

Exploring Perceptions and Practices of Prospective Teachers: Unpacking Creativity Beliefs

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Abstract. A teacher's optimistic belief in creativity can encourage and motivate students to be more creative. This study aims to analyze the perception of prospective elementary school teachers on the confidence of teacher creativity in teaching practice. This research design uses a mixed method to thoroughly investigate the perceptions and practices of future teachers related to belief in creativity. Sixty-one prospective elementary school teachers with teaching experience in microteaching, tutoring, and campus became participants. Prospective teachers' perceptions of teaching creativity using a creativity questionnaire consisting of 19 items, assessing aspects of invention in learning, peer support, curriculum support, and college. The results of qualitative research using interviews to explore in depth the beliefs of prospective teachers related to teaching creativity. The analysis results show that most prospective teachers have high confidence in teacher creativity, especially in designing learning material content. The implications of these findings emphasize the importance of boosting teacher candidates' confidence through diverse teaching experiences, supporting collaboration between teachers, and ensuring that the curriculum supports teacher creativity to create innovative learning environments.

Keywords: Creativity, Perception, Teaching Beliefs, Creative Teacher

1 Introduction

The successful application of creativity in education depends mainly on teachers' beliefs about creativity, which have been extensively researched in the last 25 years. Previous research has revealed teachers today may not share the same ideas (1) because of revised curricula in different countries. This makes teachers all over the world feel confused and wonder about the true meaning of the phrase. In the microteaching session, prospective teachers can run teaching simulations by focusing on using creativity in teaching methods (2,3). They can practice and test creative approaches to teaching certain concepts. In teaching creativity, several studies say microteaching can create practical learning experiences, motivate students, and help them reach their maximum potential in primary education (4–6). This aligns with the view that education should be a place to instil creativity in a more adaptive and innovative generation (7–9).

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Z. B. Pambuko et al. (eds.), Proceedings of 5th Borobudur International Symposium on Humanities and Social Science (BISHSS 2023), Advances in Social Science, Education and Humanities Research 856, https://doi.org/10.2991/978-2-38476-273-6 108 Previous research investigating teachers' beliefs regarding creativity has provided valuable insights into how teachers understand the concept of creativity, their views on the characteristics of creative students and teachers, and their perspectives on learning environments that encourage creativity. A recent analysis underlines some personal characteristics that might influence how educators understand and support creativity. However, the factors influencing this teacher's beliefs have not been comprehensively discovered. Given that teachers' views can change over time, especially in the context of changing emphasis on creativity in education, a systematic analysis of recent research findings on teachers' beliefs about creativity is becoming an unmet need. Therefore, this study aims to analyze the perception of prospective elementary school teachers on the confidence of teacher creativity in teaching practice. (10–13) (14).

This research is necessary because it can significantly contribute to understanding how future teachers interpret and implement creativity beliefs. By understanding their views and practices regarding creativity, we can evaluate how this concept is integrated into current teaching methods. Research results can provide valuable insights for improving teaching practices, designing curricula that better fit the needs of evolving education systems, and identifying areas where educational innovation is needed. In addition, a deep understanding of prospective teachers' creative beliefs and practices can shape education policy, improve teacher training programs, and directly influence the quality of student learning. Thus, this research is relevant in an academic context and directly impacts the improvement of the education system as a whole.

Teacher awareness in teaching creativity is critical because invention has a crucial role in students' intellectual, social, and emotional development. The theory of Freudian Psycho-analysis, developed by Sigmund Freud, can provide exciting insights into how psychological aspects can influence the perception of prospective teachers towards the teaching creativity of future teachers in prospective teachers. In research conducted by (15,16) (17) Holm-Hadulla, (18)s theory underscores the importance of resolving internal conflicts. Future teachers who face a conflict between the desire to teach more creatively and the lack of confidence may need to find ways to balance and resolve that conflict. In addition, Fossi (19) revealed prospective teachers can reflect on teaching and may be able to find creative inspiration or a deeper understanding of their motivations in education.

2 Creativity teaching

In ZPD theory, Vygotsky emphasized the importance of social interaction in the learning process. ZPD suggests that the most effective learning occurs when individuals interact with those with more advanced knowledge or skills. Therefore, ZPD supports the development of practical social, collaboration, and communication skills in education (20). In the context of learning, the role of the teacher is critical. The teacher serves as a higher comprehension and comprehension that helps students explore and grasp more complex concepts. Teachers must understand each student's ZPD to provide appropriate assistance and be within the student's potential developmental zone (21,22).

In addition, teachers can encourage student creativity by giving time and space for divergent thinking, followed by a concurrent thinking stage to design solutions. In Guilford's theory, the concept of divergent thinking is about generating various ideas or solutions from a single problem or situation. Teachers who apply this principle will encourage students to think creatively and generate multiple ideas. This can involve open-ended questions, debates, or project assignments that allow students to explore different ways to tackle a particular problem or topic. However, Guilford's convergent thinking is concerned with combining ideas generated in divergent thinking into the best or most effective solution. In a teaching context, teachers can use convergent thinking to help students evaluate ideas generated in divergent thinking and select solutions or ideas that best fit the learning objectives. The importance of combining divergent and convergent thinking in a teaching context is to create an environment that stimulates student creativity and ensures that invention is directed in a relevant and practical direction. Teachers who understand the role of both in the learning process can develop more creative, innovative, and effective teaching approaches to motivate and engage students in the learning process (23,24) (25) Creativity Beliefs.

As Bandura has expressed in the theory of Self-Efficacy, individuals believe in their ability to succeed in a particular action or task. This concept refers to a person's self-confidence to achieve goals and overcome challenges. This can be a foundation for understanding how teachers' confidence in their abilities in a teaching context can affect their creativity in the teaching process. This includes belief in their ability to design engaging and inspiring learning activities, integrate a range of resources, and create a classroom environment that supports creativity (26,27).

Teacher beliefs include beliefs about oneself, context and environment, content or knowledge, specific teaching practices, and students. In this study, creativity beliefs refer to teachers' ideas about their creativity, traits, and upbringing. Teacher confidence in teaching creativity relates to teachers' views or attitudes towards their ability to apply and develop innovative and creative teaching methods in the learning process. It includes teachers' confidence in their ability to design engaging subject matter, integrate innovation in the teaching process, and motivate students to think creatively (28).

3 Method

3.1 Research Design

This study adopts a mixed methods approach to comprehensively investigate the perceptions and practices of prospective teachers in the context of belief in creativity. Participants were 61 future elementary school teachers with experience in microteaching (29), tutoring and campus teaching. They filled in the perception of the learning that had been done. Self-confidence in the creativity of prospective teachers is measured using the Creativity questionnaire. The 19-item measure scores on (29) creativity, peer support, curriculum support and tertiary education were evaluated using a five-point scale from "strongly disagree" to "strongly agree". This five-point scale also evaluates statements about the concepts of creative teachers and creative students. These statements are designed with explicit theories of creativity in mind. The preparation of the

scale takes into account not only the content of the study but also the initial review by two experts in the field of creativity and educational psychology to correlate the questions with the concept (relevance criteria) and to guarantee the simplicity, clarity and accuracy requirements of each item. Three teachers from each academic domain were asked to review the items to evaluate the clarity of the language and the probability of providing the desired answers for the community. Some corrections were made concerning (30).

3.2 Research context

This research will explore prospective teachers' definitions and interpretations of the concept of creativity and their teaching strategies designed to stimulate student creativity. Qualitatively, through content analysis, this study seeks to understand the difference between perceptions and practices of prospective teachers related to applying creativity in the context of teacher education. Quantitatively, this study will use surveys and measurement instruments to measure the level of confidence in creativity and to identify common patterns or differences in the teaching practices of prospective teachers. Quantitative data will provide a broader picture of the extent to which confidence in creativity is reflected in curriculum and teaching practice. By combining qualitative and quantitative methods, this study aims to provide a deep and holistic understanding of the role of trust in creativity in shaping the educational practices of prospective teachers, as well as to identify general patterns or trends that may emerge from the data collected. This blended approach is expected to produce more prosperous and adequate findings to aid improvements in teacher education and curriculum development that promote creativity.

3.3 Research procedure

This mixed research procedure is designed to gain a comprehensive understanding of the perceptions and practices of prospective teachers in the context of belief in creativity. This approach begins with a qualitative phase, where researchers will use in-depth interviews to understand the future teacher's definition and interpretation of creativity. These interviews will involve open-ended questions to make room for a rich and contextual narrative. After the qualitative phase, the research will move on to the quantitative step. A structured survey will collect quantitative data on prospective teachers' perceptions and creative practices. The survey instrument will be developed based on preliminary findings from the qualitative phase, allowing researchers to gauge the extent to which prospective teachers apply their beliefs in their teaching practices. This quantitative data will then be statistically analyzed to identify general patterns and trends that can support or complement qualitative findings. The next phase involves data integration, combining qualitative and quantitative results to provide a more complete and in-depth picture. Triangulation analysis will examine the extent to which findings from the two methods are mutually supportive or contradictory. Ultimately, the study will present conclusions that combine results from both approaches, contributing to a

better understanding of the relationship between trust in teacher candidates' creativity, perceptions, and teaching practices.

4 Results and discussion

The perception of prospective teachers about creativity in learning can be seen in the experience of a future teacher when teaching. The results of the analysis are presented in Table 1.

Indicator	Score			
	Strongly disagree/ disagree.	Neither	Agree/ Strongly agree	
Designing learning material content	19,67%	24,59%	55,74%	
Design a learning model	24,59%	27,87%	47,54%	
Designing learning model media	26,23%	29,51%	44,26%	
Obstacles when implementing learning	22,95%	63,93%	13,11%	

Table 1. Perception of creative teachers base on learning

Based on the Table 1, most prospective teachers have self-confidence in creative teachers based on teaching experience (66.61%). Self-confidence in designing material content (55.75%), learning models that have been developed (47.54%), learning media that have been developed (44.26%), prospective teachers who experience obstacles (63.93%)

Prospective teachers' perceptions of peer support can be presented in Table 2.

		Score				
Indicator	Strongly disagree.	disagree/	Neither	Agree/ Strongly agree		
Credible Peer	16,39%		9,84%	73,77%		
Collaboration with peers	22,95%		29,51%	47,54%		

Table 2. Perception of creative teachers based on creativity in peers

Most prospective elementary school teachers feel that they need the support of their friends to become creative teachers (72.79%). They think peer support is essential to design innovative learning. Some feel their peers are more creative by giving advice (73.77%), and they must collaborate in creating creative learning (47.54%).

Meanwhile, it would help if you supported the curriculum and college to become a credible teacher candidate. The data can be seen in Table 3.

Indicator	Score			
	Strongly disagree.	disagree/	Neither	Agree/ Strongly agree
Curriculum that supports the creativ-				_
ity of prospective teachers	16,39%		14,75%	67,21%
Facility support	29,51%		32,79%	37,70%
Supervisor support	11,48%		32,79%	55,74%

Table 3. Perceptions of creative teachers based on curriculum and college support

The existence of curriculum support significantly affects creative teachers (71.48%). Most prospective teachers feel that the help of the curriculum system can cause teacher creativity (67.21%). Future teachers think that there is a lack of university support based on facilities in encouraging (37.70%), while most already feel that there is support from supervisors to become creative teachers (55.74%).

5 Discussion

This research is a conceptual replication of Westby and Maria Fatima's (31) analysis, which shows that teachers' perceptions of teachers are creative. The results were similar to those obtained by the participants, and this study found that prospective teachers' confidence in creative teachers could affect the learning process that had been carried out. Several studies reveal creativity and innovative thinking have been widely promoted as essential to 21st-century education and productivity (32). This research shows that the perception of creative teachers can be seen in the experience of prospective teachers teaching on the teaching campus, PPL and tutoring. Most of them consider experience as learning material in designing learning in the classroom. In research conducted by Todd Chester, teacher creativity can be seen from how closely prospective teachers understand the characteristics of students. In designing teaching materials, you should look at students' learning characteristics. Teachers' beliefs about creativity influence technology-based creativity development practices, with beliefs about assessment being a significant obstacle (33). Several studies have shown that creative teachers view learning as a dynamic process that requires fresh and exciting teaching methods (34,35). They tend to create a classroom environment that arouses students' curiosity, encourages active participation, and provides space for creative expression. Creativity in learning, according to the perception of innovative teachers, includes applying project-based learning methods and using educational technology (33,36). Flexibility and adaptability in drawing up lesson plans are also integral to the perception of creative teachers, as they understand that every class and every student has unique needs. Rather than just imparting knowledge, creative teachers engage students in the creative process, giving them the freedom to express their ideas (37)

The results of an interview with one of DW's prospective teachers said:

"When I try a learning model, I learn from colleagues with better teaching experience than me. I think the length of teaching experience can analyze shortcomings and advantages directly. In addition to my colleagues, I gained teaching experience from literacy studies in reputable journals."

This perception is enriched by the understanding that creativity is not just about producing a creative result but also involves an appreciation of the entire learning process, including students' ability to think critically, solve problems, and develop holistically. Thus, the perception of creative teachers reflects a belief in the importance of creativity as a central element in achieving broader educational goals.

The results of this study show that the perception of a creative teacher is often strongly influenced by peer support in the work environment. In the interview results, one of the prospective AD teachers said that.

"In developing teaching materials in learning, I usually discuss the exchange of ideas and experiences between peers, which can provide additional motivation and inspiration for a creative teacher. Peer advice made me more confident and confident in developing teaching materials and trying innovative learning approaches."

Based on the results of interviews and questionnaires, the perception of prospective creative teachers requires support from peers as much as 72.79%. Peers become pillars that reinforce a positive outlook on creativity in learning. Peer support can include exchanging ideas, collaborating, and inspiring each other. Creative teachers may feel more motivated to try new approaches to teaching when they see fellow teachers appreciating their efforts (38,39). By having peer support, a creative teacher can feel more confident and motivated to continue exploring new ways to create innovative and dynamic learning environments (23).

Curriculum support covers the extent to which the curriculum facilitates and encourages creative approaches to learning. Creative teachers will feel more supported when the curriculum provides flexibility to adapt teaching methods to students' needs and interests, allowing them to innovate in education. In addition, school support involving leadership that supports creative initiatives, adequate resources, and ongoing training can improve teachers' perceptions of the importance of creativity in the learning process (40,41). When schools encourage and support an atmosphere that facilitates experimentation and discoveries, creative teachers feel more valued and motivated to continue developing innovative teaching methods. Curriculum and school support that promotes inclusive approaches supports diversity and allows teachers to explore creative learning methods, creating an environment that stimulates teacher creativity. Thus, the perception of creative teachers is not only influenced by internal factors but also highly dependent on the work environment that facilitates and supports the development of creativity in learning (42).

6 Conclusion

In this study, it can be concluded that some factors, including self-confidence, peer support, and support from the curriculum and college, influence prospective teachers'

perceptions of creativity in learning. The analysis results show that most prospective teachers have high confidence in teacher creativity, especially in designing learning material content. Peer support is also essential, with most prospective teachers recognizing the need for collaboration and exchanging ideas to develop creative learning. In addition, help from curriculum and universities has a significant role in shaping the perception of creative teachers, with curriculum support playing a crucial role in encouraging innovative learning approaches. The implications of these findings suggest that the development of teacher creativity is not only related to individual aspects but also strongly related to the work environment and education system. Therefore, efforts are needed to increase the confidence of prospective teachers through diverse teaching experiences and support collaboration between teachers. Schools and colleges need to ensure that the curriculum can provide space for teacher creativity, and support for university facilities and supervisors also needs to be considered. By creating an environment that supports teacher creativity, it can be expected that the learning process will become more innovative and responsive to the needs of students by the demands of 21st-century education.

References

- 1. Jones H. Thoughts on teaching thinking: Perceptions of practitioners with a shared culture of thinking skills education. Curriculum Journal. 2008;19(4):309–24.
- 2. Jones JL, Jones KA. Teaching Reflective Practice: Implementation in the Teacher-Education Setting. Teacher Educator. 2013 Jan;48(1):73–85.
- Zulfikar T, Nidawati, Khasinah S, Mayangsari I. Indonesian students' perceived benefits of the micro-teaching course to their teaching internship. Indonesian Journal of Applied Linguistics. 2020;10(1):242–50.
- Donnelly R, Fitzmaurice M. Towards productive reflective practice in microteaching. Innovations in Education and Teaching International. 2011 Aug;48(3):335

 –46.
- 5. Carrier SJ. Implementing and integrating effective teaching strategies including features of lesson study in an elementary science methods course. Teacher Educator. 2011 Apr;46(2):145–60.
- Schall WE. Procedures for improving student teacher evaluation. Supervisors Quarterly. 1969;5(2):28–33.
- Ralph EG. The Effectiveness of Microteaching: Five Years' Findings [Internet]. Vol. 1, International Journal of Humanities Social Sciences and Education (IJHSSE). 2014. Available from: www.arcjournals.org
- 8. Higgins A, Nicholl H. The experiences of lecturers and students in the use of microteaching as a teaching strategy. Nurse Educ Pract. 2003;3(4):220–7.
- Ostrosky MM, Mouzourou C, Danner N, Zaghlawan HY. Improving Teacher Practices Using Microteaching: Planful Video Recording and Constructive Feedback. Young Exceptional Children. 2013 Mar 1;16(1):16–29.
- 10. Karwowski M, Gralewski J, Lebuda I, Wiśniewska E. Creative teaching of creativity teachers: Polish perspective. Think Skills Creat. 2007;2(1):57–61.
- 11. Simonton DK. Teaching Creativity: Current Findings, Trends, and Controversies in the Psychology of Creativity. 2012;39(3):217–22.
- Wisudawan NA, Artini LP, Utami IAMI, Inggris B, Ganesha UP. Perceived Teaching Creativity and Strategy Implementation in Distance Learning Activities. 2021;6:24–37.

- 13. Levenson E. Exploring collective mathematical creativity in elementary school. Journal of Creative Behavior. 2011;45(3):215–34.
- 14. Wang L, Kokotsaki D. Primary school teachers' conceptions of creativity in teaching English as a foreign language (EFL) in China. Think Skills Creat [Internet]. 2018; Available from: https://doi.org/10.1016/j.tsc.2018.06.002
- 15. Reis B. Creative repetition. International Journal of Psychoanalysis. 2019 Nov 2;100(6):1306–20.
- 16. Fonagy P, Luyten P. Fidelity vs. flexibility in the implementation of psychotherapies: time to move on. Vol. 18, World Psychiatry. Blackwell Publishing Ltd; 2019. p. 270–1.
- 17. Sternberg RJ, Karami S. An 8P Theoretical Framework for Understanding Creativity and Theories of Creativity. Journal of Creative Behavior. 2022 Mar 1;56(1):55–78.
- 18. Holm-Hadulla RM. Creativity and positive psychology in psychotherapy. International Review of Psychiatry. 2020;32(7–8):616–24.
- 19. Fossi G. Psychoanalytic Theory and the Problem of Creativity [Internet]. Vol. 66, International Journal of Psycho-Analysis. 1985. Available from: http://www.pepweb.org/document.php?id=ijp.066.0215a&type=hitlist&...
- 20. Gill G. International Handbook of Research on Teachers' Beliefs.
- 21. Van Der Stuyf RR. Scaffolding as a Teaching Strategy. 2002.
- 22. Margolis AA. Zone of Proximal Development, Scaffolding and Teaching Practice. CulturalHistorical Psychology. 2020;16(3):15–26.
- 23. FRYER M, COLLINGS JA. British Teachers' Views of Creativity. J Creat Behav. 1991;25(1):75–81.
- 24. Milne J. What is creativity? British Journal of Nursing. 2020;29(12):S4.
- 25. Beghetto RA. Education and creativity. The Curated Reference Collection in Neuroscience and Biobehavioral Psychology. 2016;(February 2013):37–41.
- 26. Sternberg RJ. A triangular theory of creativity. Psychol Aesthet Creat Arts. 2018 Feb 1;12(1):50–67.
- 27. Rubenstein LDV, Ridgley LM, Callan GL, Karami S, Ehlinger J. How teachers perceive factors that influence creativity development: Applying a Social Cognitive Theory perspective. Teach Teach Educ. 2018 Feb 1;70:100–10.
- 28. Gill G. International Handbook of Research on Teachers' Beliefs.
- 29. Creswell JW. Designing and Conducting Mixed Methods Research. Aust N Z J Public Health. 2007;31(4):388–388.
- 30. Schall WE. Procedures for improving student teacher evaluation. Supervisors Quarterly. 1969;5(2):28–33.
- 31. Azrai EP, Rini DS, Suryanda A. Micro-teaching in the Digital Industrial Era 4.0: Necessary or not? Universal Journal of Educational Research. 2020 Apr 1;8(4A):23–30.
- 32. Kettler T, Lamb KN, Willerson A, Mullet DR. Teachers' Perceptions of Creativity in the Classroom. Creat Res J. 2018 Apr 3;30(2):164–71.
- 33. Bereczki EO, Kárpáti A. Technology-enhanced creativity: A multiple case study of digital technology-integration expert teachers' beliefs and practices. Think Skills Creat. 2021 Mar 1;39.
- 34. Hetherington L, Chappell K, Ruck Keene H, Wren H, Cukurova M, Hathaway C, et al. International educators' perspectives on the purpose of science education and the relationship between school science and creativity. Research in Science and Technological Education. 2020 Jan 2;38(1):19–41.
- 35. Higgins A, Nicholl H. The experiences of lecturers and students in the use of microteaching as a teaching strategy. Nurse Educ Pract. 2003;3(4):220–7.

- Mohammad N, Yasin RM, Ana. Creative Teaching in Design and Technology Curriculum: Using Structural Equation Modeling. Procedia Soc Behav Sci [Internet]. 2015;204(November
- 37. 2014):240–6. Available from: http://dx.doi.org/10.1016/j.sbspro.2015.08.146
- 38. Stone DL. Art Teachers' Beliefs about Creativity. Visual Arts Research. 2015 Dec 1;41(2):82–100.
- 39. Schiavio A, Biasutti M, Antonini Philippe R. Creative pedagogies in the time of pandemic: a case study with conservatory students. Music Education Research. 2021;23(2):167–78.
- 40. Luan L, Hong JC, Cao M, Dong Y, Hou X. Exploring the role of online EFL learners' perceived social support in their learning engagement: a structural equation model. Interactive Learning Environments. 2020;
- 41. Cremin T, Chappell K. Creative pedagogies: a systematic review. Res Pap Educ. 2021;36(3):299–331.
- 42. A creative curriculum. The Primary Curriculum Design Handbook : Preparing Our Children for the 21st Century. 2015.
- 43. Jeffrey B, Woods P. Creative learning in the primary school. Creative Learning in the Primary School. 2008. 1–182 p.

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