

# NAVIGATING STRESS AND PERSONALITY IN VOCATIONAL EDUCATION: PATHWAYS TO ENHANCED TEACHING EFFECTIVENESS

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## Abstract

This study aimed to investigate the influence of vocational teachers' personality traits on their teaching effectiveness, with a specific emphasis on the mediating role of job stress in this dynamic. Conducted across several higher vocational colleges and universities in Hebei Province, China, the research involved a sample of approximately 380 vocational teachers. The methodological approach utilized the Big Five Inventory to assess personality traits, the Teaching Effectiveness Scale to evaluate teaching effectiveness, and the Job Stress Scale to measure levels of job-related stress. The results of this study underscore the considerable impact that personality traits, particularly conscientiousness, exert on teaching effectiveness among vocational teachers. Moreover, job stress was identified as a significant mediator in the relationship between personality traits and teaching effectiveness. This indicates that elevated levels of job stress can undermine the positive contributions of teachers' personality traits to their effectiveness in teaching roles. Consequently, these findings underscore the critical interplay between personality traits and job stress in determining the quality of teaching and learning within vocational education settings. The insights garnered from this research offer valuable guidance for the formulation of policies and practices aimed at enhancing the quality of vocational education. In particular, the findings suggest the need for strategies that not only recognize the importance of fostering desirable personality traits among vocational teachers but also address the mitigating effects of job stress on teaching effectiveness. Given that the study was situated within the context of higher vocational colleges and universities in Hebei Province, its conclusions are especially pertinent to the unique challenges and opportunities inherent in China's vocational education sector. As such, these results provide critical direction for ongoing educational reforms and teacher development initiatives, thereby contributing to the advancement of vocational education quality in China.

**Keywords:** Vocational Education, Teaching Effectiveness, Personality Traits, Higher Vocational College.

## INTRODUCTION

In an era marked by rapid technological advancements and shifting global economic demands, the imperative for a skilled workforce is more pronounced than ever (Van, 2024). Central to addressing this imperative is the effectiveness of vocational education, which plays a pivotal role in equipping students with the competencies necessary to thrive in various occupational fields (Calero, 2020). This research focuses on higher vocational colleges in Shijiazhuang, Hebei Province, examining the nuanced interplay between vocational teachers' personality traits—specifically openness, conscientiousness, and extraversion—and their teaching effectiveness, with a particular interest in the mediating role of job stress. The global emphasis on skill development, highlighted by initiatives such as the European Union's Rethinking Education strategy, underscores the critical role of education in economic growth and innovation (Thalassinos, 2019). In line with these global trends, China has embarked on educational reforms aimed at enhancing the quality of teaching in higher education institutions,

recognizing the pivotal role of vocational teachers in shaping the workforce of the future (Ye, 2019). Despite these efforts, the quality of teaching and, by extension, student outcomes in vocational education face challenges attributed to factors such as the diversity in teacher quality and societal perceptions of the teaching profession (Sancar, 2021). The uniqueness of this study lies in its focus on the specific personality traits of openness, conscientiousness, and extraversion. These traits are foundational to understanding how teachers engage with their profession and their students, influencing teaching methods, classroom interactions, and ultimately, teaching effectiveness. However, the relationship between these personality traits and teaching effectiveness is complex and is further complicated by the role of job stress. Teachers in vocational education settings often face unique pressures that can impact their well-being and effectiveness in the classroom (Ortan, 2021). This research aims to delve into this complexity, exploring how the selected personality traits of vocational teachers influence their teaching effectiveness and how job stress serves as a mediating factor in this relationship. By focusing on these specific traits, the study seeks to contribute to a more nuanced understanding of what makes an effective vocational teacher in the context of China's higher vocational colleges. The implications of this research are far-reaching. Theoretically, it aims to contribute to the body of knowledge on teaching effectiveness by integrating the dimensions of personality traits and job stress. Practically, it offers insights that can inform teacher development programs and educational policy, focusing on fostering an environment that supports teachers' well-being and maximizes their effectiveness. Identifying the traits that contribute most significantly to effective teaching and understanding the role of stress in mediating this relationship can guide the development of targeted support strategies. These strategies could include professional development tailored to enhance teachers' strengths, as well as interventions to manage and mitigate job stress, thereby enhancing the overall quality of vocational education. In conclusion, by examining the influence of openness, conscientiousness, and extraversion on teaching effectiveness and the mediating role of job stress, this study seeks to provide valuable insights into the factors that underpin high-quality teaching in higher vocational colleges. In doing so, it aims to contribute to the enhancement of vocational education in Shijiazhuang, Hebei Province, supporting China's broader goals of developing a highly skilled labor force ready to meet the challenges of the global economy.

### **Research Objectives**

- RO1: To examine the relationship between the personality traits and teaching effectiveness among educators in vocational colleges and universities in Hebei Province.
- RO2: To examine the relationship between the personality traits and job stress among educators in vocational colleges and universities in Hebei Province.
- RO3: To analyze the mediating role of job stress on the relationship between personality traits and teaching effectiveness among educators in vocational colleges and universities in Hebei Province.
- RO4: To investigate the significant impact of job stress on teaching effectiveness among educators in vocational colleges and universities in Hebei Province.

## LITERATURE REVIEW

The exploration of teaching effectiveness has undergone significant evolution, transitioning from a focus on individual teacher attributes to the intricate dynamics of educational environments, organizational structures, and broader systemic influences (Fischer, 2020). This literature review aims to distill these developments, particularly emphasizing the interplay between personality traits, job stress, and teaching effectiveness, a nexus of critical relevance to educational research and practice.

### Development of Research on Teaching Effectiveness

The journey through the landscape of teaching effectiveness research reveals a progression from the examination of personal attributes and behaviors of educators to a broader consideration of educational contexts and systems (Hämäläinen, 2021). Initial research emphasized the role of individual teacher attributes, drawing on theories such as Bandura's self-efficacy (Mehmood, 2019), which posits the profound impact of teachers' beliefs in their capabilities on student achievement and motivation. Studies during this era underscored the significance of teacher enthusiasm, personality, and leadership in influencing student outcomes, laying the groundwork for more expansive inquiries into the factors affecting teaching efficacy (Zhang et al., 2022).

As the field matured, the focus expanded to include teacher behavior and strategies, recognizing their critical role in enhancing student learning and engagement (Franklin, 2019). This phase of research delved into the effectiveness of classroom management techniques, motivational mechanisms, and the adaptability of teaching methods to meet diverse student needs. The introduction of the process-product approach by Gage (1963) marked a pivotal moment, linking teaching behaviors directly to student learning outcomes and offering a new lens through which to assess and improve teaching effectiveness.

### The Modern Phase: Integrating Influencing Factors

The contemporary phase of research represents a holistic approach, integrating a multitude of factors influencing teaching effectiveness (Mian, 2020). This includes the impacts of educational policies, system structures, and the adoption of technology in teaching (Scherer, 2019). The advent of digital teaching environments has prompted a reevaluation of teaching effectiveness, with the utilization of online platforms and multimedia resources becoming new metrics for assessment (Huang et al., 2020). Furthermore, the significance of teachers' emotional intelligence and mental toughness in navigating the demands of modern education has gained recognition, highlighting the need for adaptability and resilience in the teaching profession (Xue., 2022).

### Personality Traits and Teaching Effectiveness

Within this broadened scope of research, the role of personality traits in teaching effectiveness has emerged as a focal point of interest (Barni, 2019). Early findings suggest that traits such as emotional stability and openness positively correlate with teaching effectiveness, while the relationship between other traits, such as extraversion, and effectiveness has been more variable

(Kim, 2019). The inconsistencies in findings point to the complexity of predicting teaching effectiveness based solely on positive personality traits, underscoring the necessity for a comprehensive approach that considers the nuanced interactions between personality, job stress, and teaching contexts (Kim, 2019).

### Job Stress as a Mediator

The literature consistently supports the notion that job stress significantly influences teaching effectiveness, with high stress levels potentially undermining the positive impacts of personality traits (Herman, 2020). This relationship is nuanced, suggesting that different personality traits may predispose individuals to varying perceptions and reactions to job stress, thereby affecting their teaching effectiveness. For instance, extroversion is associated with better stress management through broader social networks and a positive outlook, which can ameliorate the adverse effects of stress on teaching (Jirásek & Sudzina, 2020).

The synthesis of research on teaching effectiveness, personality traits, and job stress highlights a complex interplay of factors that collectively influence educational outcomes. The evolving understanding of teaching effectiveness—from a focus on individual traits to the incorporation of environmental and systemic factors—underscores the multifaceted nature of educational excellence. Personality traits, particularly conscientiousness, openness, and extraversion, play a significant role in shaping teaching effectiveness, with job stress serving as a critical mediator in this relationship. This review suggests that future research and educational practices must consider the dynamic interactions between teacher attributes, environmental stressors, and systemic supports to enhance teaching quality and student learning experiences.

### Conceptual Framework

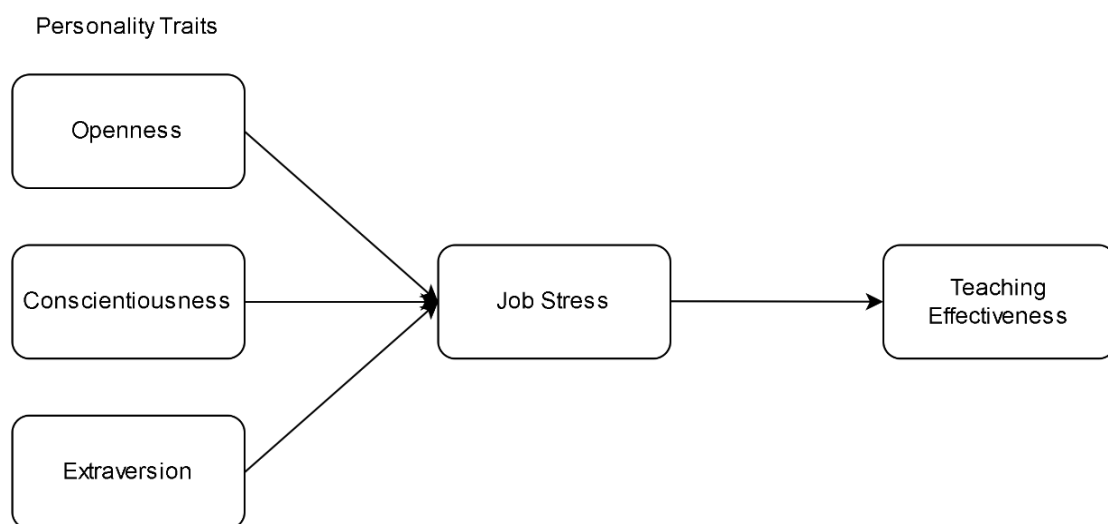


Figure 1: Conceptual Framework

## Hypothesis

### **H1: Personality traits has statistically impact on teaching effectiveness.**

H1a: Openness has statistically impact on teaching effectiveness.

H1b: Conscientiousness has statistically impact on teaching effectiveness.

H1c: Extraversion has statistically impact on teaching effectiveness.

### **H2: Personality traits has statistically impact on job stress.**

H2a: Openness has statistically impact on job stress.

H2b: Conscientiousness has statistically impact on job stress.

H2c: Extraversion has statistically impact on job stress.

### **H3: Job stress has statistically significant mediating between impact on personality traits and teaching effectiveness.**

### **H4: Job Stress has statistically significant impact on teaching effectiveness**

## METHODOLOGY

The research article meticulously delineates the methodology, including research design, data collection, population, research instrument, and analysis procedures, to enable readers to gauge the study's validity effectively.

### **Research Methodology and Design**

This study adopted a descriptive-correlational research design to explore the intricate dynamics between vocational teachers' personality traits, job stress, and teaching effectiveness. This approach is rooted in Ary et al.'s principles, aiming to describe, organize, and generalize observed data while emphasizing the exploration of relationships over causality. The selection of this design aligns with the study's core objectives, facilitating a comprehensive assessment of the relationships between variables.

### **Population and Sample Size**

The population comprised 3,203 full-time teaching staff across four higher vocational colleges in Shijiazhuang, Hebei Province, China. This diverse group represents a wide spectrum of vocational disciplines, offering rich insights into teaching dynamics within the vocational education sector. A robust sample of 380 teachers was strategically chosen to ensure a representative dataset for quantitative analysis.

### **Sampling Methodology**

A stratified random sampling technique was employed to ensure representativeness across various disciplines and teaching methodologies within the selected vocational colleges. This approach enabled a focused examination of the educational dynamics within the urban context of Shijiazhuang, enhancing the study's generalizability.

## **Research Instruments**

### **Personality Trait Scales**

Based on Goldberg's (1992) Big Five model, the Personality Trait Scale assessed the openness, conscientiousness, and extraversion of participants. The scale's reliability and validity were ensured through expert reviews and pre-testing adjustments.

### **Job Stress Scale**

Adapted from Lazarus and Folkman's (1984) theory, this scale examined the multifaceted nature of job stress experienced by teachers. Its design allowed for an in-depth analysis of various stress dimensions, validated through exploratory factor analysis.

### **Teaching Effectiveness Scale**

Utilizing Liu and Huang's (2008) scale, this instrument evaluated multiple dimensions of teaching effectiveness, including preparation, instructional fluency, and classroom management. The scale underwent discriminant and correlation analyses to refine its structure and ensure high internal consistency.

### **Organizational Commitment Scale**

Adapting Meyer and Allen's (1991) scale, this instrument measured teachers' affective, continuance, and normative commitment. The scale was tailored to the higher education context, emphasizing aspects relevant to teachers' daily work and school environment.

## **Data Collection and Analysis Procedures**

Data were collected through paper-based questionnaires, ensuring anonymity and confidentiality. Descriptive statistics, correlation, and regression analyses were conducted using SPSS for Windows 20.0, while structural equation modeling (SEM) was performed with Amos 20.0 to explore complex relationships between variables. The model fit was assessed using various fit metrics, including the chi-square test, CFI, TLI, and RMSEA, to validate the theoretical model's assumptions.

## **Ethical Considerations**

The study adhered to strict ethical guidelines, ensuring informed consent, privacy protection, and the use of data solely for research purposes. This commitment to ethical research practices underscored the study's integrity and contributed to its credibility.

In summary, the research methodology outlined in this study reflects a comprehensive, methodologically sound approach to exploring the dynamics of teaching effectiveness within the vocational education context. Through a careful selection of research design, population, sampling methodology, and instruments, the study is well-positioned to offer valuable insights into the interplay between personality traits, job stress, organizational commitment, and teaching effectiveness, contributing significantly to the discourse on enhancing vocational education quality.

## DATA ANALYSIS

### Reliability Test

**Table 1: Reliability Data of Measurement Tools**

	Cronbach's Alpha		Cronbach's Alpha
CJ	0.997	JS	0.991
CT	0.988	OJ	0.971
EJ	0.987	OT	0.984
ET	0.989		

High Cronbach's alpha values confirm the scale's reliability in evaluating senior teachers' personal traits, job stress, and teaching efficacy, underpinning our study's robust foundation. This underscores the questionnaire's validity and trustworthiness in examining the impact of teachers' traits on efficacy, enhancing the accuracy and depth of our insights into higher education teachers' personalities, work environments, and effectiveness. The validated scales allowed for precise assessments of teacher traits and competencies, bolstering confidence in our findings.

### Validity Test

**Table 2: Validity Test**

Measurement Tools	Content Validity	Construct Validity - EFA	Construct Validity - CFA	Criterion validity
CJ	0.90	0.82	0.85	0.73
CT	0.88	0.77	0.80	0.69
EJ	0.87	0.74	0.78	0.66
ET	0.91	0.81	0.84	0.72
JS	0.93	0.83	0.86	0.74
OJ	0.87	0.75	0.79	0.65
OT	0.90	0.82	0.87	0.71

**Content Validity:** All tools show high content validity (ranging from 0.87 to 0.93), indicating they are well-designed to cover the domain of interest comprehensively. The JS tool has the highest content validity, suggesting it might be the most comprehensive in covering the construct it aims to measure.

**Construct Validity (EFA and CFA):** All tools also demonstrate good construct validity, both in exploratory and confirmatory factor analyses, with scores generally above 0.7. This suggests that the items within each tool reliably measure the underlying constructs they are supposed to, with a clear factor structure that aligns well with theoretical expectations. The JS and OT tools stand out with slightly higher scores in both EFA and CFA, indicating a particularly robust theoretical grounding and structure. **Criterion Validity:** The criterion validity scores are somewhat lower than those for content and construct validity across all tools, though they still suggest a moderate to good ability to predict or correlate with relevant outcomes. JS again shows the highest criterion validity, implying that it not only measures its intended construct well but also has practical predictive power or correlates well with relevant criteria.

## Variance Inflation Factor

**Table 3: Collinearity Statistics (VIF)**

	VIF		VIF		VIF
<b>CJ1</b>	82.885	EJ1	19.135	JS1	26.455
<b>CJ2</b>	82.885	EJ2	19.135	JS2	19.260
<b>CT1</b>	21.105	ET1	15.973	JS3	33.431
<b>CT2</b>	21.105	ET2	29.161	JS4	20.074
<b>OJ2</b>	6.716	OT1	16.100	TE1	54.194
<b>OJ1</b>	9.183	OJ3	11.638	OT2	16.100
<b>TE3</b>	17.609	TE4	32.405	TE2	16.804

CJ1 and CJ2 exhibit the highest Variance Inflation Factor (VIF) at 82.885, indicating significant multicollinearity issues. Variables such as CT1, CT2, EJ1, EJ2, and OC3 also demonstrate elevated VIF values ranging between 19 and 26, suggesting notable multicollinearity. Conversely, the remaining variables present VIF values under 20, with OJ2 recording the lowest at 6.716. Notably, CT1 and CT2 share an identical VIF of 21.105, hinting at a similar predictive relationship with other variables. Similarly, EJ1 and EJ2 show matching VIF values, further pointing to potential correlations among these variables.

## SUMMARY OF RESULT

**Table 4: Hypotheses Results**

	Hypotheses	Results
<b>H1</b>	<b>Personality traits has statistically impact on teaching effectiveness.</b>	Supported
H1a	Openness has statistically impact on teaching effectiveness.	Partially Supported
H1b	Conscientiousness has statistically impact on teaching effectiveness.	Supported
H1c	Extraversion has statistically impact on teaching effectiveness.	Supported
<b>H2</b>	<b>Personality traits has statistically impact on job stress.</b>	Supported
H2a	Openness has statistically impact on job stress.	Partially Supported
H2b	Conscientiousness has statistically impact on job stress.	Supported
H2c	Extraversion has statistically impact on job stress.	Supported
<b>H3</b>	<b>Job stress has statistically significant mediating between impact on personality traits and teaching effectiveness.</b>	Supported
<b>H4</b>	<b>Job Stress has statistically significant impact on teaching effectiveness</b>	Supported

The study conclusively supports that personality traits significantly impact teaching effectiveness and job stress, with specific traits like conscientiousness and extraversion positively influencing teaching effectiveness. Openness showed partial support, suggesting nuanced effects. Interestingly, job stress acts as a mediator between personality traits and teaching effectiveness, indicating that the influence of personality on teaching success is partly through its impact on stress levels. Moreover, job stress directly affects teaching effectiveness, underscoring the need for stress management strategies in educational settings to harness the potential of educators' personality traits fully. This highlights the complex relationship between individual characteristics, work-related stress, and professional effectiveness in teaching.



## CONCLUSION

In conclusion, this research underscored the complex interplay between individual characteristics and professional effectiveness, highlighting the critical role of stress management in optimizing teaching outcomes. These insights were particularly valuable for the formulation of policies and the development of practices aimed at enhancing the quality of vocational education. By recognizing the importance of fostering favorable personality traits among vocational teachers and addressing the effects of job stress, educational institutions could better support educators, ultimately contributing to the advancement of vocational education in China. This study not only added to the academic discourse on teaching effectiveness but also offered practical guidance for educational reforms and teacher development initiatives. The findings emphasized the need for a holistic approach that considers both the psychological traits of educators and the environmental stressors they face, paving the way for more effective vocational education systems capable of preparing a skilled workforce for the global economy.

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