

Fostering Creativity in Early Childhood Education: The Interplay of Psychological Capital, Teacher Agency and Creative Teaching Self-Efficacy

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Abstract

This study examines how psychological capital and teacher agency interact to support creative teaching self-efficacy among early childhood educators. Drawing on data from a nationwide survey of 222 preschool teachers in Taiwan, we investigated the influence of self-efficacy and optimism, and how these psychological resources interact with teacher agency—both personal and contextual dimensions—to foster creative instructional practices. The results reveal that psychological capital has a significant impact on teacher agency, which, in turn, plays a crucial mediating role in enhancing creative teaching self-efficacy. These findings highlight the need to integrate psychological resource-building and professional empowerment in teacher development programs to promote creativity in early childhood classrooms.

Keywords: Creative teaching, Psychological Capital, Teacher Agency, Self-efficacy, Early Childhood Education

1.Introduction

Creative teaching in early childhood education (ECE) is crucial for fostering children's curiosity, engagement, and holistic development. However, preschool teachers often face emotional labor, performance pressures, and systemic constraints that limit their ability to implement innovative teaching practices (Purper et al., 2023; Jeon et al., 2019). These challenges not only affect teacher well-being but also reduce their confidence in utilizing creative methods.

Recent research has turned its focus to the interaction between educators' internal psychological resources and external professional environments as key factors in empowering creative teaching. Psychological capital, which includes self-efficacy and optimism, has been found to influence teachers' creative teaching behaviors. Additionally, teacher agency,

particularly in the context of professional autonomy, plays a crucial role in facilitating creativity in the classroom (Chaaban et al., 2021). Despite this growing interest, limited research has explored how these factors interact, especially within the Asian cultural context, where top-down educational policies often constrain teacher autonomy.

This study seeks to fill this gap by investigating the relationship between psychological capital and teacher agency in fostering creative teaching self-efficacy among preschool teachers in Taiwan. The findings provide insights into how psychological resources and professional empowerment can be integrated into teacher development programs to enhance creativity in early childhood education.

2. Literature Review

2.1 Psychological Capital and Creativity

Psychological capital (PsyCap) refers to a set of positive psychological resources—self-efficacy, optimism, hope, and resilience—that enable individuals to thrive in challenging situations (Luthans et al., 2007). In the context of early childhood education (ECE), self-efficacy allows teachers to feel capable of managing complex classroom dynamics, while optimism helps them stay hopeful and proactive in adapting creatively to changes and challenges (Granziera & Perera, 2019; McIlveen & Perera, 2016).

Research indicates that when early childhood educators possess high levels of psychological capital, they are more likely to remain engaged in their work, take pedagogical risks, and sustain creative practices over time (Gan & Cheng, 2021; Song, 2022). This suggests that PsyCap not only promotes teacher well-being but may also serve as a precursor to innovation and professional growth, thereby influencing the quality and creativity of teaching practices.

2.2 Teacher Agency and Creative Practice

Teacher agency refers to educators' ability to make intentional decisions and act purposefully within their professional roles (Biesta et al., 2015). It is expressed through two main dimensions: personal agency, which involves setting goals and designing curricula, and contextual agency, which encompasses collaboration with colleagues and initiating change within the educational system (Tao & Gao, 2017; Karousiou et al., 2022).

In early childhood education, teacher agency is a crucial factor in fostering professional autonomy and ownership over creative instruction. When teachers perceive themselves as active agents in shaping the learning environment, they are more likely to implement

innovative teaching strategies, experiment with playful learning models, and engage in inquiry-based approaches (Eteläpelto et al., 2015; Stavholm et al., 2023). This sense of agency not only facilitates creativity but also enhances teachers' overall satisfaction and efficacy in their roles.

2.3 The Interplay of PsyCap and Agency

The relationship between psychological capital (PsyCap) and teacher agency is dynamic and reciprocal. Teachers with high levels of self-efficacy and optimism are more likely to take initiative in their teaching and feel empowered to implement creative practices. Optimism fosters a proactive attitude, while self-efficacy builds confidence in trying new teaching strategies (Gotch & McLean, 2019).

At the same time, teacher agency enhances PsyCap. Teachers with strong agency, particularly contextual agency, are better positioned to create environments that support innovation. For example, engaging in collaborative decision-making or advocating for changes in the school system can boost teachers' sense of accomplishment and resilience, which strengthens their psychological resources (Du, 2023). This reciprocal interaction suggests that both PsyCap and agency are crucial for fostering creativity and resilience in teaching.

However, empirical studies examining how PsyCap and teacher agency jointly influence creative teaching self-efficacy remain limited. Understanding their interplay is vital for developing teacher support programs that enhance both creativity and professional empowerment in early childhood education.

3. Method

3.1 Participants and Procedure

The study recruited 222 preschool teachers from diverse regions of Taiwan through online outreach on educational platforms. Participants were from both public and private kindergartens, ensuring broad representation across different types of institutions. Ethical approval was obtained, and informed consent was acquired from all participants prior to participation.

The survey was designed to capture teachers' perceptions of their psychological strengths, professional agency, and confidence in creative teaching. It included measures of psychological capital (self-efficacy and optimism), teacher agency (personal and contextual), and self-efficacy for creative teaching. Data were collected via an online survey, allowing teachers to participate at their convenience. This approach supported the study's goal of exploring the psychological and behavioral mechanisms that underlie creativity in early

childhood education. cal-behavioral mechanisms underlying creativity in early childhood education.

3.2 Instruments

This study employed three validated instruments to measure key constructs related to psychological capital, teacher agency, and creative teaching self-efficacy. Each instrument was carefully adapted to fit the context of early childhood education in Taiwan.

- **Psychological Capital:** To assess the psychological strengths of teachers, an 11-item scale measuring self-efficacy and optimism was adapted from Gan & Cheng (2021). The self-efficacy items focus on teachers' belief in their ability to effectively handle teaching challenges, while the optimism items assess their positive outlook toward future teaching opportunities. The reliability of the scale was confirmed with a Cronbach's α of .92, indicating strong internal consistency.
- **Teacher Agency:** A 13-item scale measuring both personal and contextual dimensions of teacher agency was adapted from Chaaban et al. (2021). Personal agency items assess the extent to which teachers feel empowered to make decisions and set goals in their classrooms, while contextual agency items measure teachers' ability to collaborate with colleagues and advocate for change within the broader school environment. This scale showed strong reliability, with a Cronbach's α of .89.
- **Creative Teaching Self-Efficacy:** A set of items related to teachers' confidence in their ability to engage in creative and innovative teaching practices was adapted from Shi et al. (2023). These items assess teachers' satisfaction with their teaching, their engagement with innovative pedagogical strategies, and their belief in their ability to foster creativity in the classroom. The reliability for this scale was also strong, with a Cronbach's α of .87.

All scales employed a 5-point Likert scale, ranging from “Strongly Disagree” to “Strongly Agree.” Prior to data collection, the scales were pre-tested with a small group of early childhood educators to ensure their appropriateness and clarity in the context of Taiwanese preschools. Factor analysis confirmed the structural validity of all three instruments, supporting their use in this study.

3.3 Data Analysis

Data analysis was conducted using SPSS 28 and AMOS 24. Descriptive statistics and bivariate correlations were computed to explore the relationships among the variables. Confirmatory factor analysis (CFA) was performed to validate the measurement model. Structural equation modeling (SEM) was then employed to test the hypothesized mediation model, with optimism and self-efficacy as exogenous variables, contextual agency as the mediator, and creative teaching self-efficacy as the outcome variable. Multi-group SEM was conducted to examine potential differences in the structural paths across gender and academic major. Model fit was evaluated using standard indices: chi-square (χ^2), comparative fit index (CFI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR).

4. Results

4.1 Descriptive Statistics

Descriptive statistics revealed generally high ratings for both optimism ($M = 4.1$) and contextual agency ($M = 4.0$) within the sample. These results indicate that participants tend to possess a moderately high level of optimism and perceive their working environments as supportive of their agency. The mean values suggest that the respondents generally feel confident about their abilities and optimistic about their professional circumstances.

4.2 Structural Equation Modeling (SEM) Results

The results of the Structural Equation Modeling (SEM) analysis provided further insights into the relationships between the variables of interest. The analysis revealed the following significant pathways:

- **Psychological Capital → Creative Teaching Self-Efficacy:** The path coefficient ($\beta = .05$, ns) indicates that psychological capital did not have a significant direct effect on creative teaching self-efficacy. This suggests that, in isolation, psychological capital may not directly enhance a teacher's belief in their ability to engage in creative teaching practices. The lack of significance may imply that other factors, such as teacher agency or contextual supports, are more influential in shaping creative teaching self-efficacy.
- **Psychological Capital → Teacher Agency:** The path coefficient ($\beta = .62$, $p < .01$) suggests a significant positive relationship between psychological capital and teacher agency. Teachers with high psychological capital are more likely to perceive themselves as having the agency to act within their teaching environments, which in turn empowers them to take creative initiatives.

- **Teacher Agency → Creative Teaching Self-Efficacy:** A moderate but significant effect was observed ($\beta = .33, p < .01$), indicating that teachers who perceive themselves as having more agency in their professional environments are more likely to feel confident in their ability to engage in creative teaching. While this relationship is positive, it is weaker than the effect of psychological capital on teacher agency, suggesting that teacher agency is an important, though less direct, factor.

4.3 Mediation Analysis

Mediation analysis was conducted to examine the role of teacher agency as a mediator in the relationships between psychological capital and creative teaching self-efficacy. The results indicated the following:

- **Teacher Agency as a Mediator:** Teacher agency was found to significantly mediate the relationship between psychological capital and creative teaching self-efficacy ($\beta = .33, p < .01$). This suggests that teachers with higher psychological capital are more likely to feel empowered in their professional environments, which in turn enhances their belief in their ability to teach creatively.

5. Discussion

The findings of this study underscore the complex interplay between psychological capital, teacher agency, and creative teaching self-efficacy. The results suggest that while psychological capital does not directly predict creative teaching self-efficacy, it plays a crucial role in empowering teachers by enhancing their sense of agency. Teachers who possess high levels of psychological capital, characterized by optimism, resilience, and hope, are more likely to perceive themselves as having the autonomy and agency to engage in creative teaching practices. This sense of agency, in turn, positively influences their confidence in their ability to innovate and implement creative teaching strategies (Bandura, 2001).

One of the key insights from this study is that psychological capital, in isolation, does not directly enhance teachers' creative teaching self-efficacy. This finding is consistent with previous research, which has emphasized that individual traits such as optimism and resilience, while important, are not sufficient on their own to foster creative teaching. Instead, contextual factors such as teacher agency play a more direct role in shaping teachers' beliefs in their creative teaching capabilities (Sullanmaa et al., 2023; Neugebauer et al., 2019). These results suggest that fostering teacher agency—teachers' perception of their ability to act independently

and creatively within their teaching environments—is crucial in supporting their creative self-efficacy.

The mediation analysis further highlights the importance of teacher agency as a mediator between psychological capital and creative teaching self-efficacy. Teachers with high psychological capital are more likely to feel empowered in their professional contexts, which strengthens their belief in their ability to teach creatively. This aligns with Bandura's (2001) social cognitive theory, which posits that self-efficacy is influenced not only by personal factors but also by the social and contextual environment. In this study, the perception of having control over one's professional environment and decision-making appears to be a key mechanism through which psychological capital impacts creative teaching self-efficacy. Interestingly, the findings suggest that while psychological capital is positively associated with teacher agency, the direct relationship between teacher agency and creative teaching self-efficacy is somewhat moderate. This indicates that teacher agency is an important factor, but not the sole determinant, of teachers' creative teaching self-efficacy. Teachers who perceive themselves as having agency in their teaching contexts are more likely to engage in creative teaching practices, but this relationship is not as strong as the effect of psychological capital on teacher agency. This suggests that psychological capital might serve as a foundational resource that enables teachers to feel empowered in their professional environments, whereas teacher agency acts as an intermediary factor that translates these resources into creative teaching behaviors (Chao et al., 2023).

Furthermore, the lack of direct significance for psychological capital in influencing creative teaching self-efficacy without the mediating role of teacher agency highlights the complexity of fostering creativity in teaching. This finding supports the idea that creativity in teaching is not merely an individual trait, but rather a product of the interaction between teachers' personal resources (such as psychological capital) and their work environments (such as the degree of teacher agency they experience) (McLennan et al., 2017). These findings suggest that educational policies and professional development programs should focus not only on building teachers' psychological capital but also on creating work environments that foster teacher agency and autonomy.

In conclusion, this study contributes to the growing body of research on teacher motivation and creativity by highlighting the crucial role of teacher agency in translating psychological capital into creative teaching self-efficacy. It suggests that supporting teachers' belief in their agency, as well as fostering a work environment that empowers teachers, is key to enhancing their creative teaching practices. Future research could further explore the ways

in which specific contextual factors, such as mentorship, collaboration, and professional development, interact with teachers' psychological capital and agency to influence creative teaching behaviors. Additionally, interventions that target both psychological capital and teacher agency may be effective in fostering a more creative and innovative teaching culture in early childhood education.

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