



# A Study on the Impact of Strength-Based Psychological Climates on University Teachers Innovative Behavior

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**Abstract.** Based on Affective Event Theory, this study examines the influence of strength-based psychological climates on university teachers innovative behavior, as well as the mediating role of gratitude and the moderating effect of inclusive leadership. By conducting a scenario experiment, the findings reveal a significant positive impact of strength-based psychological climates on teachers innovative behavior, where gratitude acts as a mediator, and inclusive leadership positively moderates the relationship between strength-based psychological climates and gratitude, ultimately influencing teachers innovative behavior. This study offers managerial insights and practical implications for universities to foster innovative behavior among teachers.

**Keywords:** strength-based psychological climates, innovative behavior, gratitude, inclusive leadership.

## 1 Introduction

how to stimulate the innovative behavior of teachers is a key issue for the sustained innovation of universities <sup>[1]</sup>. For universities, creating a distinctive atmosphere can have a significant impact on the motivation of teachers <sup>[2]</sup>, which in turn affects their innovative behavior <sup>[3]</sup>. Research on the impact of general atmospheres based on organizational needs on innovative behavior has been relatively thorough <sup>[3]</sup>, but as important subjects of innovation in universities, the perception of the atmosphere by individuals has been rarely discussed by scholars <sup>[4]</sup>. In this regard, van Woerkom and Meyers proposed strength-based psychological climates <sup>[5]</sup>. Universities can explore the perception of support for the identification, development, and utilization of their strengths from the perspective of teachers <sup>[5-6]</sup>. Previous studies have analyzed the influence of strength-based psychological climates on innovative behavior. For example, Ding et al. suggested that employees, when developing and utilizing their strengths, believe they can creatively complete work tasks and effectively control the outcomes of innovative behavior, which helps enhance their creative self-efficacy and directly promote their innovative behavior <sup>[5]</sup>. Lin and Ding further found that strength-based psychological climates can also promote innovative behavior by reducing the time pressure of innovation <sup>[7]</sup>. However, the strength-based psychological climates mainly exist in the stages

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of teachers identifying, developing, and utilizing their strengths. That just says, without the context of innovation events, teachers may not perceive the support from the university for the identification, development, and utilization of their strengths. Therefore, based on the Affective Event Theory, this study explores the process by which strength-based psychological climates influence the teachers innovative behavior, and actively responds to the research call by Biswas-Diener et al. that strengths should be developed according to different contexts and matched with their respective contexts [8].

State gratitude is a social emotion with interpersonal characteristics, which is more common than trait gratitude, a stable and persistent positive social emotion. When universities fully recognize, develop, and utilize the innovation strengths of teachers, providing them with creative space, teachers can internalize innovation activities, and promoting innovative behavior. Moreover, leaders, as a part of the organizational context for teachers, play a crucial role in shaping and influencing their gratitude. Inclusive leaders can appreciate and recognize the contributions of teachers and tolerate their mistakes, respect, recognize, and empathize with their subordinates. Inclusive leaders can stimulate the innovative behavior of teachers, and the more inclusive the leader, the easier it is to stimulate the gratitude of teachers, thereby enhancing their work enthusiasm and creativity. Therefore, this study explores the mediating role of gratitude in the relationship between strength-based psychological climates and innovative behavior based on the Affective Event Theory, analyzing the relationship between strength-based psychological climates and gratitude for the first time, and enriching the research on gratitude. At the same time, this study analyzes the regulatory role of inclusive leadership, revealing the boundary conditions of the impact of strength-based psychological climates on the innovative behavior of teachers. This study provides practical insights for universities to mobilize the innovation enthusiasm of teachers and continuously stimulate their innovative behavior.

## 2 Theory and Hypotheses

An advantage is a characteristic that enables an individual to perform at their best. Strength-based psychological climates refer to teachers' perception of the university's support for their advantage identification, development, and utilization [5-6]. Innovative behavior is the process of generating novel and useful ideas and transforming them into service. According to the Affective Event Theory, stable work environment characteristics can lead to positive or negative work events, and the experience of these events can trigger emotional responses that affect behavior through two paths: directly impacting behavior and indirectly impacting behavior through the influence on work attitudes. High strength-based psychological climates are associated with a higher likelihood of positive behavior among teachers [5], and innovative behavior is an important positive behavior in universities. Specifically, participating in innovation activities requires individuals to possess inspiration and professional skills, and strength-based psychological climates can help teachers transform their implicit knowledge into explicit innovative behavior by supporting the identification, development, and use of their strengths.

Second, innovation activities are full of uncertainty and risk, and participating in innovation activities requires the consumption of psychological resources such as motivation and vitality. Strength-based psychological climates can provide energy for innovation by promoting positive emotions and reducing negative emotions. Lastly, participating in high-risk innovation activities requires courage<sup>[7]</sup>, and strength-based psychological climates can enhance teachers' creative self-efficacy by promoting their strengths, which can help them face challenges and setbacks in the innovation process. Thus, this study proposes Hypothesis 1:

Hypothesis 1: Strength-based psychological climates positively affect teachers innovative behavior.

State gratitude refers to the moral cognitive evaluation made by both the benefactor and the beneficiary during interpersonal interactions. Affective Event Theory suggests that emotional events directly or indirectly influence individuals to produce two different types of behavior: one is emotion-driven behavior, which is directly driven by emotional responses, and the other is judgment-driven behavior, which is indirectly influenced by emotional responses and affecting work attitudes, which in turn promote individual behavior. When teachers are in a university environment that recognizes their value, they can fully leverage their strengths, weaken the perception of negative threats, and enhance their confidence and courage in the success of innovative activities<sup>[7]</sup>. They can also use their unique talents to generate helpful behaviors, increase organizational-based self-esteem, and generate positive emotions, forming an emotional drive. At this time, the supportive actions from the university for teachers to fully utilize their talents, such as policies and processes that develop their strengths<sup>[3]</sup>, which are distinct from policies and processes that directly impose performance evaluation requirements on them. Teachers can gain opportunities to try to leverage their strengths to achieve their self-conceptions for the future. The university's support for teachers to actively participate in high-risk innovative activities based on their strengths allows them to see the university's cost commitment in innovation. This altruistic, selfless support can effectively stimulate the gratitude of teachers, helping them accumulate rich resources, experiences, knowledge, and abilities to engage in innovative activities, thereby generating innovative behavior. Thus, this study proposes Hypothesis 2:

Hypothesis 2: Strength-based psychological climates positively influence teachers gratitude.

Inclusive leadership is a relational leadership style that encourages, appreciates, and acknowledges the contributions of faculty and teachers. It involves being openness, effectiveness, and accessibility, with characteristics that include being accommodating, allowing for mistakes, respecting, and understanding subordinates. According to Affective Event Theory, leadership style is a part of the work environment, and events can range from frustrating or negative to inspiring and positive, affecting teachers' attitudes through both emotional and non-emotional pathways. Inclusive leaders foster gratitude among their team by allowing for mistakes, respecting, and empathizing, which in turn leads to reciprocal acts of gratitude. In a high-inclusive leadership context, teachers are more likely to identify and apply their strengths in innovative activities, even if they fail. Leaders provide emotional and tangible support by acknowledging errors, explaining their reasons, and offering constructive guidance for improvement.

This creates a supportive environment that fosters gratitude, higher organizational commitment, and increased innovation. Conversely, in low-inclusive leadership context, where teachers' strengths are not recognized and they lack innovation support, they are less likely to feel grateful, enthusiasm reduced, and are disinclined to engage in innovative efforts. Thus, this study proposed Hypothesis 3:

Hypothesis 3: Inclusive leadership positively mediates between the strength-based psychological climates and teachers gratitude.

### **3 Experimental Design**

#### **3.1 Participants**

The experiment recruited 230 participants in December 2023, inviting in-service academic teachers who regularly participate in innovation activities to participate in the scenario experiment study. Before participating in the scenario experiment study, participants were informed that the research did not involve any violations of laws, regulations, or ethical guidelines, and their information would be kept strictly confidential. This experiment employed a 2x2 between-group design, manipulating strength-based psychological climates (high vs. low) and inclusive leadership (high vs. low), with  $n(\text{high inclusive-high climates}) = 60$ ,  $n(\text{high inclusive-low climates}) = 53$ ,  $n(\text{low inclusive-high climates}) = 57$ , and  $n(\text{low inclusive-low climates}) = 60$ . The participants were 65.2% female, with 15.7% having 1 year or less of teaching experience, 33.9% having 1-5 years of teaching experience, 23.5% having 6-10 years of teaching experience, and the rest having 10 years or more of teaching experience.

#### **3.2 Manipulation**

To manipulate strength-based psychological climates, the high strength-based psychological climates scenario instruction was: "Your institution has established a system focusing on mining the personal strengths of teachers, with teachers who play to their strengths in completing innovation tasks being rewarded and praised." The low strength-based psychological climates scenario instruction was: "Your institution has established specific standard procedures, requiring teachers to follow the charter and complete tasks, without paying attention to your personal strengths, and not rewarding teachers who rely on their personal strengths to complete work."

To manipulate inclusive leadership, the high inclusive leadership scenario instruction was: "Your leader is Professor Zhang, who is respectful and responsible in the workplace, always acknowledges you, and provides timely response and appropriate assistance when you need help." The low inclusive leadership scenario instruction was: "Your leader is Professor Zhang, who is serious in the workplace, always requires teachers to follow his instructions, but does not show recognition, and does not respond in a timely manner or provide assistance when teachers need help."

### 3.3 Measurements

Strength-based psychological climates were measured using the 12-item scale developed by van Woerkom and Meyers [6], with a Cronbach's  $\alpha$  value of 0.978. Gratitude was measured using the 10-item scale developed by Cain et al., with a Cronbach's  $\alpha$  value of 0.963. Innovative behavior was measured using the 6-item scale developed by Scott and Bruce, with a Cronbach's  $\alpha$  value of 0.965. Inclusive leadership was measured using the 9-item scale developed by Carmeli et al., with a Cronbach's  $\alpha$  value of 0.978. The gender and work experience of the teachers were measured as control variables.

## 4 Results

### 4.1 Manipulation Checks

A one-way ANOVA showed that participants in the high strength-based psychological climates group scored significantly higher than those in the low strength-based psychological climates group,  $t(228) = 20.729$ ,  $p < 0.001$ , Cohen's  $d = 2.728$ . Furthermore, participants in the high inclusive leadership group scored significantly higher than those in the low inclusive leadership group,  $t(228) = 34.595$ ,  $p < 0.001$ , Cohen's  $d = 0.840$ . A one-way ANOVA also showed that participants in the high inclusive-high climates group scored significantly higher than those in the other three groups,  $F(3, 226) = 471.378$ ,  $p < 0.001$ .

### 4.2 Hypothesis Testing

**Main Effect Testing.** A one-way ANOVA showed that the high strength-based psychological climates group had significantly higher in innovative behavior ( $M = 5.437$ ,  $SD = 1.092$ ) than the low strength-based psychological climates group ( $M = 3.530$ ,  $SD = 1.627$ ),  $F(1, 228) = 109.715$ ,  $p < 0.001$ ,  $\eta^2 = 0.325$ . Thus, a high strength-based psychological climates has a significant positive effect on innovative behavior, supporting Hypothesis 1.

**Mediating Effect Testing.** A one-way ANOVA showed that the high strength-based psychological climates group had significantly higher in gratitude ( $M = 5.515$ ,  $SD = 1.011$ ) than the low strength-based psychological climates group ( $M = 3.538$ ,  $SD = 1.497$ ),  $F(1, 228) = 138.704$ ,  $p < 0.001$ ,  $\eta^2 = 0.378$ . Thus, a high strength-based psychological climates has a significant positive impact on gratitude, supporting Hypothesis 2.

**Moderating Effect Testing.** A moderated mediation analysis using SPSS Process Model 7 revealed that the interaction effect between strength-based psychological climates and inclusive leadership on gratitude was 0.073 (LLCI = 0.048, ULCI = 0.097, not including 0), and the conditional indirect effect was 0.033 (LLCI = 0.008, ULCI = 0.061, not including 0). Thus, inclusive leadership has a positive moderating impact on the relationship between strength-based psychological climates and gratitude, supporting Hypothesis 3.

## **5 Conclusions and Discussion**

### **5.1 Conclusions**

Based on Affective Event Theory, this study examines the influence of strength-based psychological climates on university teachers innovative behavior, as well as the mediating role of gratitude and the moderating effect of inclusive leadership. By conducting a scenario experiment, the findings reveal a significant positive impact of strength-based psychological climates on teachers innovative behavior, where gratitude acts as a mediator, and inclusive leadership positively moderates the relationship between strength-based psychological climates and gratitude, ultimately influencing teachers innovative behavior.

### **5.2 Theoretical Contributions**

Theoretical contributions of this study are as follows: First, this study explored the impact of strength-based psychological climates on innovative behavior, which is a positive response to Biswas-Diener et al.'s call for the development of strengths based on different contexts and matched with their contexts<sup>[8]</sup>. The strength-based psychological climates mainly exist in the stage of recognizing, developing, and utilizing strengths, which means that without the innovation event, teachers may not perceive support from the university for their strengths development. Second, this study explored the mediating role of gratitude in the relationship between strength-based psychological climates and innovative behavior based on Affective Event Theory, which is the first time to analysis the relationship between strength-based psychological climates and gratitude, which enriches the research of gratitude in the field of organizational behavior.

### **5.3 Practical Implications**

The practical implications of this study are as follows: First, recognizing, developing, and utilizing strengths is an effective management method to stimulate teachers innovative behavior, and it is necessary to establish clear policies and regulations in universities to make teachers truly feel the support and help from universities for their strengths development, such as giving certain material rewards or honors, enhancing their gratitude emotions, and encouraging them to actively participate in innovation activities. Second, the design of institutions and leadership support for teachers strengths development in universities should be coordinated, truly realizing the virtuous cycle of innovation in universities.

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