

# Investigate of the Relationship between Thinking Styles and Classroom Management of the Teachers of Vocational Colleges

Weiguo Hu<sup>1,5</sup>, Zi Ye<sup>2</sup>, Chou Chen<sup>3</sup>, Wei Chen<sup>4</sup>, Chan Li<sup>5</sup>, Haijun Zhou<sup>6,8,\*</sup>, Ruiyang Chen<sup>7,\*</sup>

<sup>1</sup>Institute of Education, Xiamen University, Xiamen, CHINA.

<sup>2</sup>School of Marxism, Zhejiang Institute of Economics and Trade, Hangzhou, CHINA.

<sup>3</sup>Department of Public Sports, Wenzhou University of Technology, Wenzhou, CHINA.

<sup>4</sup>Department of Laboratory Management, Wenzhou Business College, Wenzhou, CHINA.

<sup>5</sup>School of Marxism, Zhejiang College of Security Technology, Wenzhou, CHINA.

<sup>6</sup>Department of Audit, Zhejiang College of Security Technology, Wenzhou, CHINA.

<sup>7</sup>School of Marxism, Wenzhou Medical University, Wenzhou, CHINA.

<sup>8</sup>School of Marxism, North western Polytechnical University, Xi'an, CHINA.

## ABSTRACT

**Aim/Background:** This study investigated the relationship between thinking styles and classroom management among teachers at X (anonymous) Vocational College of China during the academic year 2021-2022. **Materials and Methods:** The population of the study consisted of all 442 teachers at X Vocational College. Descriptive and inferential statistical techniques, including Fisher's Z test, were employed for data analysis. **Results:** The findings revealed that only the legislative and judicial thinking styles significantly predicted classroom management among the teachers. Additionally, thinking style was found to be a potential predictor of classroom management style. However, the results of Fisher's Z test indicated no statistically significant difference between teachers' thinking styles and classroom management based on gender. **Conclusion:** The study concludes that specific thinking styles, particularly legislative and judicial, play a role in influencing classroom management. Gender does not appear to significantly affect the relationship between thinking styles and classroom management among teachers.

**Keywords:** Classroom Management styles, Teacher thinking, Thinking styles, Vocational College.

## Correspondence:

**Prof. Haijun Zhou**

Department of Audit, Zhejiang College of Security Technology, Wenzhou-325000, CHINA.

Email: zhj2020@mail.nwpu.edu.cn

**Prof. Ruiyang Chen**

School of Marxism, Wenzhou Medical University, Wenzhou-325000, CHINA.

Email: chenruiyang@wmu.edu.cn

**Received:** 14-02-2025;

**Revised:** 08-04-2025;

**Accepted:** 27-06-2025.

## INTRODUCTION

All effective actions and factors in education revolve around the teacher or instructor, who influences the classroom environment and the teaching process. In this process, various factors have varying degrees of importance, with class management method being one of the most significant ones.<sup>1-3</sup>

One of the elements that might have a big impact on students' motivation and growth is the way the classroom is run. Creating a secure and interesting learning environment is referred to as classroom management. Designed to encompass all of a teacher's professional roles; this term combines a teacher's personality, professional behavior and skills.<sup>4</sup> According to some definitions, management style is the method a teacher employs to maintain student discipline.<sup>5</sup> According to Martin, Yen and Mayal, the

classroom management style is the teacher's performance in classroom management, which is influenced by the teacher's beliefs and opinions regarding the nature of student behavior.<sup>6</sup> According to Djegik and Stojilkovic, classroom management is a safe and motivating environment for learning that shows the teacher's personality, professional behavior and capabilities.<sup>4</sup>

According to Wolfgang, teachers develop their classroom management behaviours based on their perceptions of students' development and learning and each behavioural pattern or style may have a distinct impact on students' learning.<sup>7</sup> In his opinion, there are three types of classroom management styles, which are: non-interventionist style (giving responsibilities to students and more opportunities for free interaction in the class and following their personal interests), interactive style (control and discipline in light of the interaction between the student and the teacher and the participation of the students in the planning and organization of the class) and the interventionist (emphasis on exercising more control and supervision over the activities and behavior of students and emphasizing the rules and discipline of the class).<sup>8</sup> Many research findings show that effective classroom



DOI: 10.5530/ijper.20253776

### Copyright Information :

Copyright Author (s) 2025 Distributed under Creative Commons CC-BY 4.0

Publishing Partner : Manuscript Technomedia. [www.mstechnomedia.com]

management is even more important than factors such as students' IQ and their social status or class.<sup>9-12</sup>

Therefore, it is important to search for methods and factors that can help teachers manage their classrooms better. The findings of past research show that classroom management is influenced by various factors such as teacher's personality, classroom environment and teaching content; therefore, one of the variables influencing classroom management is the thinking style of teachers. The scientific record of studying thinking style goes back to the second half of the 20<sup>th</sup> century. People think about how to do things with their own style. Thinking styles are the preferred ways of people in using their abilities; therefore, thinking style is not ability in itself, but refers to how to use abilities.<sup>13</sup> Recognizing, growing and developing the thinking styles of managers are always an important issue. During the last decade, the study of organizational and managerial behavior and the investigation of managers' thinking style has increased significantly.<sup>14-16</sup>

Sternberg proposes the theory of mental self-management, which is divided into 13 kinds of thinking styles. These styles are categorised according to 5 dimensions: function, forms, levels, domains and tendencies. There are two categories that fit these thirteen thought patterns. Legal, judicial, holistic, hierarchical and free-thinking thinking styles are examples of the first category of thinking styles. These thinking types encourage innovation and need complicated information processing. People who think in this way frequently question conventions and take risks. Simple information processing is necessary for the second category of thinking styles, which includes executive, detail-oriented, unipolar and conservative ones. This kind of thinking is typically used by people who uphold rules and are focused on authority. Depending on the task at hand, the remaining four thinking styles (such as anarchy, oligarchy, internal and external) can be classified as either complex or simplistic.<sup>17</sup> Researchers contend that people can display their thinking styles in a number of ways and that the relative goodness and badness of thinking styles depend on time, place and circumstance.<sup>18</sup>

Academic problems in lower grades can be one of the reasons for low academic progress in higher grades and this causes irreparable damage to society from a cultural and economic perspective. One of the elements that might have a big impact on students' motivation and growth is the way the classroom is run. As a result, it's important to focus on the predictor variables of this problem, like teachers' classroom management techniques and to pinpoint the predictor variables of motivation and academic progress in students, so that education officials can plan the necessary program to boost performance and motivate students. On the other hand, one of the elements that can affect the classroom management style is the teachers' thought processes. However, the primary concern of the researcher and the research is whether there is a significant relationship between the teaching

styles of the teachers at X Vocational College in China and how they manage the classroom, as well as whether these teaching styles will influence how the classroom is managed. Teachers' thinking style is manifested as teaching style.

For this purpose, the main question that is pursued in this research is what is the relationship between the thinking styles and classroom management of the teachers of X Vocational College of China?

## Theory and hypotheses development

### *Thinking styles and classroom management*

According to Robert Sternberg, the preferred mode of thought is the thinking style.<sup>19</sup> Thinking styles are not abilities, but rather the preferred way of thinking, or the manner in which potential abilities are utilized.<sup>20</sup> Teaching thinking styles, the relationship between curriculum and thought patterns and the impact of thinking styles on consumer behavior and search motivation all contribute to the significance of thinking styles in research.<sup>21,22</sup> The relationship between the academic development of Hong Kong students and their thinking patterns.<sup>23</sup> Contrary to the example of western societies, conservative and the strongest correlation between executive thinking patterns and academic success was found. Sri Vasta investigated how thinking processes and creativity are related. According to the findings, creativity and analytical style have different relationships, with holistic types and creativity having a favourable link.<sup>24</sup> Wang *et al.*, showed that one of the most important effective factors in learning is the class management style.<sup>25</sup> Class management style can play a major role in the teaching process. Likewise, choosing the appropriate class management style can have a serious impact on the academic progress of students. Yilmaz investigated the relationship between pre-service teachers' self-efficacy and classroom management.<sup>26</sup> Adeyemo looked into the relationship between students' academic success and teachers' proficiency in managing the classroom.<sup>27</sup> The results showed that there is a significant relationship between the effective classroom management skills and techniques of teachers and the academic progress of students in physics. Dejjik and Stojilkovic by examining classroom management styles reached the conclusion that the advantages and positive aspects of interactive management style are much more compared to interventionist and non-interventionist styles.<sup>4</sup> Also, while emphasizing the role and significant effect of classroom management on the creation and development of academic motivation, participation in curricular activities and increasing the level of students' progress, also confirmed the fact that there is a relationship between teachers' beliefs and style and their class management style.

### **Research hypotheses and hypothesized path model**

Therefore, according to what has been mentioned, the following hypotheses have been proposed in this research.

**Hypothesis 1:** There is a significant relationship between multiple dimensions of thinking styles (legislative, executive and judicial) with classroom management.

**Hypothesis 2:** Multiple dimensions of thinking styles (legislative, executive and judicial) contribute to the prediction of classroom management.

**Hypothesis 3:** The correlation between thinking styles and classroom management of male and female teachers is different.

Also, according to the literature review in examining the relationship between the thinking styles and classroom management of teachers, the conceptual model of the research is proposed according to Figure 1.

## MATERIALS AND METHODS

### Participants and procedures

In terms of practical objectives, the research approach is descriptive and correlational in terms of information collection. The main goal of the research is to investigate the relationship between thinking styles and classroom management of teachers of X Vocational College of China. Based on this objective, we have evaluated thinking styles as predictor factors and classroom management as a dependent variable.

The population of this research includes all the teachers of X Vocational College of China in the academic year of 2021-2022 by 442 people, so the statistical sample of this research is a collection of teachers in the X Vocational College of China in the academic year of 2021-2022 as 205 people. According to the table of Morgan and Karjesi, the samples were selected based on the random sampling method. Given that some questionnaires were not returned, 10% more questionnaires, i.e. 226 questionnaires, were distributed and collected.

### Measures

Standard questionnaires of thinking styles and classroom management styles are the primary instrument for measuring and collecting data in this research. Thinking styles were measured

using the short form of the Sternberg-Wagner questionnaire,<sup>28</sup> which consisted of 24 questions and classroom management style was measured using the Wolfgang and Glickman questionnaire,<sup>7</sup> which consisted of 25 questions on a five-point Likert scale.

To ensure that the questionnaire for this study has high validity, a few professors validated the initial questionnaire and the papers were distributed afterward. In addition, the reliability of the thinking styles questionnaire using the factor analysis method was measured 0.77.<sup>28</sup>

The dependability coefficient often lies between 0 (no correlation) and 1 (perfect correlation). In this study, the reliability of the questionnaire was evaluated using the Cronbach's alpha coefficient (Table 1).

### Analytical procedures

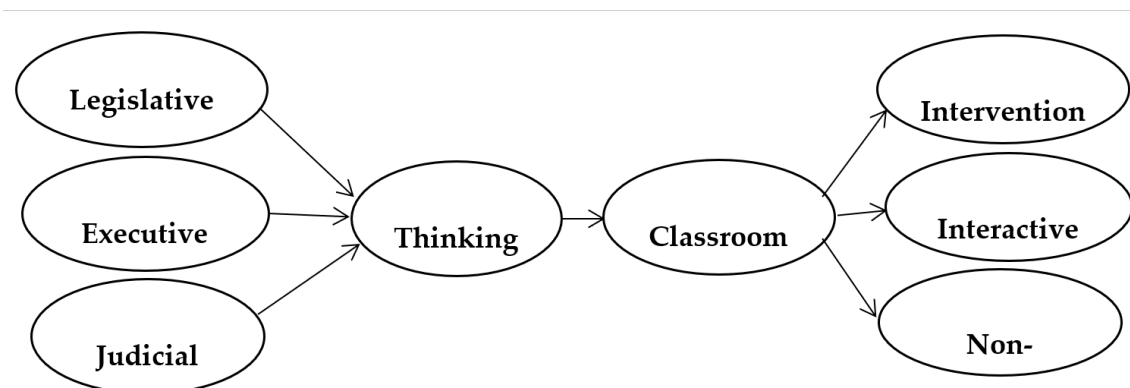
In this study's data analysis, descriptive and inferential statistical techniques were employed. In fact, each variable is initially described in the form of Tables and statistical indicators using SPSS software. Finally, SPSS statistical software was used to evaluate the data using the Pearson's correlation coefficient and regression techniques. The Kolmogorov-Smirnov test was employed in this study to determine whether the data were normal. Fisher's Z test was used to determine the difference between the thinking styles and classroom management of male and female teachers.

## RESULTS

### Descriptive statistics

The statistical description of the questionnaire's demographic variables revealed that 53.74% of the statistical sample is male and 46.26% is female. Additionally, 33.5% of respondents have between six and nine years of service experience.

According to the description of the central indicators and the variable distribution of thinking styles, the average legislative thinking style variable score is 4.08, the average executive thinking style variable score is 3.45 and the average judicial thinking style variable score is 3.90. In addition, the description of the central indicators and dispersion of the class management style variable



**Figure 1:** Conceptual model of the research.

**Table 1: Cronbach's alpha coefficient and Kolmogorov-Smirnov test of research variables.**

Variable	Dimensions	Reliability of all indicators	K-S test statistic value	Level of Significance	Test result
Thinking styles	Legislative	0.80	1.094	0.121	Is normal
	Executive	0.76	1.026	0.077	Is normal
	Judicial	0.75	1.010	0.120	Is normal
Classroom management	Interventionist	0.74	1.092	0.087	Is normal
	Non-interventionist	0.74	1.092	0.087	Is normal
	Interactive	0.74	1.017	0.093	Is normal

**Table 2: Correlation coefficient between the components of thinking styles and classroom management.**

Variable	Thinking styles	Legislative	Executive	Judicial	Multiple correlation coefficient (R)	Coefficient of determination (R <sup>2</sup> )	Standard error
Classroom management	Correlation coefficient	-0.383	-0.131	-0.245	0.44	0.17	0.86
	<i>p</i> -value	0.002	0.102	0.031			

revealed that the interventionist management style variable has an average score of 3.03, the non-interventionist management style has an average score of 2.85 and the interactive management style has an average score of 2.72.

### Hypotheses testing

The Kolmogorov-Smirnov test was employed in this study to determine whether the data were normal. The significance level of the Kolmogorov-Smirnov test for all research variables is greater than 0.05, as evidenced by the data in Table 1. As a result, the present study's variables all exhibit a normal distribution.

**Hypothesis 1:** There is a significant relationship between multiple dimensions of thinking styles (legislative, executive and judicial) with classroom management.

The correlation between thinking styles and classroom management was analyzed using Pearson's coefficient of correlation. The findings showed that there was no correlation between executive thinking style and classroom management ( $p > 0.050$ ), however there was a substantial correlation between legislative and judicial thinking types and classroom management ( $p < 0.050$ ). This suggests that as teachers' legislative and judicial thinking styles increased, their classroom management decreased (Table 2). On the contrary, with the decrease of teachers' legislative and judicial thinking styles, their classroom management increased.

**Hypothesis 2:** Multiple dimensions of thinking styles (legislative, executive and judicial) contribute to the prediction of classroom management.

According to Table 2, the multiple correlation coefficients between the three predictor variables included in the model and the dependent variable is 0.44. The value of the coefficient of determination is equal to 0.17, that is, 17% of the variance in the dependent variable is explained by these three variables entered the model and the remaining variance is explained by other variables that the researcher did not consider and did not enter into the model.

The obtained F (14.11) is at the significance level of 0.05 and this shows that firstly the regression was significant and secondly at least one of the independent variables was effective in predicting the dependent variable.

Multiple regression tests were used to predict teachers' classroom management. In this model, the legislative, executive and judicial thinking style variables were entered as predictor variables and the classroom management variable was entered into the model as the criterion variable (Table 3).

By examining the thinking styles, it was also found that judicial and legislative thinking styles could have a significant impact on the prediction of classroom management. Also, the beta coefficient shows that judicial thinking style and legislative thinking style have the most impact on predicting classroom management, with the executive thinking style ranking third with an impact of 4.4%.

**Table 3: Regression coefficients for predicting classroom management.**

Predictor variables	B	Std. Error	Beta	T	P
Constant	13.84	0.47		29.15	0.001
Legislative thinking style.	-0.065	0.023	-0.110	-2.821	0.005
Judicial thinking style.	-0.704	0.083	-0.318	-8.472	0.001
Executive thinking style.	-0.151	0.113	-0.044	-1.328	0.181

**Hypothesis 3:** The correlation between thinking styles and classroom management of male and female teachers is different.

Fisher's Z test was used to determine the difference between the thinking styles and classroom management of male and female teachers. The results showed that Fisher's Z calculated for male and female teachers was equal to 0.10, which is lower than the critical value of 1.96, these two groups' correlation coefficients are not significantly different from one another at the  $p < 0.05$ .

## DISCUSSION

Several factors are effective in the teaching process and the most important determining factors in this field are related to the actions that are carried out by teachers in the form of classroom management.<sup>5</sup> Classroom management includes managing time, space, activities, materials and tools, social interactions and learner's behavior.<sup>4</sup> The purpose of this research was to investigate the relationship between thinking styles and classroom management styles of teachers of X Vocational College of China.

The description of the demographic variables of the respondents in this research showed that 53.74% of the respondents are men and 46.26% of the respondents are women. The service history of the respondents showed that 33.5% of the respondents have 6 to 9 years of service experience. Descriptive analysis of the research variables showed that the executive thinking style with an average score of 4.08 has the highest score and the judicial thinking style with an average score of 3.45 has the lowest score. Also, the average score of legislative thinking style was 3.90. Executive thinking has the highest score, based on the results. In justifying this finding, Sternberg states that executive thinking style is preferable in educational environments, because executive people do what they are told and doing the work is often associated with pleasantness. In general, the average scores in the thinking styles of teachers were: executive, legislative and judicial, in order from the highest to the lowest.<sup>29</sup>

Descriptive analysis of the research variables showed that interactive management style with an average score of 3.03 has the highest score and non-interventionist management style with an average score of 2.72 has the lowest score. In addition, the average interventionist management style score was 2.85. Consequently, based on the average scores of class management style and the distribution of scores around the interactive point,

it is evident that most of the respondents to this study used an interactive approach to class management.<sup>30</sup> According to the findings of Dijic's study, when teachers employ an interactive classroom management style, students make greater academic progress, whereas when teachers employ an interventionist style, students make less progress.<sup>4</sup>

Part of the findings show that there is a significant correlation between classroom management and legislative thinking style. In the review of the research background, no research was found in which the relationship between these two variables was studied.

The results of the research data showed that there is a substantial association between the key research variables, thinking styles and classroom management style. Regarding the explanation of these results, it can be noted that a person with a legislative thinking style tends to create, innovate and design and accomplishes things in his own manner, while a person with a judgemental thinking style likewise tends to criticize and evaluate people and things. Few research also explored the association between management style and self-efficacy, motivation for growth and teachers' personality qualities. The findings of this research demonstrated a substantial correlation between the studied factors and the class management style. The findings demonstrated that thinking style can 17% more accurately predict class management style. The findings of the research show that among the functions of thinking styles, only judicial and legislative thinking style had the power to predict classroom management among the teachers at X Vocational College of China. In the analysis of B values, it was also found that judicial thinking style has the greatest influence ( $B = -0.318$ ). Meanwhile legislative thinking style was the second most influential factor ( $B = -0.110$ ). In the present study, thinking styles were able to increase the predictive power of classroom management. In explaining this finding, it can be said that people with a judicial thinking style focus more on judging and evaluating people and things. Also, being in the second place of legislative thinking style shows the importance and validity of creativity from the teachers' point of view; because a person with a legislative thinking style enjoys doing things that require creativity and design. This finding is supported by the few research.<sup>31,32</sup>

The Fisher's Z test was employed in this study to compare the classroom management and thought processes of male and

female teachers. The findings showed that, for male and female teachers, the estimated Fisher's Z is smaller than the critical value of 1.96, suggesting that, at the 95% level of confidence, the difference between the correlation coefficients of these two groups is not statistically significant. The findings of this study are congruent with those of study, which found that, other from the legislative thinking style, there is no discernible difference in other thinking styles according to gender. They also looked into the connection between the thinking styles of school principals and their findings revealed no discernible gender differences.<sup>33</sup> Additionally, the findings of this study supported the findings of Martin *et al.*, that there was no significant difference between male and female teachers' approaches to classroom management.<sup>34</sup>

Considering that teachers are the main influential element in the teaching-learning process of schools and according to the results obtained from the present research, it can be said that the legislative thinking style, among others, plays an important and effective role in the management of teachers' classrooms. Based on this, it is necessary and important to pay attention to the thinking styles of school teachers. The ultimate goal of classroom management is to cultivate students. Improving the learning process and changing students' behavior leads to improving their educational success and academic progress; Therefore, the planners, managers and educators of the educational system should strive to improve and develop the ways of teaching, thinking and classroom management. Encourage teachers to carry out innovative classroom teaching and management. In addition, better class management is also to better improve the quality of students.

### Limitations and Future Research Directions

The small domain of this research in X Vocational College of China limits our ability to generalize the findings to all schools in the country. Another limitation is including only the teachers at X Vocational College of China; therefore, the results obtained cannot be generalized to other schools.

This is the first study in the field of examining the relationship between teachers' thinking styles and classroom management and it is limited in scope, therefore, for strategic planning, better classroom management and improving the quality of students, it is suggested to further expand the scope: Considering that the purpose of this research was to investigate the relationship between thinking styles and classroom management of teachers of X Vocational College of China, in future researches, the effect of these factors as independent variables on: learning styles, teachers' personality characteristics could be investigated. It is also suggested to conduct research in a wider dimension and with more statistical samples at the national or regional level in order to provide more generalizable results.

### CONCLUSION

This research shows that teachers' thought patterns directly influence how they handle their classroom control procedures. Research findings show that teachers display executive thinking style patterns most often with legislative and judicial thinking styles at lower frequencies. Teachers who think using executive methods tend to fulfil established procedures and accomplish tasks with efficiency thus making this style appropriate for formal educational contexts. Academic literature indicates that interactive management style is the most applied approach for school classroom management, yet interventionist and non-interventionist styles also have notable usage frequencies. Research reveals teachers who use interactive classroom management gain better student academic outcomes.

A strong relationship emerged between teaching styles and classroom discipline approaches and legislative and judicial thinking patterns demonstrated notable predictive power. Instructors who display a legislative thinking style demonstrate innovation skills that empower them to create new methods for classroom management. Robust evidence shows that the critical evaluation traits of judicial thinking styles directly impact classroom environments.

The research study determined that thinking styles alongside classroom management methods do not show any major variations between different genders since these characteristics depend more on an individual's personality and professional routines.

The implications of these findings are substantial. To enhance teaching effectiveness and student outcomes, educational systems should focus on fostering creativity, critical thinking and adaptability in teachers. By encouraging legislative thinking and innovative classroom practices, educators can improve the quality of teaching and learning. Moreover, training programs and professional development initiatives should aim to equip teachers with diverse management strategies to adapt to varying classroom needs and dynamics. Ultimately, this study underscores the importance of aligning teachers' thinking styles with effective classroom management practices to promote better academic achievement and behavioral development in students.

### ACKNOWLEDGEMENT

The Researcher would like to thank the Special Task of Humanities and Social Science Research of Ministry of Education for financial support (20JDSZ3160).

### CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

## FUNDING

This work is supported by “The 2025 Supply-Demand Docking Employment Education Project of the Ministry of Education of China: Construction of a Collaborative Training Internship Base for ‘Ideological and Political Education + Digital Public Welfare’ Social Work Talents”, partially by the “Special Task of Humanities and Social Science Research of the Ministry of Education, grant number 20JDSZ3160”, funded by the horizontal project “Corporate Culture Construction and High-tech Construction Services”, and “Hangzhou Philosophy and Social Sciences Planning Project Base Project (2023JD51)”.

## ABBREVIATIONS

**IQ:** Intelligence quotient; **SPSS:** Statistical Package for the Social Sciences; **ANOVA:** Analysis of Variance; **R:** Multiple correlation coefficient; **R<sup>2</sup>:** Coefficient of determination.

## AUTHOR CONTRIBUTIONS

Conceptualization, Weiguo Hu; methodology, Zi Ye; software, Chou Chen; validation, Chan Li; writing-original draft preparation, Haijun Zhou.; writing-review and editing, Ruiyang Chen.

## ETHICAL APPROVAL

This article does not contain any studies with human participants or animals performed by any of the authors.

## SUMMARY

Research investigates correlations between thinking styles of instructors at X Vocational College of China and their implemented classroom management strategies. The executive thinking style emerges as the most prevalent choice among teachers with legislative and judicial styles following behind. Educational environments commonly use executive thinking as teachers primarily prioritize rule compliance and operational task execution. When it comes to classroom management the interactive teaching method dominates while showing superior educational outcomes over interventionist and non-interventionist methods. Research data showed that effectiveness in classroom management depends significantly on whether teachers apply legislative or judicial thinking styles because legislative approaches encourage creativity and innovation, but judicial methods focus on critical evaluation. Results demonstrated equal distribution of thinking styles and management approaches across genders since these elements primarily originate from personal and professional characteristics rather than gender. This research emphasizes that the education field must dedicate its resources toward developing teachers' critical thinking abilities while improving their classroom management competencies. School systems that integrate

effective management strategies with thinking styles demonstrate improved teaching quality together with better student behavior and academic achievement results.

## REFERENCES

1. Konti F. Teachers and student's perceptions towards teachers' classroom management applications in primary schools. *Procedia Soc Behav Sci.* 2011; 15: 4093-97. doi: 10.1016/j.sbspro.2011.04.503.
2. Amini M, Rahimi H, Gholami Z. The study of classroom management styles of faculty members in Kashan University of Medical Sciences. *Strides Dev Med Educ.* 2015; 12(1): 38-48.
3. Sadeghi M, Shakiba E, Hamzei Z. Evaluation of the relationship between classroom management styles and responsibility of dental students during COVID-19 pandemic. *J Med Educ Dev.* 2022; 14(44): 52-8.
4. Djigic G, Stojilkovic S. Classroom management styles, classroom climate and school achievement. *Procedia Soc Behav Sci.* 2011; 29(1): 819-28. doi: 10.1016/j.sbspro.2011.11.310.
5. Marzano RJ, Marzano JS. The key to classroom management. *Educ Leadersh.* 2003; 61(1): 6-13.
6. Martin NK, Yin Z, Baldwin B. Classroom management training, class size and graduate study: do these variables impact teachers' beliefs regarding classroom management style? Paper presented at the annual meeting of the American Educational Research Association, San Diego; 2006.
7. Wolfgang CH, Glickman CD. Solving discipline problems: strategies for classroom teachers: Eric. Vols. 250-251, ISBN: ISBN-0-205-06888-X. Boston: College and Professional Publications; 1986.
8. Adeyemo SA. The relationship between effective classroom management and students' academic achievement. *Eur J Educ Stud.* 2012; 4(3): 367-81.
9. Tal C. Case studies to deepen understanding and enhance classroom management skills in preschool teacher training. *Early Childhood Educ J.* 2010; 38(2): 143-52. doi: 10.1007/s10643-010-0395-z.
10. Hepburn L, Beamish W. Influences on proactive classroom management: views of teachers in government secondary schools, Queensland. *Improv Sch.* 2020; 23(1): 33-46. doi: 10.1177/1365480219886148.
11. Akbari T, Javidpour M, Kazemi S, Omidvar A. The mediating role of classroom atmosphere in relationship between teachers' classroom management styles in students' educational engagement of University of Medical Science. *Akhlagh-E Zisti.* 2021; 10(35): 1-14.
12. Akman Y. The role of classroom management on confidence in teachers and educational stress. *Int J Contemp Educ Res.* 2022; 7(1): 335-45. doi: 10.33200/ijcer.687109.
13. Zhang L. Thinking Styles and big Five Personality traits revisited. *Educ Psychol.* 2006; 22(1): 17-31.
14. Bernardo AB, Zhang LF, Callueng CM. Thinking styles and academic achievement among Filipino students. *J Genet Psychol.* 2002; 163(2): 149-63. doi: 10.1080/00221320209598674, PMID 12095086.
15. Ogaboh AA, Ashibi NI. Teachers' leadership style, classroom variables and students' academic performance in Calabar Metropolis, Nigeria. *Educ Res.* 2010; 1(6): 178-85.
16. Babaei M. Deep concern about classroom management and the relationship between increasing communication skills of students and new educational ideas. *Aust J Teach Educ.* 2014; 7(1): 64-49.
17. Stephen K. Do thinking styles of entrepreneur's matter in innovation. *J Glob Bus Technol.* 2008; 4(2): 24-33.
18. Keras K. From Sternberg, a new take on what makes kids Tufts – worthy. *Tufts Daily.* November 2005.
19. Zhang LF, Sternberg RJ. Are learning Approaches and Thinking styles Related? A study in two Chinese populations. *J Psychol.* 2000; 134(5): 469-89. doi: 10.1080/00223980009598230, PMID 11034129.
20. Soheili F, Alizadeh H, Murphy JM, Bajestani HS, Ferguson ED. Teachers as leaders: the impact of Adler-Dreikurs classroom management techniques on students' perceptions of the classroom environment and on academic achievement. *J Individ Psychol.* 2015; 71(4): 440-61. doi: 10.1353/jip.2015.0037.
21. Ching YS, Chaun LW. The relationship among creative, critical thinking and thinking styles in Taiwan high school students. *J Instr Psychol.* 2004; 31: 33-45.
22. Lobart YS, Chann L. The Relationship among creative, critical Thinking and Thinking Style in Taiwan Itinght School Students. *J Instr Psychol.* 2004; 31(1): 33-45.
23. Zhang LF. Thinking styles and academic achievement among Filipino students. *J Psychol.* 2002; 163(2): 69-149.
24. Srivastava S, Childers ME, Baek JH, Strong CM, Hill SJ, Warsett KS, *et al.* Toward interaction of affective and cognitive contributors to creativity in bipolar disorders: A controlled study. *J Affect Disord.* 2010; 125(1-3): 27-34. doi: 10.1016/j.jad.2009.12.018.
25. Wang MC, Geneva DH, Herbert JW. Toward a knowledge base for school learning. *Rev Educ Res.* 1993; 63(3): 249-94.

26. Yilmaz D. Primary school teacher candidates' teacher self-efficacy beliefs and self-efficacy beliefs in mathematics and first reading and writing [masters thesis]. Kocaeli: Kocaeli University Social Sciences Institution; 2019.
27. Adeyemo SA. Background and classroom correlates of students' achievement in physics. *Int J Educ Res Technol*. 2012; 1: 25-34.
28. Sternberg RJ, Wagner RK. Thinking styles Inventory. Unpublished test. Yale University; 1992.
29. Sternberg RJ. Mental self-government: A Theory of Intellectual styles and their development. *Hum Dev*. 1988; 31(4): 197-224. doi: 10.1159/000275810.
30. Aali A, Amin-Yazdi A. The effect of teacher traits on classroom management style. *Educ Psychol Stud*. 2008; 24(1): 103-5.
31. Cheng L, Wu D, Cao JW. Determinants of preschool teachers' knowledge-sharing behavior from a thinking style perspective. *Behav Sci (Basel)*. 2023; 13(3): 230. doi: 10.3390/bs13030230, PMID 36975254.
32. Kars S, Akyurek G. Thinking styles in occupational therapy students. *Psychol Sch*. 2023; 4(3): 1-12.
33. Poorkyani M, Shahilo F. Examine the relation between Thinking Styles and Time Traps in Principals. *Tadbir Mon Mag*. 2010; 21(216): 60-4.
34. Martin NK, Baldwin B. An examination of the construct validity of the Inventory of Classroom Management Style. Paper presented at the Annual Meeting of the Mid-South Educational Research Association, New Orleans, LA; 1993.

**Cite this article:** Hu W, Ye Z, Chen C, Chen W, Li C, *et al.* Investigate of the Relationship between Thinking Styles and Classroom Management of the Teachers of Vocational Colleges. *Indian J of Pharmaceutical Education and Research*. 2025;59(4):1277-84.