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Influence of Young Teachers' Perceived School Support on Creative Teaching Behaviors in Higher Vocational Colleges

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Abstract. This study explores the impact of school support on the creative teaching behaviour of Chinese higher vocational teachers and the mediating role of teacher adaptability and creative teaching efficacy. It aims to understand the situation of young teachers' perceptions of school support, adaptability and creative teaching efficacy. It helps optimize incentive mechanisms in the long run for young teachers in higher vocational schools to stimulate their creative teaching behaviour. This study conveniently sampled 660 young teachers from vocational high schools in Shandong Province and conducted a questionnaire survey with them. The results showed that teaching adaptability and creative teaching efficacy could be mediators in the relationship between perceived school support and creative teaching behaviour, showing that apart from school support, these two elements are crucial for the activation of creative teaching behaviour. Perceived school support has a positive impact on teachers' adaptability, creative teaching efficacy and creative teaching behaviour. Teacher adaptability and creative teaching efficacy play a partial mediating role in the relationship between perceived school support and creative teaching behaviour.

Keywords: perceived school support; creative teaching behaviour; teacher adaptability; creative teaching efficacy; young teacher

1. Introduction

As a key part of the vocational education system, higher vocational education plays a role as a bridge and link in the further development of the economy and society (Xia, 2021). The innovative mode of vocational education teaching is an inevitable trend in the development of vocational education. With the in-depth

implementation of the innovation-driven development strategy and the urgent need for the cultivation of innovative talents, the research on teachers' creative teaching has attracted more and more attention (Wang, 2023). During the process of teaching, teachers in higher vocational schools must not only cultivate the innovation ability of students and practice vocational skills for their future positions but also have a strong comprehensive ability, in which creative teaching behaviour is the embodiment of the highest level of teachers' comprehensive ability (Chen & Tang, 2021). Besides, classroom innovation and teaching reform are inevitable in the context of vocational education reform, and teachers with creative teaching behaviour abilities are more likely to be rewarded and valued (Wei, 2021). Hence, creative teaching does not only enable teachers to enjoy their work but is viewed as a challenge to try new teaching methods, helping to build teachers' self-esteem (NemerAitski & Heinla, 2020). In short, creative teaching practices bring benefits to schools, teachers and students. Therefore, it is important to study the factors influencing teachers' creative teaching behaviour, which is the first aim of this study.

Further, research has shown that an individual's creativity is significantly influenced by the environment in which they live. Therefore, teachers' creative teaching behaviours not only affect teachers' perceptions of the teaching environment but are also influenced by the perceptions of the supportive environment. Apart from their own efforts, young teachers seek emotional, institutional, and material support from their schools (Zhang, 2022). When teachers feel supported by their schools, their work engagement and performance tend to improve, which is conducive to achieving the school's overall goals (Chang et al., 2021). Expectations and trust in teachers in schools can motivate teachers to have different attitudes and behaviours at work (Rivas, 2017). Hence, the first scope of this study is to understand how perceived school support impacts creative teaching behaviour.

Teacher adaptability is regarded by scholars as the cornerstone of effective teaching and an important pedagogical speciality that teachers should possess (Xiao, 2022). Teachers are not only required to be able to perceive and judge changes in the external context (Ismayilova & Laksov, 2023) and give effective feedback and adjustments according to the new situation, but to also have the knowledge, skills, emotions, and more. Hence, they can cope with the new or changing situation. Therefore, this study aims to explore the relationship between perceived school support, teacher adaptability and creative teaching behaviour.

In addition, creative teaching efficacy (i.e. teachers' confidence in their ability to stimulate students' creativity in teaching) has been widely recognised as a key factor in positively influencing teachers' creative teaching behaviours (Chang et al., 2020; NemerAitski & Heinla, 2020). Therefore, it is important to explore and describe how the specific factors, attitudes, and beliefs that may influence the sense of creative teaching efficacy (Cayirdag, 2017) promote creative teaching behaviour. Although the importance of creative self-efficacy has been recognised, there is still limited discussion of its antecedents in the school context (Huang et

al., 2018). Another aim of this study is to explore the relationship between creative teaching efficacy, perceived school support and creative teaching behaviour.

One of the contributions of this study is to examine teacher adaptability and creative teaching efficacy as mediating variables, deeply explore the mechanism of perceived school support, teacher adaptability, and creative teaching effectiveness on innovative teaching behaviours, and deepen the understanding of the process of perceived school support, teacher adaptability, and creative teaching efficacy on the development of innovative teaching behaviours. The influencing factors of creative teaching behaviour will be clarified and the cultivation path of teachers' creative teaching behaviour is also studied. Another contribution of this study is to enrich the current literature on creative behaviour in the field of education since there is no empirical research on the relationship between perceptual school support and creative teaching behaviour among young teachers in higher vocational colleges under the guidance of this theory.

2. Literature Review and Hypothesis Development

2.1 Perceived School Support and Creative Teaching Behaviour

Zhen et al. (2023) defined perceptual school support as the attention, respect, and recognition of the school's innovation as felt by teachers. This included three aspects: leadership support, peer support and student support: perceived leadership support refers to the degree to which teachers feel that school leaders value, support and encourage them to explore new ways in curriculum content and teaching methods. Meanwhile, creative teaching efficacy is a kind of professional self-efficacy, which is derived from the theories of self-efficacy, creative self-efficacy, and teaching effectiveness. Bandura (2000) defines self-efficacy as an individual's belief that they are using existing or potential resources to accomplish a task. In educational research, perceptual support is widely recognised as an important antecedent for predicting individual innovative behaviour (Huang et al., 2019). When leadership provides a high level of innovation support, it enhances employees' sense of responsibility to the organisation and promotes employee-organisation interaction, which in turn stimulates employees' motivation to innovate (Biron & Boon, 2013; Khaddam et al., 2023).

In addition, teachers' sense of teaching effectiveness has a positive effect on creative teaching ability, which is mainly reflected in the prediction of thinking innovation ability, teaching strategies, innovation ability and multiple evaluation abilities. Mathisen (2011) suggests that the type of task, the autonomy of tasks, the relationship between leaders and members, and the perception of team members' innovation support had a significant impact on employees' creativity efficacy. Teachers with high self-efficacy are more open to new teaching methods and demonstrate higher levels of planning and organisational skills. In summary, there is a strong link between perceived school support and teachers' sense of creative teaching efficacy. School support does not only enhance teachers' creative self-efficacy but also influences teachers' teaching effectiveness and openness to innovative teaching methods through leadership and organisational atmosphere. Hence, we propose the following hypothesis.

Hypothesis 1: Perceived school support is positively related to creative teaching behaviour.

2.2 Perceived School Support and Teacher Adaptability

The American Psychological Association defines adaptability as an individual's ability to respond appropriately to change or changing situations, including the ability to change or adjust one's behaviour in different environments or with different people (VandenBos, 2007). Teacher adaptability refers to the teacher's response to the demands of external change in the course of curriculum change, and to maintaining a balance between the self and the environment by adjusting their own psychological state and behavioural practices (Loughland & Alonzo, 2019). Collective intelligence and teamwork can help teachers better adapt to the new teaching environment and challenges and improve their work effectiveness and teaching quality. Peer support not only improves the cohesion and cooperation efficiency of the whole team but also promotes the adaptability of teachers along with the development of education in a more positive direction (Chung & Chen, 2018; Jin et al., 2021). Teachers adjust instructional strategies and content by observing student engagement, response, and learning outcomes. By responding to student support and engagement, teachers can continuously improve their teaching skills and adaptability for professional growth (Parsons et al., 2017). Hence, we propose the following hypothesis.

Hypothesis 2: Perceived school support is positively related to teachers' adaptability.

2.3 Teachers' Adaptability and Creative Teaching Behaviour

Creative teaching refers to the use of specific methods used by teachers in the teaching process which aim to cultivate students' creative thinking and problem-solving skills. Besides, creative teaching behaviour could be defined as a teaching process with the goal of cultivating students with innovative qualities. This process consists of four aspects: guidance on learning styles, motivation stimulation, evaluation of opinions, and encouragement of flexibility (Zhang et al., 2008). Together, these aspects form the core content of creative teaching behaviour which aims to meet the individual needs of students and promote their holistic development through innovative teaching methods.

When teachers are proactive and adaptive, they are more likely to shape behaviours for work resources and challenges. Meanwhile, cognitive adaptation involves a teacher's cognitive adjustment to a new situation, for example, when a teacher needs to teach a new subject that they are not familiar with, they need to find a connection between new material and what is already known. Besides, behavioural adaptation involves a teacher's behavioural modifications, such as seeking help from colleagues with more knowledge and relevant resources to better adapt to new instructional requirements. There is an overlap between adaptive and creative teaching behaviours, as both involve the adjustment of thoughts and behaviours. Hence, we propose the following hypothesis.

Hypothesis 3: Teachers' adaptability is positively related to creative teaching behaviours.

2.4 Perceived School Support and Creative Teaching Efficacy

Bandura (2000) defines self-efficacy as an individual's belief that they are using existing or potential resources to accomplish a task. This study adopted Lin and Qiu's (2008) understanding of creative teaching efficacy, which is teachers'

perception of their own creative self-efficacy in the teaching field. This kind of teaching behaviour is creative and includes three levels: positive affirmation, negative self-consciousness, and anti-stress belief. Positive affirmation refers to teachers' confidence in their ability and judgement to engage in creative teaching. Negative self-consciousness is the teacher's judgement that they are unable to engage in creative teaching; anti-stress beliefs are beliefs that teachers think they could persevere in even in environments that are not conducive to creative teaching.

Mathisen (2011) conducted an exploratory study of the organisational factors influencing the efficacy of creativity. The results showed that the type of task, the autonomy of tasks, the relationship between leaders and members, and the perception of team members' innovation support had a significant impact on employees' creativity efficacy. High-empowerment leaders delegate authority, involve employees in decision-making, and encourage self-management, while low-empowerment leaders provide employees with limited opportunities for autonomy, hinder individual self-management, and lack confidence in their own abilities. School support does not only enhance teachers' creative self-efficacy but also influences teachers' teaching effectiveness and openness to innovative teaching methods through leadership and organisational atmosphere. Hence, we propose the following hypothesis:
Hypothesis 4: Perceived school support is positively related to creative teaching efficacy.

2.5 Creative Teaching Efficacy and Creative Teaching Behaviour

In the study of organisational management, Tierney and Farmer (2004) propose the concept of creativity efficacy based on social cognitive theory and analysed its formation and mechanism of action. The study empirically verified the positive impact of creativity efficacy on individual innovation behaviour and performance and found that creativity efficacy could better predict individual innovation behaviour and performance than work efficacy. In addition, studies have confirmed that teachers' general self-efficacy had a significant positive impact on their teaching behaviour (Schipper et al., 2018). Self-efficacy is a positive belief that helps teachers be self-motivated and act in the face of teaching difficulties. When teachers have a high sense of self-efficacy, teachers are more likely to face the teaching work with full enthusiasm and confidence, produce good teaching results in the classroom, improve students' academic performance, and be appreciated by superiors (Yachun, 2023). Therefore, this study infers that when teachers are confident enough to carry out innovative and novel teaching behaviours and beliefs, their behaviours to develop creative teaching will be improved. Hence, we propose the following hypothesis.
Hypothesis 5: Creative teaching efficacy is positively related to creative teaching behaviour.

2.6 Teachers' Adaptability, Perceived School Support, and Creative Teaching Behaviour

Adaptability helps teachers successfully manage their own work demands and promotes a positive work experience (Van-de-Broeck et al., 2013). In the context of rapid changes in technology, pedagogical knowledge and society, teachers' creative behaviour is particularly important in promoting innovation and

maintaining social competitiveness in schools and students (Thurlings et al., 2015). Research by Parsons et al. (2017) shows that teacher factors (knowledge, pedagogical thinking, beliefs, and experience) are associated with adaptability. This finding is important for administrators, professional developers, and teacher educators because it supports the development of teacher knowledge, thinking, and beliefs. Teachers who are effectively supported by their schools feel more empowered, trusted by the organization, motivated to participate in their work, and have a greater sense of commitment to their schools (Collie & Martin, 2016; Fernet et al., 2015; Klassen et al., 2012; Lee & Nie, 2014). According to research by Ployhart and Bliese (2006), adaptable teachers show a proactive attitude when faced with environmental challenges. Through initiative, creative thinking, and adaptability, teachers are able to acquire the required teaching skills and take advantage of the support provided by the school. Initiatives taken by adaptable teachers not only increase the likelihood of receiving help when needed but also makes them more likely to be recognised and supported by school management (Cullen et al., 2014; Wang & Ge, 2023). This recognition and support could further enhance teachers' self-confidence and motivation, prompting them to continue to explore and practice innovative teaching methods. That is, when teachers perceive support from the school and are adaptable, teachers are more likely to exhibit creative behaviours in teaching.

Teachers' active adaptation in the process of interacting with the environment could help teachers achieve all-round improvement in educational philosophy, professional knowledge, teaching skills, etc., and ultimately promote their own professional development (Munna & Kalam, 2021). Teacher adaptability plays an important mediating role between the support provided by the school and creative teaching behaviour. Teachers are more willing to experiment with new teaching methods and strategies when they perceive positive support from their schools, knowing that they are more likely to cope with challenges in a supportive context (Loughland, 2019; Loughland & Alonzo, 2019). This support helps teachers build self-confidence and positive attitudes, stimulates creative thinking, and promotes the occurrence of creative teaching behaviours. Therefore, based on the above theories and previous studies, it is speculated that young teachers' perceptions of school support could affect creative teaching behaviour through teacher adaptability. Hence, we propose the following hypothesis.

Hypothesis 6: Teachers' adaptability mediates the relationship between perceived school support and creative teaching behaviour.

2.7 Creative Teaching Efficacy, Perceived School Support and Creative Teaching Behaviour

Self-efficacy is a key cognitive variable in the triadic causal system that connects the environment, individuals, and behaviours, and it plays a crucial mediating role in translating environmental influences into concrete actions (Bandura, 2000). Creative teaching efficacy, as a specific manifestation of self-efficacy in the creative field, involves an individual's perception and judgement of their own creative ability (Tierney & Farmer, 2002), which has a significant impact on teachers' achievement of teaching goals and response to challenges. When teachers feel positive support from their schools, including expectations from leaders and supportive behaviours from managers, teachers' creative self-efficacy

is enhanced and they are more likely to adopt innovative teaching methods and strategies (Jaiswal & Dhar, 2015; NemerAitski & Heinla, 2020). Empirical studies have shown that creative self-efficacy plays a mediating role between perceived support and innovative behaviours. From the perspective of social cognition, Gu et al. (2014) reveal the mechanism by which supportive organisational context promotes innovative behaviour by influencing individuals' sense of creativity and efficacy.

Abdullah et al. (2021) point out that the transformational leadership of principals plays an important role in the development of teachers' creativity, and that transformational leadership can build confidence in the ability to complete specific tasks. Teacher self-efficacy plays a mediating role in the relationship between principals' transformational leadership and teachers' creativity. Teachers' creative role identification includes self-perceptions of creative behaviour and expectations of school, colleagues, and students. Creative self-efficacy does not only predict an individual's creative behaviour (Beghetto et al., 2011), but also individuals with different levels of creative self-efficacy would have different creative performances under different evaluation types. In such an environment, teachers are not only encouraged to try new teaching methods and explore innovative teaching strategies to continuously challenge and develop their professional skills, but also significantly influence teachers' motivation to engage more in their teaching tasks. Huang et al.(2019) demonstrates a significant association between teachers' creative self-concept (i.e. creative role identity and creative self-efficacy) and creative teaching. Both the personal and contextual aspects of creative role identity are significantly correlated with creativity teaching, with the most closely correlated with school expectations. Cai and Tang (2021) show that colleague support and student support have a positive predictive effect on teacher innovation, and teacher self-efficacy plays a mediating role. Therefore, based on the above theories and previous studies, it was speculated that young teachers' perceptions of school support could affect creative teaching behaviour through creative teaching efficacy. Hence, we propose the following hypothesis.

Hypothesis 7: Creative teaching efficacy mediates the relationship between perceived school support and creative teaching behaviour.

In summary, Figure 1 illustrates the research framework of this study.

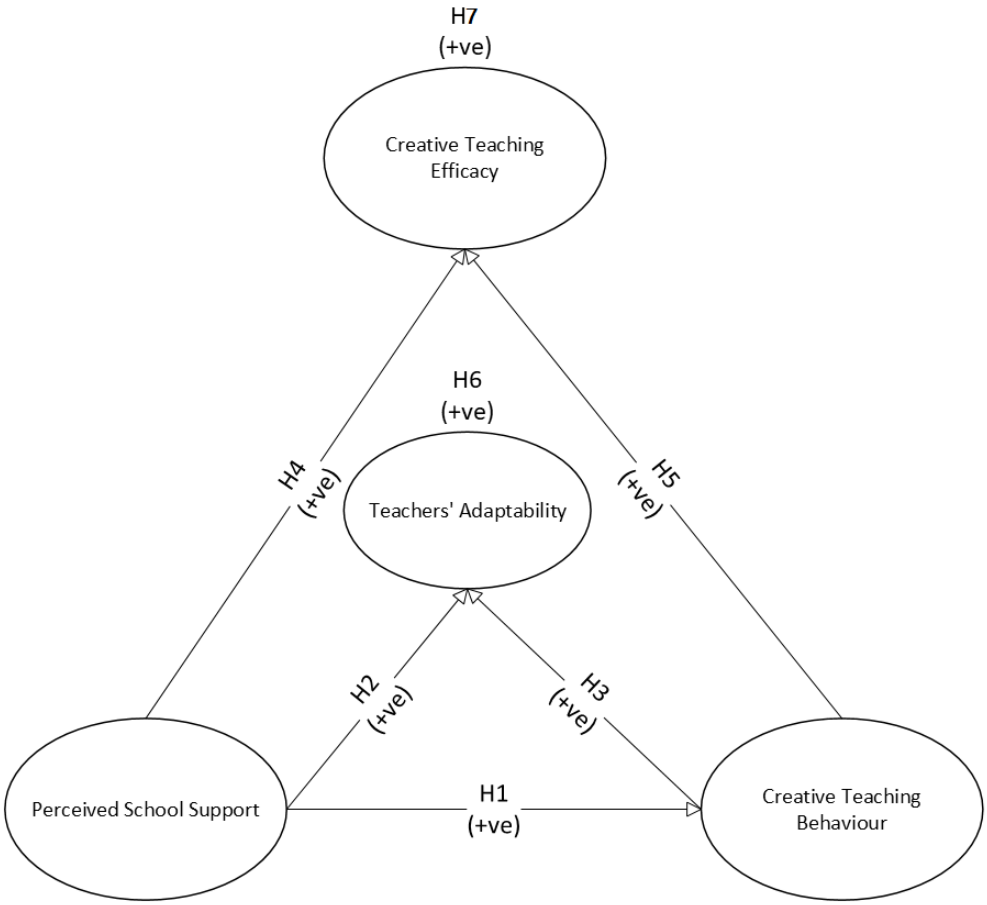

Figure 1. The Research Framework

Note. (+ve) refers to a positive relationship, (-ve) refers to a negative relationship.

3. Method

Sample and Procedure

The age limit for young teachers in this study was set at 40 years old or younger, which is consistent with the spirit of the upper age limit for young scholars set by several important scientific research funds in China. In this study, the questionnaire was distributed using convenience sampling. First, the investigator published the study to provide information to inform the participants who then completed the questionnaire voluntarily. The questionnaire was completely anonymous, and the data obtained were used only for academic research, following the "informed consent section" of research ethics. The questionnaire was distributed through the questionnaire star with the help of colleagues and friends, and part of the data was collected with the help of WeChat groups such as "Young Backbone Teacher Training" or "Young Teacher Basic Skills Competition". A total of 700 questionnaires were distributed, with 40 invalid questionnaires excluded, there were 660 valid questionnaires collected. The response rate was 94%. As shown in Table 1, 323 female young teachers (48.9%) and 337 male young teachers (51.1%) were among the valid questionnaires collected. There were 179 young teachers with bachelor's degrees, accounting for 27.1%, and 481 young teachers with master's and doctoral degrees, accounting for 72.9% of the participants.

Table 1. Demographic Information of the Participants

		Number	Percentage (%)	Cumulative Percentage (%)
Gender	man	337	51.1	51.1
	woman	323	48.9	100
Education Level	undergraduate	179	27.1	27.1
	Master's and PhD students	481	72.9	100

Note. Demographics for the Participants in This Study

4. Measure

The following measure, unless specified, adopted a 5-point Likert scale from (1) Strongly Disagree to (5) Strongly Agree.

Perceived School Support

A 13-item Perception of School Support Service Scale developed by Cai and Tang (2021) was adopted, which had three dimensions – colleague support, leadership support, and student support. The sample items were "When I need to solve problem, my leader will take the initiative to help me", "When I encounter difficulties in life or work, my colleagues will take the initiative to help me", and "Students are willing to approach me and communicate with me in a timely manner", respectively. The Cronbach alpha was .89, .86 and .84, respectively.

Teachers' Adaptability

A 9-item Teacher Adaptability Scale developed by Martin et al. (2012) was used. The sample item was "In class, I was able to help me face new situations through some possible options". The Cronbach alpha was .93.

Creative Teaching Efficacy

A 16-item Teachers' Creative Teaching Efficacy Scale developed by Lin and Qiu (2008) was adopted. There were three dimensions in this scale – self-affirmation, negative self-consciousness, and anti-stress belief. The sample items were "I am able to teach in an innovative and lively way", "I lack the creative teaching skills", and "I was able to overcome the limitation of teaching resources and develop a unique teaching style", respectively. The Cronbach alpha was .89, .89, and .88, respectively.

Creative Teaching Behaviour

A 28-item Creative Teaching Behaviour Scale revised by Zhang et al. (2008) was used. There were four dimensions in this scale – learning style guidance, motivation stimulation, opinion evaluation, and encouragement of flexibility. The sample items were "Students often engage in group activities during class", "I applaud the students for putting what they have learnt to different uses", "When students make a point, I ask the teacher to think about it before expressing his attitude", and "In class, students have the opportunity to exchange the teachers' views and perspectives", respectively. The Cronbach alpha was .89, .90, .94, .91, respectively.

Control Variables
We controlled age and education level, since age was related to creative teaching behaviour (Xiong et al., 2020) and teachers' adaptability (Lazarová et al., 2019).

Common Method Variance
Since all data was collected at the same time point, we used statistical techniques to prevent the happening of common method variance. We performed the Hayman Single Factor Test using SPSS 29. The result showed that a total of 11 factors were obtained without spinning the axis; the cumulative explanatory variation was 67.785%, of which the explanatory variance of the first factor was 25.992%, which did not exceed 50%, so the data collected from the formal questionnaire in this study did not have the problem of common method variability (Podsakoff et al., 2003). Therefore, common method variance did not pose a threat.

Analytical Strategies
We used MPlus 8.9 (Muthén & Muthén, 2017) for the statistical analysis of this study. First, we adopted the confirmatory factor analysis to validate the discriminant validity of the studied model. Then, we performed a path analysis using structural equation modelling. We also measured the direct and indirect effects of both mediators (i.e. teacher adaptability and creative teaching efficacy).

5. Results

5.1 Confirmatory Factor Analysis and Discriminant Validity

As mentioned, a confirmatory factor analysis was the first step in evaluating the discriminant validity of the variables collected to compare the model fitness. The CFA confirmed that a four-factor model (i.e. perceived school support, teacher adaptability, creative teaching efficacy, and creative teaching behaviour) was statistically significant ($X^2 = 300.26, dF = 146, RMSEA = .04, CFI = .97, TLI = .96, SRMR = .07$) and had better model fitness than other models (see Table 3). It demonstrated a better model fit for a four-factor model. Our CFAs indicate a good discriminant validity for our variables' measurement. As shown in Table 2, descriptive statistics and correlations are provided.

Table 2. Descriptive and Correlation Statistics

		Mean	SD	1	2	3	4	5	6
1	**Age**	1.49	.50	1					
2	**Education Level**	2.87	.63	-.01	1				
3	**Perceived School Support**	3.45	.58	-.05	.02	1			
4	**Teachers' Adaptability**	3.43	.91	.04	-.01	.25**	1		
5	**Creative Teaching Efficacy**	3.57	.76	.08*	-.02	.30**	.57**	1	
6	**Creative Teaching Behaviour**	3.55	.61	-.01	-.02	.31**	.31**	.30**	1

Note: *. Correlation is significant at the 0.05 level (2-tailed). **. Correlation is significant at the 0.01 level (2-tailed).

Table 3. Model Fitness of Different Factor Models

Model	X^2	dF	RMSEA	CFI	TLI	SRMR
Four Factor Model a*	300.26***	146	.04	.97	.96	.03
Three Factor Model b	627.37***	149	.07	.90	.89	.06
Two Factor Model c*	826.31***	151	.08	.87	.85	.07
One Factor Model d*	1415.18***	152	.11	.74	.72	.09

Note. * Items are parcelled by their dimensions. a = (Perceived School Support, Teacher Adaptability, Creative Teaching Efficacy, Creative Teaching Behaviour), b = (Perceived School Support & Teacher Adaptability, Creative Teaching Efficacy, Creative Teaching Behaviour), c = (Perceived School Support & Teacher Adaptability & Creative Teaching Efficacy, Creative Teaching Behaviour), d = (Perceived School Support & Teacher Adaptability & Creative Teaching Efficacy & Creative Teaching Behaviour).

5.2 Hypothesis Testing

First, the path analysis demonstrated a good fit model with a model fitness index higher than the cut-off value ($X^2 = 301.36, dF = 146, RMSEA = .04, CFI = .97, TLI = .96, SRMR = .03$). In addition, hypothesis 1 predicted a positive relationship between perceived school support and creative teaching behaviour. Our result proved that this hypothesis was statistically significant ($\beta = .32, p < .001$). Besides, it was also statistically significant to report hypothesis 2, where we predicted teacher adaptability was positively related to perceived school support ($\beta = .54, p < .001$). For hypothesis 3, it was statistically significant ($\beta = .16, p < .05$) to report a positive relationship between teacher adaptability and creative teaching behaviour. Further, hypothesis 4 suggested a positive relationship between creative teaching efficacy and perceived school support and the result was statistically significant ($\beta = .61, p < .001$). Besides, hypothesis 5 predicted a positive relationship between creative teaching efficacy and creative teaching behaviour. The result was statistically significant ($\beta = .17, p < .05$). Figure 2 reported the details of the path analysis for this study.

For the two mediating variables, the results of Hypothesis 6 and Hypothesis 7 revealed that both indirect and direct effects for creative teaching efficacy and teacher adaptability were statistically significant to report a partial mediation existed for these two variables (i.e. details referred to Table 4). A statistically insignificant relationship was reported for the control variable (i.e. age) on creative teaching behaviour and teacher adaptability. Meanwhile, the delta AIC, BIC, and adjusted BIC was 964.48, 986.94, and 971.06, showing that age was a successful control variable for this study.

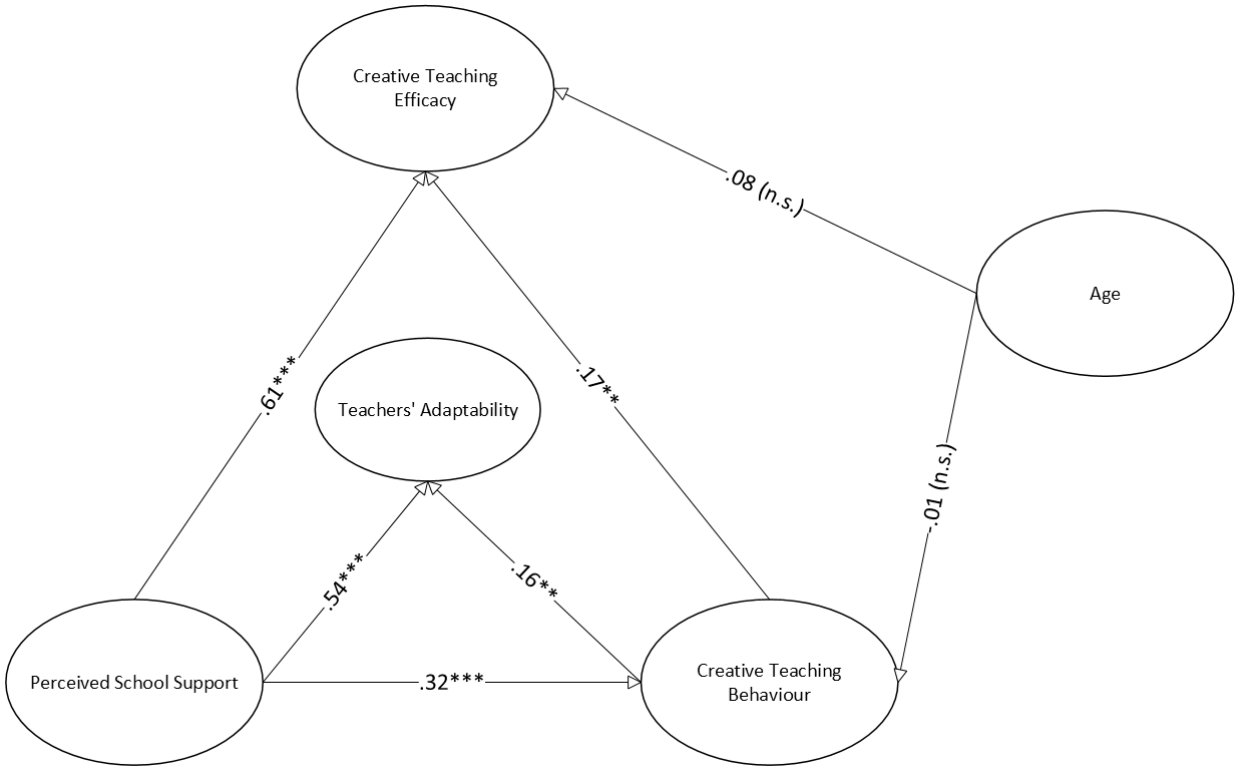

Figure 2. The Result of Path Analysis

Note. *** p <.01, ** p <.05, * p<.10, n.s. = not significant

Table 4. Regression Result of the Mediations of This Study

	Effect	S.E.	95% [LLCI, ULCI]
The indirect effect of perceived school support on creative teaching behaviour (via teacher adaptability)	.10	.04	[.03, .18]
The indirect effect of perceived school support on creative teaching behaviour (via creative teaching efficacy)	.12	.06	[.02, .24]
The total effect of perceived school support on creative teaching behaviour (via teacher adaptability)	.48	.11	[.31, .72]
The total effect of perceived school support on creative teaching behaviour (via creative teaching efficacy)	.50	.10	[.35, .72]

Note. CI = confidence level, S.E. = Standard Error, a = X→Y, b = X→M→Y.

6.Conclusion

First, the perceived school support of young teachers in higher vocational colleges in Shandong Province has a positive and significant impact on creative teaching behaviour; second, teacher adaptability plays an important mediating role between perceived school support and creative teaching behaviour; similarly, creative teaching efficacy also plays an important mediating role between perceived school support and creative teaching behaviour. Therefore, an influencing mechanism model of the relationship between perceived school support and creative teaching behaviour was constructed, and the path

relationship between the variables was demonstrated. Improving the teachers' feelings of emotional support and encouragement from the school will enhance the teachers' sense of creative teaching efficacy. When teachers feel multi-level support, they are more likely to feel a sense of accomplishment and satisfaction in teaching. This positive emotional experience can further motivate teachers to adopt innovative teaching methods and explore more effective teaching methods, providing new theoretical references for further advancing the research on the influencing factors and psychological mechanisms of creative teaching behaviour, and helping to promote the development of the education field and improve the quality of teaching.

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Appendix 1

Questionnaire

Part One: Basic Information
1. Your gender: (1) Male (2) Female
2. Your academic qualifications: (1) Bachelor's degree (2) Master's degree and PhD degree

The second part is about the content description items about "perceived school support". Please read the following items carefully, make evaluations and judgments based on your actual feelings and experiences, and put "√" under the options you agree with:

number	content	disagree strongly	do not agree	uncertain	agree basically	agree strongly
1	When I need to solve a problem, my leader will take the initiative to help me.					
2	When I encounter difficulties at work or in life, I can ask my leader for help.					
3	The school leaders encouraged me to have various exchanges with them.					
4	I can feel that the leaders care about the faculty and staff.					
5	My leader can recognize my progress at work and express his appreciation to me.					
6	When I encounter difficulties in life or work, my colleagues take the initiative to help me.					
7	When I encounter difficulties, I can ask my colleagues for help.					
8	I can feel recognized and appreciated by my colleagues.					
9	Most of my colleagues work hard and have a positive impact on me.					
10	At work, my colleagues and I work together very well.					
11	Students are willing to approach me and communicate with me in a timely manner.					
12	Students like my class.					
13	Most of my students have a strong thirst for knowledge and study hard.					

The third part is about the content description items about "Teacher Adaptability". Please read the following items carefully, make evaluations and judgments based on your actual feelings and experiences, and put a "√" under the option you agree with:

number	content	disagree strongly	do not agree	uncertain	agree basically	agree strongly
1	In class, I was able to walk through some possible options to help me face new situations.					
2	In class, I was able to modify the way I thought about new situations to help me get through them.					
3	I am able to adjust my thinking or expectations in class to help me when necessary.					
4	In the classroom, I am able to seek out new information, helpful advice, or helpful resources to effectively handle new situations.					
5	In uncertain situations that arise in the classroom, I am able to develop new ways of approaching things (e.g., different ways of doing something or finding information) to help me get through them.					
6	To help me in new situations that arise in the classroom, I am able to change the way I do things when necessary.					
7	In class, I was able to reduce negative emotions.					
8	I am able to minimize my frustration or irritation when uncertainty arises in the classroom so that I can best handle it.					
9	To help me get through new situations that arise in the classroom, I am able to tap into positive feelings and emotions (enjoyment, contentment).					

The fourth part is about the content description items about "Creative Teaching Efficacy". Please read the following items carefully, make evaluations and judgments based on your actual feelings and experiences, and put "√" under the options you agree with. :

number	content	disagree strongly	do not agree	uncertain	agree basically	agree strongly
1	I can use innovative and lively methods to teach.					
2	I can develop novel and flexible course designs.					
3	My creative teaching can stimulate students' learning motivation.					
4	I can use lively and vivid teaching					

	strategies to create a harmonious and pleasant classroom atmosphere.					
5	My creative teaching can improve students' learning effectiveness.					
6	My creative teaching is welcomed by students.					
7	I lack sufficient creative teaching skills.					
8	I feel that using innovative teaching methods and activities cannot increase students' interest in learning.					
9	The mentality of students studying for exams is very common, which makes it impossible for me to be innovative and changeful in teaching.					
10	I feel that the course content I teach is not conducive to my creative teaching.					
11	I would care about other teachers' opinions and be afraid to develop unique teaching methods.					
12	I can overcome the limitations of teaching resources and develop creative teaching.					
13	Even if the school has many unfavorable measures for creative teaching (such as standardized administrative measures, too many courses, etc.), I can still engage in creative teaching.					
14	I would still engage in creative teaching even if the overall school climate was not conducive to creative teaching (e.g. teaching to the test, lack of peer support, etc.).					
15	I can still teach creatively even if parent attitudes are not conducive to creative teaching.					
16	No matter how the educational policies and environment change, I can still maintain my unique teaching style.					

The fifth part is about content description items about "creative teaching behavior". Please read the following items carefully, make evaluations and judgments based on your actual feelings and experiences, and put a "√" under the option you agree with:

number	content	disagree strongly	do not agree	uncertain	agree basically	agree strongly
1	Students will often engage in group activities in class.					
2	I leave students with problems to solve on their own.					

3	I encourage students to make suggestions for teaching.					
4	I give students basic knowledge and leave room for personal self-study.					
5	I will let the students find the answers themselves.					
6	I expect students to actively cooperate in group activities.					
7	I appreciate students putting the knowledge they have learned into different uses.					
8	Students know that I expect them to learn basic knowledge and basic skills.					
9	I encourage students to use the knowledge they learn in class to do different things.					
10	I don't mind if students deviate from what is taught to try out their own ideas.					
11	I pay attention to learning basic knowledge and basic skills in class.					
12	I emphasize the importance of mastering basic knowledge and basic skills.					
13	When students put forward their opinions, I let them think about it before expressing their attitude.					
14	I provide opportunities for students to learn about each other's strengths and weaknesses.					
15	I understand students' suggestions so that they understand that I take them seriously.					
16	Students are clear that I expect them to check their work themselves first.					
17	Students know that I will not dismiss their suggestions easily.					
18	I only comment after students have fully discussed their views.					
19	Whether right or wrong, students have the opportunity to judge for themselves.					
20	Even if students' suggestions are not practical or useful, I will listen carefully.					
21	I listen patiently to students' questions that may seem ridiculous.					
22	During class, students have the opportunity to share their views and opinions.					
23	I encourage students to think from different perspectives, even if the idea doesn't work.					
24	I help students learn from their failures.					
25	I like when students take time to think from different perspectives.					

26	I encourage students who encounter setbacks to view setbacks as branches of learning.					
27	Even though doing things differently takes up more time, I encourage students to do so.					
28	I encourage students who experience failure to seek other possible solutions.					

Please check whether any of the above questions have been missed and save the data. Thank you again for your help and support for this research!