analyzing self-reports from 18 participating teacher educators, it was suggested that education should provide opportunities for student teachers to collaborate with educational research communities, thereby facilitating the development of their identity (Giralt-Romeu et al., 2024). In a study investigating the role of deans in promoting creative collaboration in China's aesthetic education reform, it was verified that active collaboration is crucial in driving transformation in higher education, influencing teachers' professional growth, values, and interpersonal relationships (Pan & Songco, 2023). Research initiated by three former teacher educators from the Asmara College of Community Education in Eritrea has shown that collaboration, action, and participatory research can adapt to changing educational situations and foster a lasting professional identity for teachers (Yosief et al., 2024).

Based on the above reasons, the following hypotheses were established.

**H3:** Educational collaboration positively influences role identity.

Multiple studies indicate that educational collaboration positively impacts role compliance. Hemming & Arat (2024) highlight that educational collaboration plays a key role in promoting mindfulness in education, emphasizing the significant influence of teacher learning on mindfulness. Furthermore, a systematic meta-review and multi-level analysis confirm that teacher learning and collective cognition significantly enhance teachers' cognition and mindfulness practices, thereby strengthening role compliance (Anderson & Taner, 2023; Ihl et al., 2022). These studies underscore the importance of educational collaboration in teacher professional development and role fulfillment.

Based on the above reasons, the following hypotheses were established.

**H4:** Teacher learning positively influences role mindfulness.

The concept of "role compliance" has been frequently studied in psychology, sociology, organizational behavior, and management disciplines, with its origins traced back to sociologist George Herbert Mead's notion of "self," viewed as a social product arising from interactions with others. Mead's ideas laid the foundation for understanding how individuals internalize social expectations and norms associated with the roles they play (Mead, 1934; Mead, 1978; Mead, 2015). Subsequent research in the field of organizational behavior further explored the concept of role compliance within the workplace context, defining it as individuals' conscientious behaviors that exceed the minimum organizational requirements for compliance to rules and regulations, relying on employee responsibility or voluntary compliance (Blau, 1994; Farh et al., 1990; Gelfand et al., 2024; Organ et al., 2005). The concept of role compliance has evolved over time to encompass not only the behavioral aspects of role enactment but also the psychological and social processes that drive individuals to fulfill or resist demands associated with their roles. "Role compliance" refers to the extent to which individuals adhere to expectations, norms, and responsibilities associated with their specific roles in social settings (Balci & Küçüköğlu, 2019; Palenzuela, 2004).

Semi-structured interviews with 50 Turkish teachers across primary, middle, and high schools revealed that rich professional experiences deepen teachers' understanding of their profession and enhance their compliance with ethical standards (Toraman & Korkmaz, 2022). A study on 31 pre-service teachers for elementary and early childhood education in New England indicated that observing experienced teachers in authentic classroom settings helps pre-service teachers better understand role requirements (Scott & Rohde, 2024). Additionally, a structured survey of employees in the oil and gas industry showed that implementing relevant education and training programs improves occupational health and compliance, enabling employees to adhere to professional norms and requirements (Quaigrain et al., 2024).

Based on the above reasons, the following hypotheses were established.

**H5:** Teacher learning positively influences role compliance.

Supporting students' professional identity development through appropriate environments and personnel by basic science educators reflects the goal of teacher education programs. These programs help teacher candidates integrate prior teaching knowledge with accurate information and experiences, thereby reducing identity dissonance and enhancing identity affirmation (Haudek et al., 2022). Research on the teacher education experiences of three novice English teachers in Iran over three years revealed how teacher educators facilitated identity construction through emotional labor

within teacher education programs(Nazari et al., 2023). Furthermore, a study of four female physics teachers in Turkey with over 15 years of teaching experience demonstrated how their experiences, beliefs, community relationships, and practices contributed to a heightened sense of identity in their role as physics teachers(Sengul, 2024).

Based on the above reasons, the following hypotheses were established.

**H6:** Teacher learning positively influences role identity.

The integration of mindfulness into teacher learning and education has been recognized as a means to enhance teachers' self-awareness, alleviate stress, boost well-being, and help them reaffirm values they consider crucial to their teaching mission. By fostering mindfulness, teachers' identity is strengthened(Ergas & Ragoonaden, 2020; Y. Wang et al., 2024). An analysis of data from 200 graduates of South African higher education institutions further indicated that mindfulness can predict professional identity among early-career graduates (de Abreu et al., 2024).

Based on the above reasons, the following hypotheses were established.

**H7:** Role mindfulness positively influences role identity.

The development of a research model based on a decision-making psychological framework for norm internalization has shown that psychological micro-level factors significantly influence norm internalization, which encourages norm compliance and enhances behavioral stability(Batzke & Ernst, 2023). Studies on 150 students with abnormal behaviors highlight the importance of improving the learning environment for younger generations, as it helps them maintain focus, reduces reckless behavior, and leads to better conduct and performance(Osorio, 2024). Increased self-awareness has been proven to reduce antisocial and selfish behaviors, and aids individuals in avoiding situations that may negatively impact their self-image(Gross & Vostroknutov, 2022).

Based on the above reasons, the following hypotheses were established.

**H8:** Role mindfulness positively influences role compliance.

By integrating social science research through the lens of cultural evolution, an interdisciplinary review of the emerging field of norm dynamics reveals that individuals who strongly identify with their group are more likely to internalize social norms(Gelfand et al., 2024). An analysis of five subjective learning experiences narrated by novice teachers working in Chile, Ecuador, Brazil, Spain, and Australia suggests that professional identity serves as a crucial tool for teachers to combat work stress and overcome job burnout(Rojas et al., 2024). Research shows that social image can influence norm compliance, as we often desire to be perceived by others as fair, honest, or upright, and this "image concern" is an

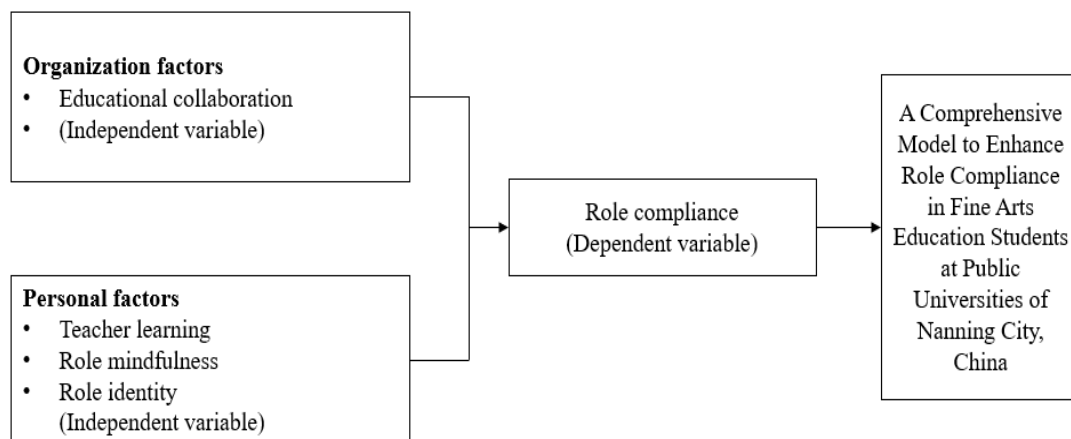


### 3. Research Methodology

This study employed a mixed-methods approach, combining quantitative surveys and qualitative literature review. The quantitative phase included a stratified random sampling method to select 412 fine arts education student-teachers from three universities in Nanning City, China. Data were collected using an online survey platform (Wenjuanxing) between September 18-25, 2024. The survey questionnaire was designed based on a systematic literature review and preliminary interviews, ensuring content validity. A 7-point Likert scale (1=Strongly Disagree to 7=Strongly Agree) was used for measurement. Structural equation modeling (SEM) was conducted using SPSS and PLS to analyze the quantitative data.

The qualitative phase involved a systematic literature review to provide a comprehensive understanding of the theoretical background and existing research on role compliance. This review included analyzing key themes and concepts related to educational collaboration, teacher learning, role mindfulness, and role identity. The literature review aimed to provide a theoretical foundation for the study and support the interpretation of the quantitative results.

To guide the research process and provide a clear understanding of the relationships between the variables, a conceptual framework was developed (see Figure 2). This framework illustrates the hypothesized relationships between educational collaboration, teacher learning, role mindfulness, role identity, and role compliance.



**Figure 2:** Research Conceptual Framework

To ensure the robustness of the findings, the study integrated the results from both the quantitative and qualitative phases. The quantitative results provided empirical evidence on the relationships between the variables, while the qualitative literature review offered deeper insights into the theoretical underpinnings of these relationships.



#### 4. Research Finding

The study obtained 350 valid responses from fine arts education student-teachers. The demographic distribution of the participants is as follows: 67.4% female, 32.6% male; 64.3% junior-year students; monthly disposable income mainly concentrated between 1501-3000 CNY. The majority of participants (50.6%) were placed in public primary schools for their internships, with class sizes ranging from 31 to 60 students.

The results of the structural equation modeling (SEM) analysis indicate that the measurement model has good reliability and convergent validity. The standard factor loadings ranged from 0.816 to 0.941. Cronbach's Alpha values were between 0.879 and 0.954, composite reliability (CR) values were between 0.917 and 0.967, and average variance extracted (AVE) values were between 0.718 and 0.879. These indices collectively demonstrate that the measurement model is robust and effectively captures the constructs under investigation.

#### 5. Discriminant Reliability Analysis

In this study, the discriminant validity of the constructs was examined by the cross-loading method. A comparison of the cross-loadings and Forell-Larcker criterion for each indicator indicated that the indicator had reasonable discriminant validity when each scale entry had a higher factor loading on its assigned latent construct than it did on any other construct(Hair et al., 2017). As shown in Table 1.

**Table 1:** Forell-Larcker criterion.

	EC	RC	RI	RM	TL
EC	<b>0.722</b>	0.643***	0.644***	0.657***	0.657***
RC	0.643***	<b>0.923</b>	0.618***	0.654***	0.541***
RI	0.644***	0.618***	<b>0.901</b>	0.624***	0.613***
RM	0.657***	0.654***	0.624***	<b>0.899</b>	0.595***
TL	0.657***	0.541***	0.613***	0.595***	<b>0.830</b>

**Note** 1: EC= educational collaboration; RC= Role compliance; RI= Role identity; RM= Role mindfulness; TL= teacher learning.

2. \*P-Value<0.05, t>1.96. \*\*P-Value<0.01, t>2.58. \*\*\*P-Value<0.001, t>3.29.

In the analysis of the Forell-Larcker criterion presented in Table 1, the correlation coefficients among the five constructs—educational collaboration, role compliance, role identity, role mindfulness, and teacher learning exhibit certain characteristics. Notably, the correlation coefficient between role compliance and educational collaboration is as high as 0.923, indicating an extremely close relationship between these two constructs.

This suggests a significant overlap in the underlying traits measured by these constructs in the measurement model, potentially indicating issues with discriminant validity. The correlation coefficients among other constructs also range from moderate to high (0.722 - 0.901), which, although not as high as that between role compliance and educational collaboration, may still impact the discriminant validity of the model.

In order to assess the model structure, the study used a bootstrapping procedure with 5000 re-samples to obtain the standard beta ( $\beta$ ), t-value, and coefficient of determination (R<sup>2</sup>). The model was utilized to estimate the path coefficients and the t-values. The path coefficients represent the strength and direction of the relationship of the variables to show the relationship between the observed and latent variables. The R<sup>2</sup> value is the percentage of the dependent variable that can be explained and represents the model's predictive capacity. The R square of this study is shown in Table 2.

**Table 2:** R square of model.

	R-square
RC	0.538
RI	0.520
RM	0.479
TL	0.431

The analysis results from Tables 3 and 4 indicate that educational collaboration significantly and positively impacts role mindfulness, teacher learning, and role identity, highlighting its key role in fostering these variables. Teacher learning also positively affects role mindfulness and role identity, reinforcing its importance in teacher development. Role mindfulness positively influences both role identity and role compliance, while role identity positively impacts role compliance. However, the direct impact of teacher learning on role compliance is insignificant, suggesting it may influence compliance indirectly through other mediators. Additionally, the direct impact of educational collaboration on role compliance is significant. The chain mediation analysis shows that educational collaboration enhances role compliance more stably and significantly through role mindfulness and role identity than through teacher learning.

**Table 3:** Model hypotheses testing results.

	Relationship	Original sample (O)	Standard deviation (STDEV)	t- Statistics	P-value	Decision
H1	EC->RM	0.468	0.072***	6.531	0.000	Yes
H2	EC->TL	0.657	0.043***	15.322	0.000	Yes
H3	EC->RI	0.293	0.079***	3.719	0.000	Yes
H4	TL->RM	0.288	0.076***	3.796	0.000	Yes

	Relationship	Original sample (O)	Standard deviation (STDEV)	t- Statistics	P-value	Decision
H5	TL->RC	0.043	0.071	0.605	0.545	No
H6	TL->RI	0.253	0.08**	3.159	0.002	Yes
H7	RM->RI	0.281	0.069***	4.098	0.000	Yes
H8	RM->RC	0.314	0.067***	4.656	0.000	Yes
H9	RI->RC	0.227	0.077**	2.929	0.003	Yes
H10	EC->RC	0.263	0.081**	3.236	0.001	Yes

Note: \*P-Value<0.05,  $t > 1.96$ . \*\*P-Value<0.01,  $t > 2.58$ . \*\*\*P-Value<0.001,  $t > 3.29$ .

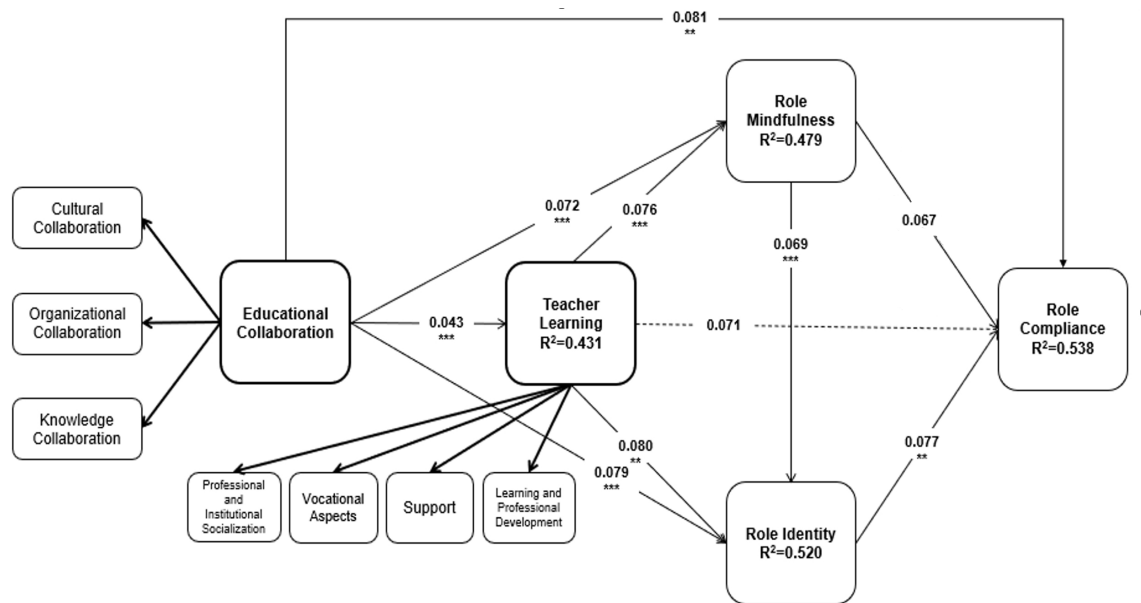


Figure 3: Standardized path coefficients and significance

Table 4: Mediating effect.

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O/STDEV )	P-value	Decision
EC → TL → RM → RI → RC	0.012	0.012	0.007	1.843	0.065	No
EC → RM → RI → RC	0.030	0.030	0.013**	2.257	0.024	Yes
EC → TL → RM → RC	0.059	0.059	0.020**	2.977	0.003	Yes
EC → TL → RI → RC	0.038	0.039	0.019*	2.008	0.045	Yes
EC → TL → RC	0.028	0.029	0.048	0.595	0.552	No
EC → RM → RC	0.132	0.130	0.037***	3.528	0.000	Yes
EC → RI → RC	0.067	0.068	0.030**	2.193	0.028	Yes

## 6. Discussion and Conclusion

The study aimed to develop a comprehensive model to enhance role compliance among fine arts education student-teachers during their educational internship phase. The results of the structural equation modeling (SEM) analysis provided empirical support for the hypothesized relationships between educational collaboration, teacher learning, role mindfulness, role identity, and role compliance. Specifically, the findings indicate that educational collaboration significantly influences teacher learning, role mindfulness, and role identity, which in turn positively affect role compliance. These results highlight the critical role of educational collaboration in fostering a supportive environment for student-teachers, enhancing their professional development, and promoting adherence to professional norms and ethical standards.

The hypothesis that educational collaboration positively influences role mindfulness (H1) was supported by the data ( $\beta = 0.468, p < 0.001$ ). This suggests that when universities and internship schools collaborate effectively, student-teachers are more likely to be present and focused in their educational settings, which is crucial for their professional development. Similarly, the hypothesis that educational collaboration positively influences teacher learning (H2) was also supported ( $\beta = 0.657, p < 0.001$ ). This implies that collaborative efforts between educational institutions provide rich learning resources and opportunities for student-teachers, facilitating their professional growth. Furthermore, the hypothesis that educational collaboration positively influences role identity (H3) was supported ( $\beta = 0.293, p < 0.001$ ), indicating that collaborative practices help student-teachers develop a stronger sense of identity as educators, which is essential for their future professional behavior and adherence to ethical standards.

The findings also support the hypothesis that teacher learning positively influences role mindfulness (H4) ( $\beta = 0.288, p < 0.001$ ). This suggests that as student-teachers engage in continuous learning, they become more mindful and responsive in their educational roles, which can improve their overall performance and professional development. However, the hypothesis that teacher learning directly influences role compliance (H5) was not supported ( $\beta = 0.043, p = 0.545$ ). This indicates that while teacher learning is important, it may not have a direct impact on role compliance. Instead, it may influence role compliance indirectly through other mediating factors such as role mindfulness and role identity. The hypothesis that teacher learning positively influences role identity (H6) was supported ( $\beta = 0.253, p = 0.002$ ), suggesting that continuous learning experiences help student-teachers develop a stronger sense of identity as educators, which can enhance their professional commitment and ethical behavior.

The results further support the hypothesis that role mindfulness positively influences role identity (H7) ( $\beta = 0.281, p < 0.001$ ). This implies that being mindful in educational settings helps student-teachers develop a stronger sense of identity, which is crucial for their professional development and adherence to ethical standards. The

hypothesis that role mindfulness positively influences role compliance (H8) was also supported ( $\beta = 0.314$ ,  $p < 0.001$ ), indicating that student-teachers who are more mindful in their educational roles are more likely to adhere to professional norms and ethical standards, which is essential for their future careers. Similarly, the hypothesis that role identity positively influences role compliance (H9) was supported ( $\beta = 0.227$ ,  $p = 0.003$ ), suggesting that a strong sense of identity as an educator is associated with higher levels of role compliance, which is important for maintaining professional standards and ethical behavior. Finally, the hypothesis that educational collaboration positively influences role compliance (H10) was supported ( $\beta = 0.263$ ,  $p = 0.001$ ), indicating that collaborative efforts between universities and internship schools create an environment that supports and encourages student-teachers to adhere to professional norms and ethical standards.

Based on the study's findings, several actionable recommendations are proposed to enhance role compliance among fine arts education student-teachers. First, universities and internship schools should establish regular communication channels and collaborative platforms to facilitate the sharing of resources and best practices. Joint curriculum development initiatives can be implemented to align theoretical knowledge with practical skills, ensuring that student-teachers are well-prepared for their future roles. Second, continuous professional development opportunities should be provided for student-teachers, focusing on areas such as pedagogical strategies, classroom management, and subject-specific knowledge. Workshops, seminars, and mentorship programs can be instrumental in fostering a culture of lifelong learning and professional excellence. Third, educational institutions should incorporate mindfulness training into their programs to help student-teachers develop greater self-awareness and focus. Additionally, initiatives aimed at strengthening professional identity, such as reflective practice sessions and identity exploration activities, can be integrated into the curriculum to enhance student-teachers' sense of belonging and commitment to the teaching profession. Fourth, to improve the quality of educational internships, universities and schools should work together to create structured and supervised internship experiences. This includes providing clear guidelines, regular feedback, and opportunities for student-teachers to engage in meaningful teaching activities under the guidance of experienced mentors. Finally, a positive and supportive learning environment is crucial for the professional development of student-teachers. Universities and internship schools should foster a culture of collaboration, respect, and mutual support, where student-teachers feel encouraged to seek help, share experiences, and reflect on their practice.

By implementing these recommendations, educational institutions can create a more conducive environment for the professional growth of fine arts education student-teachers, ultimately leading to higher levels of role compliance and better-prepared educators entering the workforce. These efforts not only improve the quality of educational internships but also lay a solid foundation for the future professional development of teachers.

## 7. Limitations and Future Research

The study's limitations include its regional focus on Nanning, China, which may introduce cultural and geographical biases. Future research should expand the sample to include fine arts education students from diverse regions, economic backgrounds, and cultures to verify the universality of the findings. Additionally, future studies should consider both internal and external factors, such as policy environment, societal expectations, and family support, to develop a more comprehensive analytical framework.

## 8. References

- Abdul Kadir, N. B. y., Mohd, R. H., & Dimitrova, R. (2021). Promoting mindfulness through the 7Cs of positive youth development in Malaysia. *Handbook of positive youth development: Advancing research, policy, and practice in global contexts*, 49-62.
- Abouzeid, R., Liardét, C., & Khachan, V. (2024). Lebanese EMI instructors' role identity and teaching practices. *Journal of English-Medium Instruction*, 3(2), 164-184.
- Adler, J., Ball, D., Krainer, K., Lin, F.-L., & Novotna, J. (2005). Reflections on an emerging field: Researching mathematics teacher education. *Educational studies in mathematics*, 60, 359-381.
- Agosto, D. E., Copeland, A. J., & Zach, L. (2013). Testing the benefits of blended education: Using social technology to foster collaboration and knowledge sharing in face-to-face LIS courses. *Journal of education for library and information science*, 94-107.
- Akkerman, S. F., & Meijer, P. C. (2011). A dialogical approach to conceptualizing teacher identity. *Teaching and Teacher education*, 27(2), 308-319.
- Anderson, J., & Taner, G. (2023). Building the expert teacher prototype: A metasummary of teacher expertise studies in primary and secondary education. *Educational Research Review*, 38, 100485.
- Andrighetto, G., Villatoro, D., & Conte, R. (2010). Norm internalization in artificial societies. *Ai Communications*, 23(4), 325-339.
- Baer, R. A., Smith, G. T., & Allen, K. B. (2004). Assessment of mindfulness by self-report: The Kentucky Inventory of Mindfulness Skills. *Assessment*, 11(3), 191-206.
- Balcı, A., & Küçükoğlu, A. (2019). An Investigation on Educational Beliefs and Self-Efficacy Beliefs of Preschool Teachers and Candidate Teachers. *Kastamonu Education Journal*, 27(3).
- Baluyos, G. R., Clarin, A. S., Bazar, J. S., Enerio Jr, A. T., Edullantes, M. P., & DepEd, O. C. P. (2024). Uncovering the Challenges of Cooperating Teachers in Shaping Pre-Service Teachers: A Case Study.

- Batzke, M. C., & Ernst, A. (2023). Conditions and effects of norm internalization. *Journal of Artificial Societies and Social Simulation*, 26(1).
- Beauchamp, C., & Thomas, L. (2009). Understanding teacher identity: An overview of issues in the literature and implications for teacher education. *Cambridge journal of education*, 39(2), 175-189.
- Bhattacharjee, A. (2001a). An empirical analysis of the antecedents of electronic commerce service continuance. *Decision support systems*, 32(2), 201-214.
- Bhattacharjee, A. (2001b). Understanding information systems continuance: An expectation-confirmation model. *MIS quarterly*, 351-370.
- Bishop, S. R., Lau, M., Shapiro, S., Carlson, L., Anderson, N. D., Carmody, J., Segal, Z. V., Abbey, S., Specia, M., & Velting, D. (2004). Mindfulness: A proposed operational definition. *Clinical psychology: Science and practice*, 11(3), 230.
- Blau, G. (1994). Developing and testing a taxonomy of lateness behavior. *Journal of Applied Psychology*, 79(6), 959.
- Boyer, K. K., Olson, J. R., Calantone, R. J., & Jackson, E. C. (2002). Print versus electronic surveys: a comparison of two data collection methodologies. *Journal of Operations Management*, 20(4), 357-373.
- Bucholtz, M., & Hall, K. (2005). Identity and interaction: A sociocultural linguistic approach. *Discourse studies*, 7(4-5), 585-614.
- Burke, P. J., & Stets, J. E. (2022). *Identity theory: Revised and expanded*. Oxford University Press.
- Caires, S., & Almeida, L. S. (2005). Teaching practice in Initial Teacher Education: its impact on student teachers' professional skills and development. *Journal of Education for Teaching*, 31(2), 111-120.
- Chadwick, P., Hember, M., Symes, J., Peters, E., Kuipers, E., & Dagnan, D. (2008). Responding mindfully to unpleasant thoughts and images: Reliability and validity of the Southampton mindfulness questionnaire (SMQ). *British Journal of Clinical Psychology*, 47(4), 451-455.
- Chong, S., & Low, E.-L. (2009). Why I want to teach and how I feel about teaching—formation of teacher identity from pre-service to the beginning teacher phase. *Educational research for policy and practice*, 8, 59-72.
- Crook, D. (2012). Teacher education as a field of historical research: retrospect and prospect. *History of Education*, 41(1), 57-72.
- de Abreu, N., Kleynhans, R., & Nel, P. (2024). Vocational identity as a mediator in the relationship between mindfulness and career adaptability among graduates in the early career stage. *British Journal of Guidance & Counselling*, 52(3), 431-441.

- Ergas, O., & Ragoonaden, K. (2020). Two perspectives on teaching mindfulness in teacher education: A self-study of two selves. In *Exploring self toward expanding teaching, teacher education and practitioner research* (pp. 179-196). Emerald Publishing Limited.
- Erikson, E. H. (1994). *Identity: Youth and crisis*. WW Norton & company.
- Farh, J.-L., Podsakoff, P. M., & Organ, D. W. (1990). Accounting for organizational citizenship behavior: Leader fairness and task scope versus satisfaction. *Journal of management*, 16(4), 705-721.
- Fontana, V. E., Griffith, G. M., & Crane, R. S. (2024). "I'm Not Sure I Can See Myself in This World": Experience of Mindfulness Teacher Training among Trainees from Diverse Backgrounds. *Mindfulness*, 1-14.
- Forde, C., McMahon, M., McPhee, A. D., & Patrick, F. (2006). *Professional development, reflection and enquiry*. Sage.
- Friedman, G. (2023). *Maladaptive perfectionism and regulation of negative affect after failure: The influences of self-esteem and mindfulness* Long Island University, Brooklyn].
- Gelfand, M. J., Gavrilets, S., & Nunn, N. (2024). Norm dynamics: interdisciplinary perspectives on social norm emergence, persistence, and change. *Annual review of psychology*, 75, 341-378.
- Giralt-Romeu, M., Liesa, E., & Castelló, M. (2024). Teacher identity as inquirer: Voices of teacher educators. *European Journal of Teacher Education*, 47(1), 140-158.
- Goodman, J., & Adler, S. (1985). Becoming an elementary social studies teacher: A study of perspectives. *Theory & Research in Social Education*, 13(2), 1-20.
- Gross, J., & Vostroknutov, A. (2022). Why do people follow social norms? *Current opinion in psychology*, 44, 1-6.
- Haigh, E. A., Moore, M. T., Kashdan, T. B., & Fresco, D. M. (2011). Examination of the factor structure and concurrent validity of the Langer Mindfulness/Mindlessness Scale. *Assessment*, 18(1), 11-26.
- Hair, J., Hollingsworth, C. L., Randolph, A. B., & Chong, A. Y. L. (2017). An updated and expanded assessment of PLS-SEM in information systems research. *Industrial management & data systems*, 117(3), 442-458.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. (2014). Pearson new international edition. Multivariate data analysis. In: Pearson Education Limited Harlow, Essex.
- Haudek, S. B., Bahner, I., Belovich, A. N., Bonaminio, G., Brenneman, A., Brooks, W. S., Chinn, C., El-Sawi, N., Habal, S., & Haight, M. (2022). How science educators still matter: Leveraging the basic sciences for student success. *Medical science educator*, 32(3), 747-753.



- Hayes, S. C., & Shenk, C. (2004). Operationalizing mindfulness without unnecessary attachments. *Clinical psychology: Science and practice*, 11(3), 249.
- Helleve, I. (2010). Theoretical foundations of teachers' professional development. In *Online learning communities and teacher professional development: Methods for improved education delivery* (pp. 1-19). IGI Global.
- Hemming, P. J., & Arat, A. (2024). Promoting mindfulness in education: Scientisation, psychology and epistemic capital. *Current Sociology*, 00113921231223180.
- Himmelman, A. T. (2002). Collaboration for a change: Definitions, decision-making models, roles, and collaboration process guide. *Minneapolis: Himmelman Consulting*.
- Ihl, A., Strunk, K., & Fiedler, M. (2022). Interpretations of mindfulness practices in organizations: A multi-level analysis of interpretations on an organizational, group, and individual level. *Organization*, 29(6), 1099-1132.
- Im, S., Stavas, J., Lee, J., Mir, Z., Hazlett-Stevens, H., & Caplovitz, G. (2021). Does mindfulness-based intervention improve cognitive function?: A meta-analysis of controlled studies. *Clinical psychology review*, 84, 101972.
- Ismail, M., KHATIBĪ, A., & Azam, S. F. (2022). Impact of school culture on school effectiveness in government schools in Maldives. *Participatory Educational Research*, 9(2), 261-279.
- Jiangbo, X. (2021). *A study on the collaboration of pre-service teacher education: A survey based on Z province*
- Joy, A. (2024). The Integration of MindfulnessBased Interventions in Mental Health Nursing Practice. *Brio International Journal of Nursing Research (BIJNR)*, 5 (1), 243, 248.
- Karsenty, R., Dole, S., Clivaz, S., Griese, B., & Pöhler, B. (2024). Roles, identities and interactions of various participants in mathematics teacher collaboration. In *Teachers of Mathematics Working and Learning in Collaborative Groups: The 25th ICMI Study* (pp. 135-202). Springer.
- Krejcie, R. (1970). Determining sample size for research activities. *Educational Psychol Meas.*
- Kuyken, W., Ball, S., Crane, C., Ganguli, P., Jones, B., Montero-Marin, J., Nuthall, E., Raja, A., Taylor, L., & Tudor, K. (2022). Effectiveness and cost-effectiveness of universal school-based mindfulness training compared with normal school provision in reducing risk of mental health problems and promoting well-being in adolescence: the MYRIAD cluster randomised controlled trial. *BMJ Ment Health*, 25(3), 99-109.
- Lee, W., McCaw, C. T., & Van Dam, N. T. (2024). Mindfulness in education: Critical debates and pragmatic considerations. *British Educational Research Journal*.
- Lutovac, S., Kaasila, R., Petäjäniemi, M., & Siira, V. (2024). How does Mind–Body Bridging support professional identity development? *International Journal for Educational and Vocational Guidance*, 24(1), 151-172.

- McLean, S. V. (1999). Becoming a teacher: The person in the process. *The role of self in teacher development*, 55-91.
- Mead, G. H. (1934). *Mind, self, and society* (Vol. 111). University of Chicago press Chicago.
- Mead, G. H. (1978). The Social Self. *Psychiatry*, 41(2), 178-182.
- Mead, G. H. (2015). *Mind, self & society*. University of Chicago Press.
- Mehdizadeh, M., Pourhaji, M., & Derakhshan, A. (2024). Evolution of communities of practice, realignment of possible selves, and repositionings in EFL teacher professional identity development: A longitudinal case study. *The Language Learning Journal*, 52(3), 336-348.
- Mokoena, T. D., & van Tonder, G. P. (2024). Influencing beginner teachers' autonomy: the impact of mentorship in fostering self-directed learning. *International Journal of Educational Management*.
- Mukuka, A., & Alex, J. K. (2024). Foundational mathematical knowledge of prospective teachers: Evidence from a professional development training. *Pythagoras*, 45(1), 14.
- Nazari, M., Seyri, H., & Karimpour, S. (2023). Novice language teacher emotion labor and identity construction: A community of practice perspective. *Teaching and Teacher education*, 127, 104110.
- Oldfield, J., Stevenson, A., & Ortiz, E. (2020). Promoting resilience in street connected young people in Guatemala: The role of psychological and educational protective factors. *Journal of Community Psychology*, 48(2), 590-604.
- Organ, D. W., Podsakoff, P. M., & MacKenzie, S. B. (2005). *Organizational citizenship behavior: Its nature, antecedents, and consequences*. Sage publications.
- Osorio, I. V. (2024). FROM UNDISCIPLINED TO DEDICATION: STRATEGIES TO MITIGATE DEVIANT BEHAVIOR AND FOSTER MOTIVATION IN UNIVERSITY STUDENTS. EDULEARN24 Proceedings,
- Palanisamy, R., Norman, A. A., & Mat Kiah, M. L. (2022). BYOD policy compliance: Risks and strategies in organizations. *Journal of Computer Information Systems*, 62(1), 61-72.
- Palenzuela, S. M. (2004). Measuring pre-kindergarten teachers' perceptions: Compliance with the high/scope program. *Journal of Research in Childhood Education*, 18(4), 321-333.
- Pan, L., & Songco, E. A. (2023). Exploring Teachers' Perceptions: The Dean's Role in Fostering Creative Collaboration in Chinese Aesthetic Education Reform. *International Journal of Education and Management Studies*, 13(4), 411-417.
- Perry, E., & Booth, J. (2024). The practices of professional development facilitators. *Professional development in education*, 50(1), 144-156.
- Quaigrain, R. A., Owusu-Manu, D.-G., Edwards, D. J., Hammond, M., Hammond, M., & Martek, I. (2024). Occupational health and safety orientation in the oil and gas industry of Ghana: analysis of knowledge and attitudinal influences on compliance. *Journal of Engineering*,

- Design and Technology*, 22(3), 795-812.
- Richardson, V. (1996). The role of attitudes and beliefs in learning to teach. *Handbook of research on teacher education*, 2(102-119), 273-290.
- Rojas, J. C., Barril, J. P., Jiménez, T. L., Clarà, M., Ramos, F. S., Peel, K., & Justiniano, B. (2024). Navigating burnout: a study of teacher identity in Chile, Ecuador, Brazil, Spain and Australia. *Pedagogy, culture & society*, 1-17.
- Rozalski, M., Stewart, A., Andrus, B., & Interlichia, C. (2021). Becoming mindful: Collaborating to empower students and peacefully resolve problems. *Children and Libraries*, 19(4), 6-12.
- Rytivaara, A., Ahtiainen, R., Palmu, I., Pesonen, H., & Malinen, O.-P. (2024). Learning to Co-Teach: A Systematic Review. *Education Sciences*, 14(1), 113.
- Scott, K., & Rohde, L. (2024). Deconstructing Teacher Engagement Techniques for Pre-service Teachers through Explicitly Teaching and Applying “Noticing” in Video Observations. *Open Education Studies*, 6(1), 20220224.
- Sengul, O. (2024). Learning to become a physics teacher: A case study of experienced teachers. *Education Sciences*, 14(2), 195.
- Tabancali, E., & Öngel, G. (2022). Relationship between School Mindfulness and Collaborative School Climate. *African Educational Research Journal*, 10(2), 161-169.
- Tam, A. C. F. (2015). The role of a professional learning community in teacher change: A perspective from beliefs and practices. *Teachers and teaching*, 21(1), 22-43.
- Tan, M., & Teo, T. S. (2000). Factors influencing the adoption of Internet banking. *Journal of the Association for information Systems*, 1(1), 5.
- Toraman, Ç., & Korkmaz, G. (2022). The Great Barrier to Teaching Profession: Technicism, Rethinking the Meaning of Professionalism through Teachers' Experience. *International Online Journal of Education and Teaching*, 9(1), 486-505.
- Turner, J. C., & Oakes, P. J. (1986). The significance of the social identity concept for social psychology with reference to individualism, interactionism and social influence. *British Journal of Social Psychology*, 25(3), 237-252.
- Van Dam, N. T., Van Vugt, M. K., Vago, D. R., Schmalzl, L., Saron, C. D., Olendzki, A., Meissner, T., Lazar, S. W., Kerr, C. E., & Gorchov, J. (2018). Mind the hype: A critical evaluation and prescriptive agenda for research on mindfulness and meditation. *Perspectives on psychological science*, 13(1), 36-61.
- Walach, H., Buchheld, N., Büttenmüller, V., Kleinknecht, N., & Schmidt, S. (2006). Measuring mindfulness—the Freiburg mindfulness inventory (FMI). *Personality and individual differences*, 40(8), 1543-1555.

- Wang, D., Huang, L., Huang, X., Deng, M., & Zhang, W. (2024). Enhancing Inclusive Teaching in China: Examining the Effects of Principal Transformational Leadership, Teachers' Inclusive Role Identity, and Efficacy. *Behavioral Sciences*, 14(3), 175.
- Wang, Y., Pan, B., Yu, Z., & Song, Z. (2024). The relationship between preschool teacher trait mindfulness and teacher-child relationship quality: the chain mediating role of emotional intelligence and empathy. *Current Psychology*, 43(3), 2667-2678.
- Weisi, H., & Salari, M. (2024). On the journey from cognizance toward thriving: Iranian EFL teachers' engagement in reflective practice and professional development: the mediating effect of teacher mindfulness. *Reflective Practice*, 1-15.
- Wenger, E. (1999). *Communities of practice: Learning, meaning, and identity*. Cambridge university press.
- Wright, B., & Schwager, P. H. (2008). Online survey research: can response factors be improved? *Journal of Internet Commerce*, 7(2), 253-269.
- Yang, N., & Ghislandi, P. (2024). Quality teaching and learning in a fully online large university class: a mixed methods study on students' behavioral, emotional, and cognitive engagement. *Higher Education*, 1-27.
- Yao, Y., Wang, P., Jiang, Y., Li, Q., & Li, Y. (2022). Innovative online learning strategies for the successful construction of student self-awareness during the COVID-19 pandemic: Merging TAM with TPB. *Journal of Innovation & Knowledge*, 7(4), 100252.
- Yosief, A., Sulieman, M.-S., & Biede, T. (2024). Improving the practices of teacher educators through collaborative action research: Challenges and hopes. *Educational Action Research*, 32(2), 204-221.
- Zheng, X., Ni, D., Liu, X., & Liang, L. H. (2023). Workplace mindfulness: Multidimensional model, scale development and validation. *Journal of Business and Psychology*, 38(4), 777-801.