

RESEARCH ARTICLE

The impact of perceived inclusive leadership of teachers on innovative behavior among vocational college students in China: The mediating role of psychological safety

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ABSTRACT

This study aims to explore the impact of teacher inclusive leadership on the innovative behavior of vocational college students in Guangdong Province, China, and to examine the mediating role of psychological safety in this process. A questionnaire survey was employed, targeting four vocational colleges in Guangdong Province. A total of 500 questionnaires were distributed, with 487 valid responses collected. The results show that there are significant differences in innovation behavior among vocational college students in Guangdong Province based on gender and grade. Students' perceptions of teacher inclusive leadership have a significant positive impact on their innovative behavior. Such perception also has a significant positive impact on students' psychological safety. Psychological safety significantly and positively affects students' innovative behavior. Furthermore, psychological safety plays a significant mediating role between perceived teacher inclusive leadership and innovative behavior.

Keywords: Teacher inclusive leadership; innovation behavior; psychological safety; vocational college students

1. Introduction

China's education system has long been criticized for its lack of innovation and creativity^[1]. As the backbone of future society, the cultivation of innovative behavior among vocational college students is crucial for the sustainable development of both society and the economy^[2]. Overall, innovation behavior among college students is increasingly drawing attention, yet the problems in actual practice cannot be overlooked^[3]. As the education system undergoes reform and society places greater emphasis on innovation ability, many higher education institutions are promoting innovation-oriented education and encourage students to participate in innovative activities and projects^[4].

Leadership is a key predictor of individual innovation behavior, and many leadership structures have been proven to be prerequisites for individual innovation^[5-7]. Leadership style is considered one of the factors that have a direct and significant impact on the innovation behavior of vocational college students^[8,9]. Inclusive leadership, as a positive leadership style, focuses on listening to, understanding, and respecting the opinions of subordinates, thereby stimulating individuals' creative thinking and behavior^[10]. When

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individuals perceive the inclusiveness of their leaders, they are more likely to take risks and be innovative^[11]. Leaders with an inclusive leadership style have more positive expectations and tolerance for individuals, which makes individuals feel more support from their leaders and thus generate more ideas^[12]. In university education, teachers' practice of inclusive leadership can stimulate students' deep thinking about knowledge and problems, encourage them to propose novel ideas and solutions, and thereby promote innovation behavior^[13]. Therefore, this study aims to deeply analyze the impact of perceived inclusive leadership on the innovation behavior of vocational college students in Guangdong.

Psychological safety is considered one of the key factors influencing innovative behavior^[14]. Inclusive leadership by teachers fosters an open and trusting atmosphere in the educational environment, cultivating students' confidence and willingness to take risks^[15,16]. Inclusive leaders encourage students to transcend traditional thinking boundaries and inspire them to pursue more novel and unique innovative ideas^[17]. In summary, inclusive leadership enhances individuals' psychological safety, thereby stimulating their innovative intentions and behaviors^[18]. Therefore, this study aims to deeply analyze the mediating mechanism of psychological safety in how inclusive leadership affects the innovation behavior of vocational college students in Guangdong, providing in-depth insights for enhancing innovation among this group.

Most existing studies focus on innovation behavior in Western cultural contexts, with relatively few studies examining the innovation behavior of Chinese students^[19,20]. The collectivism, respect for authority, and high power distance in Chinese culture may have different impacts on innovation behavior^[21]. In addition, China's education system is typically exam-oriented, emphasizing memorization and rote learning, which may suppress students' innovative capabilities^[22]. By exploring the relationships among perceived teacher inclusive leadership, student innovation behavior, psychological safety, and perceived school environment, this study can provide a more comprehensive understanding of how vocational college students in Guangdong Province, China, become innovators. This not only helps to improve the educational environment and promote the cultivation of students' innovation behavior but also has far-reaching significance for enhancing the overall competitiveness of higher education institutions in Guangdong.

2. Literature review

2.1. Innovation behavior

Innovation behaviour refers to students generating new ideas and applying new methods to solve problems and develop innovation awareness, ability, and spirit in learning, daily life, and academic contexts^[23]. Fatemi et al.^[24] found that, compared to females, males are more likely to exhibit innovative behavior because they are more willing to share their mistakes. Ferreras-Garcia et al.^[25] through a survey of students in Business Administration and Management degrees, found that female students have superior innovation capabilities compared to male students, especially in interpersonal and networking aspects. Zhao and Hou^[26] using graduate students from universities as samples, explored that there are significant differences in the innovation behavior performance of graduate students of different genders. Therefore, it is necessary to formulate differentiated and personalized innovation support policies and innovation talent training programs to enhance the innovation behavior of graduate students. Çınar and Toker^[27] measured 451 students in the Faculty of Health Sciences and found that first-year university students scored higher in the sub-dimensions of experimental openness and opinion leadership in innovation behavior compared to their senior counterparts. Therefore, this study aims to explore whether there are significant differences in innovation behavior among vocational college students across gender and grade level. This study proposes Hypothesis 1.

H1: There are significant differences in innovation behavior among vocational college students of different genders and grades in Guangdong Province, China.

H1a: There are significant differences in innovation behavior among vocational college students of different genders in Guangdong Province, China.

H1b: There are significant differences in innovation behavior among vocational college students of different grades in Guangdong Province, China.

2.2. Perceived teacher inclusive leadership and innovation behavior

Inclusive leadership promotes collaboration and interaction among students. In such an environment, students are able to share their perspectives and experiences. This exchange of information stimulates new ideas and thereby drives innovative behavior^[28]. When supported by leaders, individuals are more likely to take risks and be innovative^[29]. Jin et al.^[30] demonstrated that the stronger the perceived inclusive leadership, the more likely individuals are to improve innovation outcomes. According to Randel et al.^[13], inclusive leadership refers to a set of positive leadership behaviors that foster a sense of belonging among team members while allowing them to maintain their uniqueness. Typical behaviors of inclusive leadership include listening to subordinates' opinions, tolerating their viewpoints and failures, rationally accepting their mistakes, and providing encouragement and guidance when they err^[31]. When subordinates perform well, inclusive leaders are willing to listen to their ideas and praise those who excel^[32]. Wu and Li^[10] collected data from 263 working leaders and employees using a convenience sampling method by distributing questionnaires to enterprises in six cities in Guangdong Province, China. Their findings indicated that inclusive leadership has a significant positive impact on innovation behavior. Therefore, leaders and teachers with an inclusive leadership style have more positive expectations and tolerance for individuals, enabling individuals to feel greater support from these inclusive leaders and teachers, which in turn generates more ideas and promotes innovative behavior^[33]. Based on the above, this study proposes Hypothesis 2.

H2: The perceived inclusive leadership by teachers has a significant positive impact on the innovative behavior of students in vocational colleges in Guangdong Province, China.

2.3. Students' perceived teacher inclusive leadership and psychological safety

Inclusive leaders not only provide intellectual support but also establish emotional connections with individuals^[34]. By maintaining such a work environment, inclusive leaders help individuals experience higher levels of psychological safety and encourage them to take proactive actions^[35-37]. Inclusive leadership promotes inclusiveness through openness^[38], allowing individuals to thrive in their environment. Conversely, when leaders lack openness and withhold information, it may lead to negative outcomes due to a deterioration of psychological safety^[39].

In a recent study, Mikyoung and Moon^[37] demonstrated that inclusive leadership is positively correlated with psychological safety, which in turn mediates the relationship between inclusive leadership and individual extra-role behaviors. Javed et al.^[36] confirmed the positive correlation between inclusive leadership and psychological safety, as well as the mediating role of psychological safety in the relationship between inclusive leadership and individual extra-role behaviors. Guchait et al.^[40] found that inclusive leadership fosters a forgiving climate, which affects individuals' service recovery performance, with psychological safety mediating the relationship between the forgiving climate and service recovery performance. Subsequently, Zhao et al.^[41] discovered that inclusive leadership can positively influence psychological safety, which can mediate the relationship between inclusive leadership and psychological distress. In the field of education, when teachers exhibit inclusive leadership, students are more likely to

form trusting relationships, which is an important component of psychological safety^[42]. Inclusive leadership also creates a positive feedback culture that encourages constructive communication between teachers and students. Positive feedback can effectively enhance students' psychological safety, making them more willing to try new ideas and methods^[43]. Based on the above, this study proposes Hypothesis 3:

H3: The perceived inclusive leadership of teachers has a significant positive impact on the psychological safety of students in vocational colleges in Guangdong Province, China.

2.4. Psychological safety and innovative behavior

Given the increasing importance of innovation in today's organizations, psychological safety has become a phenomenon worth paying attention to^[44]. Since innovative behavior is an unconventional activity that typically avoids traditional methods and explores and implements new ways of working, individuals need psychological safety to advance the innovation process^[44]. Research has shown that psychological safety enhances individuals' innovative behavior^[45-47].

Schein^[48] argued that a higher level of psychological safety encourages individual innovation. This creates a more comfortable communication environment, allowing students to become close friends with each other and with their teachers^[49]. Moreover, numerous studies have shown that there is a significant correlation between individuals' perception of psychological safety and their levels of innovation and creative thinking^[50,51]. Multiple studies have found that psychological safety is closely related to research and innovation^[52], knowledge induction^[53], and innovative performance^[46, 54].

In the field of education, when vocational students feel psychologically safe, they are more willing to express new ideas without fearing negative evaluations, which in turn promotes innovative behavior^[55]. Psychological safety empowers students to take risks and experiment with new ideas and methods^[56]. Therefore, this study posits that individuals with higher levels of psychological safety are more likely to exhibit innovative behavior, as a psychologically safe environment allows for the freer exchange of ideas. Based on the above, this study proposes Hypothesis 4.

H4: Psychological safety has a significant positive impact on the innovative behavior of students in vocational colleges in Guangdong Province, China.

2.5. The mediating role of psychological safety in the relationship between perceived teacher inclusive leadership and innovative behavior

When individuals have unique ideas, others (such as leaders) may label them as troublemakers^[57], which can lead to lower support or even punishment^[58]. However, intellectual and emotional support from inclusive leaders can help shape and maintain an environment where individuals experience stronger psychological safety^[34]. This encourages individuals to develop, promote, and implement new ideas^[45,59]. Therefore, this study hypothesizes that psychological safety mediates the relationship between inclusive leadership and innovative behavior. Given the similarities between innovative behavior and risk-taking^[60], a lack of psychological safety leads individuals to engage in self-protective behaviors and avoid displaying innovative behavior^[61-63]. However, when individuals experience support from inclusive leaders, the situation is reversed^[64].

Therefore, inclusive leaders who value the inclusion of individuals in specific innovation processes provide opportunities for individuals to voice their suggestions in order to generate, promote, and implement useful ideas^[65]. These inclusive leaders foster a culture where individuals' ideas and opinions are highly valued and respected. By showing concern for individuals' feelings and expectations, inclusive leaders allow individuals to feel more psychologically safe under supportive supervision, which is conducive to engaging

in innovative behavior^[49]. Inclusive leaders demonstrate openness, emphasize the importance of innovative, and assure individuals that they will not be punished for negative consequences, thereby providing greater psychological safety^[66,67]. In summary, this study posits that in an educational environment, inclusive leadership may promote students' innovative behavior by enhancing their psychological safety. Thus, Hypothesis 5 is proposed.

H5: Psychological safety has a significant mediating effect on the relationship between perceived inclusive leadership and innovative behavior among students in vocational colleges in Guangdong Province, China.

3. Research method

3.1. Research framework

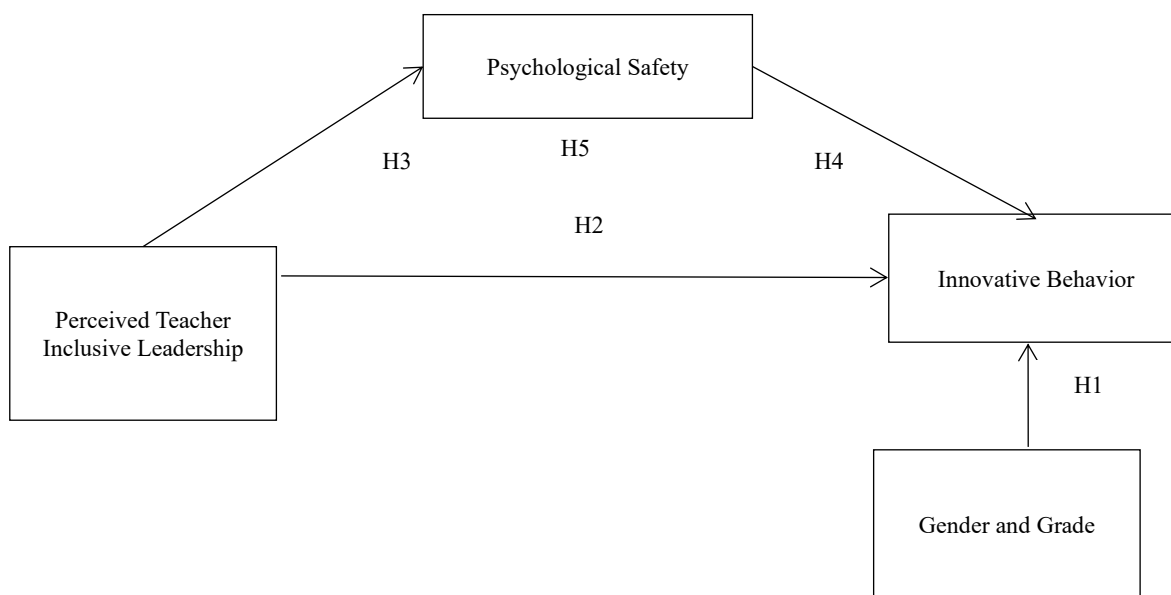


Figure 1. Research framework diagram

3.2. Research subject

The number of university students in Guangdong Province, China, has reached 2.3 million, representing a large population scale^[5]. Guangdong is a region in China with advanced economy and technology. To meet future challenges, the innovation capabilities and innovative thinking of students in vocational colleges have become particularly important. During the formal survey process, four vocational colleges in Guangdong were investigated. Among them, colleges A and B benefit from stable policy support, providing a stronger foundation in areas such as research innovation and curriculum reform. In contrast, colleges C and D emphasise practical innovation to enhance students' employability. Convenience sampling was adopted in the survey process. The questionnaires for this study were distributed via the Wenjuanxing platform, and students were encouraged to participate in the survey through class groups, student unions.

When conducting the questionnaire survey, the researchers explained the content and purpose of the study to the participants to ensure compliance with requirements regarding research procedures, duration, and the use of research results. During the data collection process, all information obtained was handled anonymously, and participants had the right to refuse or withdraw from the study at any time^[68]. The research report protects the safety and interests of the participants, fully respects their personal beliefs and cultural customs, and all information is presented anonymously. In accordance with guidelines' principles,

procedures, and requirements, all aspects of the study were subject to ethical review in line with the procedures required by the Ethics Committee of Dhurakij Pundit University in Thailand, and data collection began after obtaining approval from the Academic Ethics Committee. During data collection, questionnaires completed in less than 10 minutes or with incomplete responses were excluded from the analysis. Ultimately, a total of 500 questionnaires were distributed in this study, and after removing 13 invalid questionnaires, 487 valid questionnaires were collected, resulting in a valid response rate of 97.400%.

In terms of gender distribution, the number of female respondents is 248, accounting for 50.924%, while the number of male respondents is 239, accounting for 49.076%. Regarding grade levels, the number of students in the first year is 190, representing 39.015%; the number of students in the second year is 172, accounting for 35.318%; and the number of students in the third year is 125, representing 25.667%.

3.3. Research tool

For this study, the innovation behavior scale developed by Li^[23] was employed as the measurement tool. The scale comprises four dimensions: academic learning, thinking style, academic exploration, and practical life, consisting of a total of 17 items. A five-point Likert scale was used for measurement, where 1 indicates “strongly disagree,” 2 indicates “disagree,” 3 indicates “neutral,” 4 indicates “agree,” and 5 indicates “strongly agree.”

The scale for perceived teacher inclusive leadership was adapted from the one developed by Carmeli et al.^[49], which is widely cited by Chinese scholars and includes three dimensions with a total of nine items. This scale has been recognized and supported by numerous scholars in subsequent studies and has been validated for its good reliability and validity in the Chinese context. In this study, the wording in the items of the scale was modified to “counselor teacher” to fit the school context.

This study employs the psychological safety scale developed by Edmondson^[69], a scale that has been widely cited and revised by domestic scholars. It consists of only one dimension with a total of 7 items, and the scale has been proven to have good reliability and validity. The scale uses a 1-5 rating, ranging from “strongly disagree” to “strongly agree.” Among the items, Question 1 and Question 5 are reverse-coded.

3.4. Data analysis method

This study primarily employs statistical analysis software such as SPSS and AMOS to validate the theoretical model proposed in this research. The specific research content includes reliability analysis, validity analysis, descriptive statistical analysis, independent samples t-test, variance analysis, Pearson correlation analysis, and regression analysis.

4. Research result

4.1. Reliability test

The overall Cronbach’s Alpha for innovative behavior is .936; for the dimension of academic learning, it is .891; for the academic exploration, it is .871; for the thinking style dimension, it is .877; and for the dimension of practical life, it is .880. The overall Cronbach’s Alpha for perceived inclusive leadership is .892; for the openness dimension, it is .843; for the availability dimension, it is .882; and for the accessibility dimension, it is .854. The overall Cronbach’s Alpha for psychological safety is .922.

4.2. Convergent validity

In accordance with the recommendations of Fornell and Larcker^[70], this study examines convergent validity through composite reliability (CR) and average variance extracted (AVE). A construct reliability

value greater than .700 and an AVE value greater than .500 are considered acceptable. Therefore, all dimensions in this study meet the criteria, as shown in **Table 1**

Table 1. Convergent validity table

Dimension	Measurement Item	Std. Estimate	AVE	CR
Openness (X1~X3)	X1	.796	.641	.843
	X2	.802		
	X3	.805		
Availability (X4~X6)	X4	.901	.722	.885
	X5	.909		
	X6	.727		
Accessibility (X7~X9)	X7	.762	.661	.853
	X8	.921		
	X9	.743		
Academic Learning (Y1~Y5)	Y1	.840	.623	.892
	Y2	.718		
	Y3	.800		
	Y4	.786		
	Y5	.799		
Academic Exploration (Y6~Y9)	Y6	.733	.630	.871
	Y7	.861		
	Y8	.857		
	Y9	.713		
Thinking Style (Y10~Y13)	Y10	.735	.654	.882
	Y11	.911		
	Y12	.825		
	Y13	.750		
Practical Life (Y14~Y17)	Y14	.801	.647	.880
	Y15	.796		
	Y16	.815		
Psychological Safety (M1-1~M1-7)	Y17	.805	.627	.922
	M1-1	.818		
	M1-2	.787		
	M1-3	.779		
	M1-4	.801		
	M1-5	.782		
	M1-6	.797		
	M1-7	.777		

4.3. Discriminant validity test

To examine discriminant validity, the correlation coefficient matrix between variables was used. The data analysis revealed that, overall, the square root of the AVE for all variables was greater than the correlation coefficients^[70]. Specifically, the square roots of the AVE for openness, availability, accessibility, psychological safety, academic learning, academic exploration, thinking style, and practical life were all greater than their respective correlation coefficients with other dimensions. This indicates that the data in this study have good discriminant validity.

Table 2. Discriminant validity table

	Openness	Availability	Accessibility	Psychological Safety	Academic Learning	Academic Exploration	Thinking Style	Practical Life
Openness	.801							
Availability	.567** *	.850						
Accessibility	.620** *	.632***	.813					
Psychological Safety	.515** *	.556***	.592***	.792				
Academic Learning	.462** *	.500***	.516***	.494***	.790			
Academic Exploration	.322** *	.324***	.292***	.227***	.329***	.794		
Thinking Style	.310** *	.324***	.318***	.258***	.335***	.529***	.808	
Practical Life	.322** *	.362***	.310***	.333***	.330***	.440***	.504***	.805

Note: The values on the diagonal are the AVE values.

4.4. Differential analysis

As shown in **Table 3**, samples of different genders exhibited significant differences in innovation behavior ($p < .050$), demonstrating a gender difference in innovative behavior. Specifically, the analysis shows a significant difference at the .050 level for innovative behavior between different genders ($t = 2.065$, $p = .039$). The mean value for males (3.360) is significantly higher than that for females (3.216). Therefore, H1a: there is a significant difference in innovative behavior among students of different genders in vocational colleges in Guangdong Province, China, is supported.

Table 3. Gender difference analysis table

Analysis Item	Item	M	SD	t	p	Post-hoc Comparison
Gender	Male	3.360	0.802	2.065	.039	Male >
	Female	3.216	0.731			Female

As shown in **Table 4**, there is a significant difference in innovative behavior among students of different grades ($p < .050$), indicating that there are differences in innovative behavior among students of different grades. The analysis shows a significant difference in innovative behavior among students of different grades at the .050 level ($F = 4.040$, $p = .018$). Post-hoc comparisons using the Scheffe method reveal that the mean scores of innovative behavior are significantly different between the groups, with the second-year students having higher mean scores than the third-year students. Therefore, H1b: there is a significant difference in

innovative behavior among students of different grades in vocational colleges in Guangdong Province, China, is supported.

Table 4. Grade difference analysis table

Analysis Item	Item	M	SD	F	p	Post-hoc Comparison
Year of University	First-year Students	3.289	0.742	4.040	.018	Second-year Students>Third-year Students
	Second-year Students	3.393	0.763			
	Third-year Students	3.138	0.799			

4.5. Descriptive analysis and correlation analysis

This study first analyzed the relationships between the variables using Pearson correlation. The correlation coefficient between innovative behavior and perceived inclusive leadership is .535, with a significant p-value; the correlation coefficient between innovative behavior and psychological safety is .594, with a significant p-value; and the correlation coefficient between perceived inclusive leadership and psychological safety is .528, with a significant p-value. See **Table 5**

Table 5. Descriptive analysis and correlation analysis table

	M	SD	Innovative Behavior	Perceived Inclusive Leadership	Psychological Safety
Innovative Behavior	3.287	0.769	1		
Perceived Inclusive Leadership	3.216	0.823	.535***	1	
Psychological Safety	3.205	0.921	.594***	.528***	1

*Note:**** $p < .001$

4.6. Regression analysis

In Model 1, the β value of perceived inclusive leadership on innovative behavior is .526, with a t-value of 13.640 and a significance level less than .001, indicating a significant positive effect. This suggests that perceived inclusive leadership has a significant positive impact on innovative behavior. In Model 2, the β value of perceived inclusive leadership on psychological safety is .522, with a t-value of 13.397 and a significance level less than .001, indicating a significant positive effect. This suggests that perceived inclusive leadership has a significant positive impact on psychological safety. In Model 3, the β value of psychological safety on innovative behavior is .590, with a t-value of 16.174 and a significance level less than .001, indicating a significant positive effect. This suggests that psychological safety has a significant positive impact on innovative behavior. In Model 4, the β value of perceived inclusive leadership on innovative behavior is .299, with a t-value of 7.365 and a significance level less than .001, indicating a significant positive effect. The β value of psychological safety on innovative behavior is .434, with a t-value of 10.713 and a significance level less than .001, indicating a significant positive effect. Compared to Model 1, the β value of perceived inclusive leadership on innovative behavior in Model 4 is significantly reduced. This suggests that psychological safety plays a partial mediating role between perceived inclusive leadership and innovative behavior. Therefore, Hypotheses 2 to 5 are supported. See **Table 6**

Table 6. Regression analysis table

Variable	Model 1		Model 2		Model 3		Model 4	
	Innovative Behavior		Psychological Safety		Innovative Behavior		Innovative Behavior	
	β	t	β	t	β	t	β	t
Male	.038	.994	.053	1.348	.034	.938	.016	.446
First-year Students	.099	2.094*	-.028	-.576	.117	2.606**	.111	2.609**
Second-year Students	.127	2.668**	-.017	-.359	.154	3.426***	.134	3.140**
Perceived Inclusive Leadership	.526	13.640***	.522	13.397***			.299	7.365***
Psychological Safety					.590	16.174***	.434	10.713***
R ²	.298		.282		.369		.433	
Adj. R ²	.292		.277		.364		.427	
F	51.153***		47.443***		70.566***		73.537***	

Note 1: * $p < .050$, ** $p < .010$, *** $p < .001$

Note 2: Female students and third-year students serve as the control groups.

3. Discussions and conclusions

The results of this study reveal that there is a significant gender difference in innovative behavior among vocational college students in Guangdong Province, China, with male students exhibiting higher levels of innovative behavior than female students. Therefore, H1a is supported. The possible reason is that family expectations for male students' careers tend to lean more towards innovation and entrepreneurship, whereas expectations for female students may be more inclined towards stability and conservatism^[71]. This differentiated support system may limit the development of innovative behavior among female students.

The study also finds that there is a significant difference in innovative behavior across grade levels among vocational college students in Guangdong Province, with second-year students showing higher levels of innovative behavior than third-year students. Thus, H1b is supported. The reason for this result may be that second-year students experience relatively lower academic pressure and have more flexible course schedules, which allow them to devote more time and energy to innovative activities^[72]. In contrast, third-year students face the pressure of graduation and employment, with more time being spent on internships, job searching, and graduation design, leading to a relatively lower participation in innovative behavior^[73].

Student's perceived inclusive leadership of teachers has a significant positive impact on their innovative behavior, thus supporting H2. Inclusive leadership emphasizes respect, trust, and support, which can effectively stimulate students' intrinsic motivation, making them more willing to express new ideas and try new methods^[74]. As the forefront of China's reform and opening up, Guangdong Province's vocational education system focuses on practice and innovation. The alignment of inclusive leadership with the regional educational goals further strengthens this positive impact.

Student's perceived inclusive leadership of teachers has a significant positive impact on their psychological safety, thus supporting H3. Guangdong Province's vocational education system emphasizes the cultivation of students' practical abilities and innovative spirit. Moreover, teachers' inclusive leadership behaviors can further enhance students' sense of psychological safety by fostering an open and collaborative learning environment, thereby providing stable psychological support in the face of rapid socioeconomic changes^[43].

Students' psychological safety has a significant positive impact on innovative behavior, thus supporting H4. Psychological safety can stimulate students' intrinsic motivation and self-drive, encouraging them to

actively explore new knowledge and methods^[56]. The activation of this behavioral mechanism is particularly important in Guangdong Province's innovation-driven regional economy, as students need stronger self-directed learning abilities and innovative awareness to meet evolving market demands.

Students' psychological safety has a significant mediating effect on the relationship between perceived inclusive leadership of teachers and innovative behavior, thus supporting H5. Psychological safety creates an open and inclusive atmosphere for innovation, reducing students' fear of failure and criticism, and making them more willing to take innovation risks. Students have stronger adaptability and innovation awareness when facing rapidly changing technological and market environments^[75]. Finally, the vocational education system in Guangdong Province emphasizes students' comprehensive development and the improvement of innovation abilities. The mediating role of psychological safety can further promote students' innovative behavior by optimizing their psychological well-being and fostering an innovation environment, thereby contributing to the cultivation of high-quality skilled talents for regional economic development.

3. Research recommendations

As the primary constructors of the educational environment, schools bear significant responsibility for enhancing students' innovative behavior. Firstly, schools should systematically implement training programs on inclusive leadership for teachers. Schools can help teachers gain a deep understanding of the essence and practical methods of inclusive leadership by inviting domain experts to deliver specialized lectures, organizing workshops, and engaging teachers in case study analyses. . For example, training modules themed around "Listening and Empathy" and "Supportive Feedback" could be designed to enable teachers to master how to build good teacher-student relationships through respect and trust.

Teachers should focus on establishing trusting relationships with students by actively listening, respecting students' opinions, and paying attention to individual differences, thereby enhancing students' psychological safety. For example, in classroom teaching, teachers can adopt open-ended questions and discussions to encourage students to express their views and provide timely positive feedback, creating a supportive learning atmosphere. Secondly, teachers should encourage students to take risks and express themselves boldly in teaching, reduce criticism of mistakes, and pay more attention to students' efforts and progress.

Conflict of interest

The authors declare no conflict of interest.

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