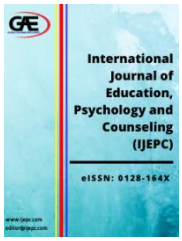
International Journal of Education, Psychology and Counseling
IJEPC
EISSN : 0128-164X
Volume 10 Issue 57 (March 2025) PP. 995-1014
DOI 10.35631/IJEPC.1057064



INTERNATIONAL JOURNAL OF EDUCATION, PSYCHOLOGY AND COUNSELLING (IJEPC)
www.ijepc.com

THE BELIEF AND PRACTICE OF CREATIVITY FOSTERING BEHAVIOUR AMONG CHINESE PRESCHOOL TEACHERS

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Article Info:

Article history:
Received date: 29.01.2025
Revised date: 16.02.2025
Accepted date: 20.03.2025
Published date: 30.03.2025

To cite this document:

Abdul Rahman, M. N., Mao, Y., Dewitt, D., & Cai, C. (2025). The Belief and Practice of Creativity Fostering Behaviour among Chinese Preschool Teachers. *International Journal of Education, Psychology and Counseling, 10* (57), 995-1014.

DOI: 10.35631/IJEPC.1057064

Abstract:

The era of Industry 5.0 demands innovative talents, underscoring the pivotal role of preschool teachers in fostering creativity. This study examined the beliefs and practices of Creativity Fostering Behavior (CFB) among 181 preschool teachers in Langfang, China, using the CFTIndex (45-item questionnaire). Results from the 5-point Likert scale revealed: (1) Beliefs in flexibility scored lowest (mean = 2.276), while integration/opportunity scored highest (mean = 2.622); (2) Practice scores mirrored this trend, with flexibility lowest (mean = 2.216) and opportunity highest (mean = 2.600). Findings indicate a belief-practice gap, where theoretical endorsement of CFB fails to translate consistently into classroom practice, likely due to insufficient training, rigid curricula, and lack of institutional support. The study highlights the need for targeted professional development to bridge this gap and align teaching practices with creativity-fostering principles.

Keywords:

Creativity Fostering Behavior; Preschool Teachers; Belief; Practice; Langfang

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Introduction

Industry 5.0 emphasizes the deep integration of humans and machines, people-centeredness, sustainability, and resilience, as well as smart supply chains and personalized production. Talent requirements are reflected in interdisciplinary knowledge and skills, innovation ability and entrepreneurship, digital technology and intelligent manufacturing skills, environmental awareness and sustainable development capabilities, and resilience. These requirements and trends will guide the future development of manufacturing and the direction of talent training (Mrugalska et al., 2023).

In the context of the industry 5.0 era, the Chinese government has proposed the "Made-in-China 2025" strategic plan to promote the transformation and upgrading of the manufacturing industry. Emphasizing that innovation is the core driving force of development, it is necessary to increase in research and development, promote cooperation between industry, academia, and research, accelerate the transformation of scientific and technological achievements, and realize the transformation of manufacturing from low-end to high-end and from tradition to modernity (Zhou, 2015). At the same time, it is necessary to strengthen innovation in high-end equipment, improve independent research and development capabilities of key equipment, and meet the needs of major national projects and projects (Li, 2018).

This puts forward the need for more innovative talents. Innovative talents must not only have cross-discipline capabilities and be able to think and innovate across different fields; they must also master digital skills to promote the digital transformation of the manufacturing industry; at the same time, innovative talents need to have strong independent learning capabilities and be able to continuously update knowledge and skills and adapt to new development needs (Mazzucchelli et al., 2019). Of course, the most important thing is to have innovative thinking. Innovative talents need to have keen insight, rich imagination, and the courage to try to promote innovative development (Zhang et al., 2023).

The demand for innovative talents also poses new challenges to education. Education needs to strengthen talent training and introduction, establish a completely innovative talent training system, attract and retain more outstanding talents, and provide strong support for industrial transformation, upgrading, and leapfrog development (Pastrana & Tobón, 2020). At the same time, creating a good innovation atmosphere and cultural environment to stimulate the creativity and innovative spirit of innovative talents is important to achieve high-quality development (Zhang, 2024).

As the starting point of education, preschool education is of extremely important significance to the cultivation of innovative talents. Preschool education is a critical period for young children’s cognitive development (Kuzik et al., 2020). Creativity needs to be instilled among children from a young age, such as at the preschool level. This is because preschool is a critical period for children's cognitive development. However, it is not known whether preschool teachers are aware of creativity-fostering behaviors and to what extent they practice these behaviors. At this stage, children can comprehensively develop their observation, thinking, expression, and other abilities through various activities, games, music, painting, etc. (Liu, 2023). In addition, preschool education not only teaches basic knowledge but, more importantly, cultivates children's learning interests and habits. Through preschool education, children can gradually build up their love and initiative for learning, laying a solid foundation for future learning (Larimore, 2020). Thirdly, it can also stimulate creativity. Preschool

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education encourages young children to explore and discover freely and stimulate their creativity and imagination through various creative activities (Karlidag, 2021). This plays a vital role in cultivating young children's innovative thinking and future creativity.

Surely, the successful development of creativity in education largely depends on teachers (Bereczki & Karpati, 2018). Promoting students' creativity by having CFB has become a necessary skill for teachers. Teachers who have CFB can create a dynamic teaching environment and process and can help students better develop the necessary cognitive and emotional skills. However, it is not known whether preschool teachers are aware of CFB and to what extent they practice these behaviors. Hence, this study seeks to identify the belief and practice of creativity-fostering behavior among Chinese preschool teachers.

Literature Review

Teachers' CFB has received much attention worldwide. Some studies have investigated factors that influence the CFB among teachers (Dikici, 2014), while others explore and evaluate teachers' CFB in different subjects (Abdulla & Cramond, 2017) (Ayyildiz & Yilmaz, 2021) (Konstantinidou & Zisi, 2017) (Paek et al., 2020) (Paek & Sumners, 2019) (Paek & Sumners, 2019; Sahin, 2021). In addition, some researchers investigated how teachers' CFBs can cultivate students' creativity (Albar & Southcott, 2021) (Harris & Rethans, 2018) (Saracho, 2012) (Oskay, 2015) (Soh, 2017).

China has always attached great importance to the development of creative education at the preschool level (Wang & Zhou, 2020). Through the database of China Knowledge Network (CNKI), the analysis of 979 journal papers compiled over 40 years, from 1978 to 2018, indicated that the development of creative education at preschool level in China can be divided into the creation period, the growth period, and the expansion period. And the development of creative education at preschool level focused on the creation of educational content, the creation of educational courses, the creation of educational operations, and the creation of preschool teachers (Wang & Zhou, 2020). Creative teachers are the key to the implementation of preschool creative education. Without creative teachers, the best educational ideals and curriculum design cannot be realized (Lang & Lv, 2020). And the construction of a team of high-quality professional and innovative teachers has been listed as one of the ten strategic tasks by China Education Modernization 2035.

However, there are relatively few studies on the creativity of preschool teachers. So far, Chinese scholars have published only 21 research papers (1978-2018) on creative preschool teachers, covering major topics such as the quality, growth, and training of creative teachers (Wang & Zhou, 2020). The barrier in the development of children's creativity is teacher guidance in fostering creativity (Wang & Wen, 2011). Sternberg (1999) mentioned that the only and most effective way to develop creative intelligence among children is to set you as a role model of creativity. Only when you show them creative behavior will they be able to develop and improve their creative intelligence. Not only the creativity of teachers has an impact on students, but also the teaching style and personality of teachers have an impact on the development of students' creativity (Wang & lv, 2015). Although the vigorous new curriculum reform in China has renewed teachers' educational beliefs on a large scale and improved teachers' comprehensive abilities, the rational education model and utilitarian examination culture that have been formed for a long time have always prevailed. The vast majority of preschool teachers do not understand the basic principles and techniques of creative

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studies (Yue, 2003). There is generally little motivation to be creative, and it is coupled with poor creative ability and indifference to innovation, which are either new ideas, technologies, or methods. When dealing with students, the attitude of uniformity, common ground, standardization, and obedience does not allow students to take risks, deviate from the rules, or stand out differently, thus forming a barrier for the development of children's creativity (Wang & Sun, 2018).

Recent Western studies highlight structural barriers to creativity, such as curriculum rigidity and insufficient professional development (Papadakis et al., 2021). For instance, Kalogiannakis & Papadakis (2020) found that preschool teachers' adoption of STEM activities relies heavily on institutional support, echoing China's challenges in balancing standardized curricula with creative pedagogy.

Currently internationally recognized is the teacher creative teaching behavior indicator (CFTIndex) developed by Soh (2000) based on the nine principles for teachers to foster students' creativity proposed by Cropley (1997). It contains 9 dimensions and a total of 45 specific behavioral indicators. See Table 1.

Table 1 CFT Index

Subscale	Item	Item content
Independence	1	I encourage students to show me what they have leaned on their own.
	10	I teach my students the basics and leave them to find out more for themselves
	19	I leave questions for my students to find out for themselves
	28	I teach students the basics and leave room for individual leaning
	37	I leave open-ended questions for my students to find the answers for themselves
Integration	2	In my class. students have opportunities to share ideas and views
	11	Students in my class have opportunities to do group work regularly
	20	Students in my class are encouraged to contribute to the lesson with their ideas and suggestions
	29	I encourage students to ask questions and make suggestions in mv class
	38	Students in my class are expected to work in group co- operatively.
Motivation	3	Learning the basic knowledgeskills well is emphasized in my class
	12	I emphasize the importance of mastering the essential knowledge and skills
	21	My students know that I expect them to learn the basic knowledge and skills well
	30	Moving from one topic to the next quickly is not my main concern in class
	39	Covering the syllabus is not more important to me than making sure the students learn the basics well
Judgement	4	When my students have some ideas, I get them to explore further before I take a stand.

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	13	When my students suggest something, I follow it up with questions to make them think further.
	22	I do not give my view immediately on students ideas whether I agree or disagree with them.
	31	I comment on student's ideas only after they have been more thoroughly explored.
	40	I encourage students to do things differently although doing this takes up more time
Flexibility	5	In my class, I probe students' ideas to encourage thinking
	14	I encourage my students to ask questions freely even if they appear irrelevant
	23	I encourage my students to think in different directions even if some of the ideas may not work
	32	I like my students to take time to think in different ways.
	41	I allow my students to deviate from what they are told to do.
Evaluation	6	I expect my students to check their own work instead of waiting for me to correct them
	15	I provide opportunities for my students to share their strong and weak points with the class
	24	My students know that I expect them to check their own work before I do.
	33	In my class, students have opportunities to judge for themselves whether they are right or wrong.
	42	I allow my students to show one another their own work before submission.
Question	7	I follow up on my students' suggestions so that they know I take them seriously.
	16	When my students have questions to ask, I listen to them carefully.
	25	My students know I do not dismiss their suggestions lightly.
	34	I listen to my students' suggestions even if they are not practical or useful.
	43	listen patiently when my students ask questions that may sound silly.
Opportunities	8	I encourage my students to try out what they have learned from me in different situations.
	17	When my students put what they have learned into different uses, I appreciate them.
	26	My students are encouraged to do different things with what they have learned in class.
	35	I don't mind my students trying out their own ideas and deviating from what I have shown them.
	44	Students are allowed to go beyond what I teach them within my subject.
Frustration	9	My students who are frustrated can come to me for emotional support.
	18	I help students who experience failure to cope with it so that they regain their confidence.

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	27	I help my students to draw lessons from their failure.
	36	I encourage students who have frustration to take it as part of the learning process.
	45	I encourage students who experience failure to find other possible solutions.

Methods

Study Context and Sample Selection

The study focused on preschools in Langfang City, Hebei Province, China. Hebei is an eastern province with a robust economy and a well-established education system. Langfang's geographical proximity to Beijing and Tianjin—two major metropolitan hubs—positions it as a pilot city for educational reforms, often adopting policies aligned with national strategic goals (Hebei Education Bureau, 2023). This unique status makes its preschool education system a microcosm of China's urban-rural integration efforts, reflecting both developed and transitioning educational contexts.

Rationale for Langfang as the Sample Source

Langfang's three main urban districts share comparable educational resource allocations, minimizing regional disparities in the sample. According to 2017 records, the city had 74 preschools and 336 full-time teachers, none of whom had participated in formal Creativity Fostering Behavior (CFB) training (see Table 2). This lack of prior CFB exposure provided an ideal baseline to investigate teachers' intrinsic beliefs and practices without external intervention bias.

Ethical Compliance

Ethical approval for this study was obtained from Universiti Malaya's Research Ethics Committee (UMREC-2023-EDU-001). All participants provided informed consent prior to data collection, and anonymity was ensured through coded responses to mitigate privacy concerns.

Table 2: Early Childhood Education in Lang Fang, He Bei province in China (2017)

Number of preschools[1]	Number of preschool teachers[2]
74	336

Source: 1. https://www.zgtjnj.org/navipage-n3018102305000258.html
2. https://www.yearbookchina.com/navipage-n3018102305000257.html

Samples

Sample Determined

According to Krejcie and Morgan (1970), 181 preschool teachers is an adequate sample size for the survey. Therefore, in this study, 215 preschool teachers from different kindergartens in Langfang were invited.

Sampling Technique For Questionnaire Administration

To obtain the desired sample size, a simple random sampling without replacement technique was used. The appearance of each individual in the sample is independent, so the sample can represent the population, eliminating the subjective influence of the researcher and make the

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results objective (Singh & Masuku, 2014). After randomly selecting a sample from the population of 336 preschool teachers, 215 samples have been randomly selected from the population. Then, from the 215 questionnaires distributed, unqualified questionnaires were eliminated, and 185 valid questionnaires were finally obtained.

Table 3: Simple Random Sampling without Replacement

Region	Population size (N)	Sample size(n)	Actual sample size(na)
Langfang	336	215	185

Data Collection

The CFTIndex was selected due to its validated cross-cultural applicability in over 15 countries (Soh, 2015), particularly its alignment with China's emphasis on holistic creativity (e.g., integration of knowledge and opportunities). Alternative models, such as the Torrance Tests of Creative Thinking, focus on student outcomes rather than teacher behaviors, making CFTIndex more suitable for this study's objectives.

An online questionnaire, which was adapted from the dimensions of beliefs and practice from the Creativity Fostering Teacher Behaviors Scale (CFTIndex) (Soh, 2000), will be conducted for preschool teachers. CFTIndex had since been used by researchers in America, Canada, Chile, Hong Kong, Korea, Mexico, Nigeria, Turkey, and Singapore for varied purposes, including several Ph.D. theses since its first appearance in the Journal of Creativity Behavior in 2000 (Soh, 2015).

The 45 items of CFTIndex were closely related to teachers' creative behavior. It was able to examine the creative behaviors of preschool teachers, which would help to determine the belief of CFB and the extent to practice CFB among preschool teachers.

Data Analysis

Descriptive analysis was used to analyse the collected data via survey questionnaires. To be specific, Statistical Package for the Social Sciences (SPSS) was used as a tool to run descriptive statistics to determine the belief and extent of the CFB among preschool teachers. In addition, a 5-point Likert scale was conducted. It can calculate the centrality characteristics (mean value) and volatility characteristics (standard deviation value) of data through descriptive analysis. Mean comparison was also used to analyse the comparison of teachers' CFB level and the extent to practice under the same CFB indicator.

Reliability And Validity

The reliability of the scale was tested by reliability analysis in SPSS. According to George and Mallery (2003), alpha coefficients between .60 and .70 are considered acceptable. As can be noted, all the construct's Cronbach alpha values were above.7. The Cronbach alpha values were noted to be above the criteria. Thus, it can be concluded that the instrument used in this survey had good internal consistency and was reliable.

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Table 4 Reliability Analysis For Each Dimension

Subscale	Items Size	Cronbach's alpha coefficient	
Dimensions		Belief	Practice
Independence	5	0.816	0.822
Integration	5	0.802	0.802
Motivation	5	0.800	0.800
Judgement	5	0.821	0.821
Flexibility	5	0.837	0.837
Evaluation	5	0.866	0.866
Problem	5	0.832	0.832
Opportunity	5	0.819	0.820
Frustration	5	0.827	0.790

Validity verification was performed using KMO and Bartlett (p-value) tests. The KMO value is used to determine the suitability of information extraction. If KMO is 0.6, it means that the information can be effectively extracted. At the same time, the validity analysis requires passing the Bartlett test (the corresponding p-value needs to be less than 0.05). From the belief dimension, the KMO value is 0.887, which is greater than 0.8, and the Bartlett (p-value) is 0.000, less than 0.5, indicating that the research data is very suitable for information extraction with an effect. And from the practice dimension, the KMO value is 0.896, the KMO value is greater than 0.8, and the Bartlett (p-value) is 0.000, which is less than 0.5, indicating that the research data is very suitable for extracting information and is effective (see Table 5).

Table 5: Validity Analysis for Each Dimensions

Dimension	KMO	Bartlett（p value）
Belief	0.899	0.000
Practice	0.907	0.000

Results

Data collected as a result of the application of CFTIndex from the dimensions of belief and practice level to CFB were analysed using SPSS. (See Table 6).

Table 6 Descriptive Analysis

Statements		N	Belief		Practice	
			Mean	Std. Deviation	Mean	Std.Deviation
Independence	1.I encourage students to show me what they have learned on their own.	185	2.416	1.144	2.265	1.142

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	10.I teacher my students the basics and leave them to find out more for themselves.	185	2.503	1.234	2.476	1.138
	19.I leave questions for my students to find out for themselves.	185	2.486	0.927	2.492	1.043
	28.I teach students the basics and leave room for individual learning	185	2.524	1.027	2.508	1.033
	37.I leave open-ended questions for my students to find the answers for themselves	185	2.551	1.251	2.438	1.122
Integration	2.In my class, students have opportunities to share ideas and views.	185	2.622	1.228	2.541	1.198
	11.Students in my class have opportunities to do group work regularly.	185	2.432	1.009	2.449	0.972
	20.Students in my class are encouraged to contribute to the lesson with their ideas	185	2.573	1.219	2.411	1.149
	29.I encourage students to ask questions and make suggestions in my class.	185	2.530	1.238	2.514	1.189
	38.Students in my class are expected to work in group cooperatively.	185	2.573	1.121	2.438	1.020
Motivation	3.Learning the basic knowledge/skills well is emphasized in my class.	185	2.616	1.264	2.454	1.220
	12.I emphasize the importance of mastering the essential knowledge and skills	185	2.551	1.188	2.481	1.166
	21.My students know that I expect them to learn the basic knowledge and skills well.	185	2.546	1.161	2.470	1.216

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	30.Moving from one topic to the next quickly is *no*t my main concern in class	185	2.438	1.082	2.259	1.057
	39.Covering the syllabus is not more important to me than making sure the students learn the basics well.	185	2.411	1.095	2.465	0.989
Judgement	4.When my students have some ideas, I get them to explore further before I take a stand.	185	2.578	1.288	2.400	1.243
	13.When my students suggest something, I follow it up with questions to make them think.	185	2.486	1.079	2.497	1.152
	22.I do not give my view immediately on students' ideas, whether I agree or disagree with them.	185	2.459	1.083	2.378	1.026
	31.I comments on student's ideas only after they have been more thoroughly explored.	185	2.530	1.193	2.503	1.133
	40.I encourage students to do things differently although doing this takes up more time.	185	2.519	1.203	2.449	1.197
Flexibility	5.In my class, I probe students' idea to encourage thinking	185	2.378	1.192	2.303	1.066
	14.I encourage my students to ask questions freely even if they appear irrelevant.	185	2.427	1.187	2.249	1.185
	23.I encourage my students to think in different directions even if some of the ideas may not work.	185	2.503	1.175	2.497	1.189

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	32. I like my students to take time to think in different ways.	185	2.341	1.131	2.308	1.077
	41.I allow my students to deviate from what they are told to do.	185	2.276	1.172	2.216	1.159
Evaluation	6.I expect my students to check their own work instead of waiting for me to correct them.	185	2.503	1.069	2.432	1.112
	15.I provide opportunities for my students to share their strong and weak points with the class.	185	2.557	1.276	2.476	1.142
	24.My students know that I expect them to check their own work before I do.	185	2.486	1.216	2.449	1.098
	33.In my class, students have opportunities to judge for themselves whether they are right or wrong.	185	2.324	1.208	2.314	1.156
	42.I allow my students to show one another their own work before submission	185	2.541	1.151	2.492	1.114
Question	7.I follow up on my students' suggestions so that they know I take them seriously.	185	2.459	1.238	2.481	1.180
	16.When my students have questions to ask, I listen to them carefully	185	2.341	1.082	2.449	1.132
	25.My students know I do not dismiss their suggestions lightly.	185	2.384	1.078	2.405	1.115
	34.I listen to my students' suggestions even if they are not practical or useful.	185	2.341	1.237	2.303	1.227
	43.I listen patiently when my students ask questions that may sound silly.	185	2.530	1.175	2.389	1.193

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Opportunities	8.I encourage my students to try out what they have learned from me in different situations	185	2.541	1.093	2.422	1.030
	17.When my students put what they have learned into different uses, I appreciate them.	185	2.546	1.113	2.405	1.119
	26.My students are encouraged to do different things with what they have learned in class.	185	2.535	1.216	2.600	1.133
	35.I don't mind my students trying out their own ideas and deviating from what I have shown them.	185	2.622	1.092	2.578	1.254
	44.Students are allowed to go beyond what I teach them within my subject.	185	2.416	1.296	2.335	1.288
Frustration	9.My students who are frustrated can come to me for emotional support.	185	2.357	1.114	2.319	0.945
	18.I help students who experience failure to cope with it so that they regain their confidence.	185	2.459	1.156	2.368	1.111
	27.I help my students to draw lessons from their failure	185	2.449	1.142	2.454	1.118
	36.I encourage students who have frustration to take it as part of the learning process.	185	2.557	1.276	2.384	1.188
	45.I encourage students who experience failure to find other possible solutions.	185	2.438	1.112	2.270	0.951

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The data analysis in Table 6 allows us to understand more deeply the belief and practice of CFB among preschool teachers in Langfang.

Analysis from the belief dimension:

The behavioral indicator "I allow my students to deviate from what I tell them to do" had the lowest perceived mean value (2.276), indicating that teachers were relatively less accepting of allowing students to freely deviate from the teaching plan. This may be related to traditional beliefs of teaching or managerial pressures.

The highest perceived mean (2.622) for the indicators "In my classroom, students are given the opportunity to share ideas and opinions" and "I don't mind if my students try out their own ideas and deviate from what I am presenting to them" indicate that teachers generally believe that it is important to give students opportunities to express and communicate in the classroom. On the whole, there was no significant difference in the beliefs of CFB among the preschool teachers, which may indicate that most of the teachers agreed on the importance of creative teaching, but there may be some differences in the actual practice.

Analysis From The Practice Dimension

The practice indicator "I allow my students to deviate from what I tell them to do" had the lowest mean value (2.216), further confirming teachers' concerns or limitations about the amount of freedom given to students in practice.

The mean value for the indicator "When my students have some ideas, I let them explore them further before I take a position" is also less than 3, showing that teachers' practice in encouraging students to explore on their own is still lacking.

The indicator of practice "I encourage students to do different things with what they have learned in class" has the highest mean value (2.600), indicating that teachers are doing relatively well in encouraging students to apply their knowledge.

Overall, whilst there were no significant differences in preschool teachers' beliefs of CFB, there is a need to further enhance support for student freedom and autonomy in practice. Teachers are encouraged to give students more opportunities for expression and communication in the classroom to foster creativity and critical thinking skills. Teachers could experiment with more open-ended teaching methods, allowing students to deviate from the lesson plan to a certain extent and explore their own ideas in order to develop their creativity and problem-solving skills. Enhancing training and support for teachers to help them overcome the limitations of traditional teaching concepts and better implement creative teaching behaviors.

Mean Comparisons

Table 7 shows how teachers' scores differed between belief and practice levels on the CFTIndex and its nine subscales.

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Table 7 Mean for Each Dimension

		Mean for belief	Mean for Practice
Independence	Total	12.48	12.179
	Average	2.496	2.436
Integration	Total	12.73	12.353
	Average	2.546	2.471
Motivation	Total	12.562	12.129
	Average	2.512	2.426
Judgement	Total	12.572	12.227
	Average	2.514	2.445
Flexibility	Total	11.925	11.573
	Average	2.385	2.315
Evaluation	Total	12.411	12.163
	Average	2.482	2.433
Question	Total	12.055	12.027
	Average	2.411	2.405
Opportunity	Total	12.66	12.34
	Average	2.532	2.468
Frustration	Total	12.26	11.795
	Average	2.452	2.359

As table 7 is shown, for independence, teachers' belief (mean = 2.496) is a little higher than teachers' practice (mean = 2.436), which means that preschool teachers' belief level of independence in the CFB index is higher than their practice level. As early as 1985, Chinese scholars clearly stated that respecting children's independence is an important condition for cultivating children's creative qualities. In the nearly 40 years since then, scholars have continuously proposed respecting children's standpoint, especially in the Curriculum Standards for National Training Programs for Early Childhood Teachers promulgated by the Ministry of

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EISSN : 0128-164X
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Education of China, it is clear that “cultivating a child-oriented scientific outlook on children” and “respecting children’s independence and intervening promptly to guide children's activities" is an important part of the training. In the development process of nearly 40 years, although the belief and practical level of preschool teachers in respect of children's independence is close to the practice level, the cognitive level is still higher than the practice level, which also shows that the training of teachers' independence should be paid attention to.

For integration, teachers' belief (mean = 2.546) is a little higher than teachers’ practice (mean = 2.471), which means the preschool teachers in Langfang have a relatively high belief in integrative creative behaviors and summarize the behaviors under the concept indicators of integration. They can encourage students to participate in the process of practicing and express their opinions. This reflects the lag of teachers' practice in the process of cultivating creative behavior.

For motivation, teachers' belief (mean = 2.512) is a little higher than teachers’ practice (mean = 2.426). Which reflects that the preschool teacher's belief in motivation is higher than the motivation behavior in the actual teaching process. This is also consistent with the educational concept of encouraging and stimulating the enthusiasm of students, but the actual teaching still exists to a large extent of indoctrination and suppression of the education phenomenon.

For judgment, teachers' belief (mean = 2.514) is higher than teachers’ practice (mean = 2.445). It shows that preschool teachers have a clear judgment on when to give advice or guidance and encourage students to explore in the process of cultivating children's creative behavior, but they have a low degree of practice in the process of practice, which reflects the lag in the development of teachers' creative practice. There are gaps in sexuality, cognition, and practice. For Flexibility, teachers' belief (mean = 2.385) is a little higher than teachers’ practice (mean = 2.315), and teachers' belief of flexibility creative behavior index is slightly more than that of practicing flexible creative behavior in practice, but this deficiency is not very obvious.

Similarly, for evaluation, teachers' belief (mean = 2.482) is a little higher than teachers’ practice (mean = 2.433), but this difference is not obvious. Generally speaking, teachers' belief in evaluation and the implementation level in the actual teaching process are relatively consistent. For Question, teachers' belief (mean = 2.411) is almost the same as teachers’ practice (mean = 2.405). As discussed earlier, questioning is also a skill that preschool teachers repeatedly practice during the training process, as it is quite normal for almost all preschool teachers to be able to agree on questioning both cognitively and practically.

For Opportunity, teachers' belief (mean = 2.532) is a little higher than teachers’ practice (mean = 2.468); this reflects that in the teaching concept, preschool teachers have relatively sufficient belief in the cultivation of the creative behavior index of opportunity, but they cannot better practice this behavior index in the process of practice.

For frustration, teachers' belief (mean = 2.452) is higher than teachers’ practice (mean = 2.359). This reflects that teachers can recognize students' negative emotions, but the level of intervention on negative emotions needs to be further improved.

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Next, we compare the mean of each indicator from another perspective. Through comparison, we find that from the perceptive of belief (Integration Mean=2.546>Opportunity Mean=2.532>Judgement Mean=2.514>Motivation Mean=2.512>Independence Mean=2.496>Evaluation Mean=2.482>Frustration Mean=2.452>Question Mean=2.411>Flexibility Mean=2.385). This reflects that, in Langfang preschool teachers' belief of creative behavior, the belief of integration behavior indicators is relatively high, followed by opportunity, judgement, motivation, independence, evaluation, frustration, question, and flexibility. The belief in the indicators of flexibility behavior is the lowest. Therefore, in the design of the teacher's creative behavior training module, the awareness of the teacher's flexibility should be the focus of the design.

Finally, let's compare the practical mean of each behavioral indicator. Through comparison, we find that from the perception of practice (Integration Mean=2.471>Opportunity Mean=2.468>Judgement Mean=2.445>Independence Mean=2.436>Evaluation Mean=2.433>Motivation Mean=2.426>Question Mean=2.405>Frustration Mean=2.359>Flexibility Mean=2.315). Observing the above values and comparing them with the cognitive mean of teachers, we found that although there are certain deficiencies in belief among Langfang preschool teachers, creativity-fostering behaviors can be practiced. Similar to belief, teachers' practice level of integration has the highest mean average value. Similarly, with the same belief level, teachers' practical level of flexibility has the lowest mean value, which also reflects that more attention should be paid to the training of flexibility in the process of teachers' CFB training.

Discussion

China's examination-oriented culture, prioritizing uniformity over experimentation (Wang & Zhou, 2020), may explain teachers' reluctance to deviate from lesson plans. Institutional pressures to meet curriculum targets likely overshadow creativity-fostering practices.

By analysing two key research questions, this paper aims to gain insights into the preschool teacher's belief and practice level for CFB. Firstly, the study aimed to identify the CFB belief level of preschool teachers; secondly, it focused on the practical level to explore the extent to which preschool teachers practiced CFB.

The answers to the first question show that the extent of the belief of CFB is the lowest mean value of 2.276 in the belief of flexibility. This indicates that teachers have relatively weak beliefs in flexible teaching, which may mean that teachers do not have firm confidence or attitude when faced with the need to flexibly adjust teaching strategies or methods. The highest mean value of 2.622 appeared in the belief of integration and opportunities. This shows that teachers have strong beliefs in integrating teaching resources and seizing teaching opportunities, which may mean that teachers are good at integrating different teaching resources and take decisive action when favourable teaching opportunities arise.

The answer to the second question shows that the extent of the practice of CFB is the lowest mean value of 2.216 occurred in the practice of flexibility. This shows that teachers use relatively little flexibility in actual teaching and may need to strengthen their practice in improving teaching adaptability, adapting to student differences, or innovating teaching methods. The highest mean of 2.600 occurred in the practice of opportunities. This shows that

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teachers can actively seek and seize practical opportunities in actual teaching and improve their creative teaching abilities through practical operations.

Overall, teachers were strong on integration and opportunity beliefs but relatively weak on flexibility beliefs and practices. This may mean that teachers need to strengthen the cultivation of flexible teaching beliefs and, at the same time, improve their ability to flexibly apply teaching strategies and methods in actual teaching. Teachers can continue to maintain and develop their advantages in integrating teaching resources and seizing teaching opportunities, and further improve the effectiveness of creative teaching by continuously optimizing teaching design and keenly seizing teaching opportunities. In order to improve teachers' beliefs and practices in creative teaching behaviors, it is recommended that schools or educational institutions provide teachers with more training and support, especially training for flexible teaching and innovative teaching methods. At the same time, teachers are encouraged to communicate and share with each other to jointly explore more effective creative teaching strategies.

Conclusion

To bridge the belief-practice gap, policymakers should decentralize curriculum control, integrate CFB metrics into teacher evaluations, and establish regional innovation hubs for peer mentoring (e.g., Singapore's "Teach Less, Learn More" model).

After an in-depth study of the beliefs and practices of preschool teachers in Langfang, we found that the data showed acceptable construct validity and internal consistency reliability when applied to preschool teachers in Langfang. However, the level of preschool teachers' CFB was no significant difference in both the belief and practice dimensions. But there is a significant gap compared to global standards and much lower than, for example, countries such as Singapore and Turkey (Dikici & Soh, 2015).

The general level of CFB among preschool teachers in Langfang City is mainly reflected in the following aspects: first, insufficient cognitive level: although most teachers agree with the importance of extensive practical activities for young children, their in-depth understanding and practical application of creative teaching still need to be improved. Second, limited practical ability: In actual teaching, teachers' CFB practical ability is generally low, especially in the flexibility of behavioral indicators.

However, there are limitations to the study. Firstly, the representatives of the conclusions are easily affected. The questionnaire has nine dimensions, and 45 questions are investigated from cognitive and practical perspectives, respectively. The number of questions is too large, which may cause a certain amount of pressure on the respondents and may affect the representative of the conclusions. Secondly, the data collected was not deep enough. Although the scale used in the questionnaire has a certain degree of authority, it is interfered with by the subjective factors of the subjects. The data collected may be superficial and do not have an in-depth understanding of the true inner world. Lastly, the survey only covers Langfang. Due to the limitations of regional characteristics, the promotion of conclusions may be limited and needs to be flexibly adjusted according to different local conditions.

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The reliance on self-reported Likert-scale data may introduce social desirability bias. Future studies could triangulate findings with classroom observations (e.g., using the CLASS framework) or semi-structured interviews to capture nuanced teacher-student interactions.

All considered, the data has shown acceptable construct validity and internal consistency reliability when applied to the preschool teachers in Lang Fang. No matter from the perspective of belief or practice, the level of CFB of preschool teachers is average and far lower than other countries in the world (Dikici & Soh, 2015). Therefore, there is an urgent need to develop the CFB among teachers. However, how to foster the CFB of preschool teachers is the main point for future research.

Acknowledgements

I am deeply grateful to all who supported me throughout this academic journey. First, I sincerely thank my supervisors, Dr. Nazri and Dr. Dorothy, for their expert guidance, rigorous scholarship, and unwavering dedication, which laid the foundation for this research and enriched my academic growth. To my beloved mother, whose lifelong love and sacrifices—including caring for my daughter during my PhD—made this achievement possible, I owe my deepest gratitude. Though she could not witness this milestone, her influence remains my greatest treasure. Finally, I extend my appreciation to Universiti Malaya's staff for their invaluable support, which ensured the success of this work.

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