



Educational climate as a psychosocial context for creative self-concept among university students: A mixed-methods study

Rahmat Aziz¹, Mukhibat Mukhibat², Agus Zaenul Fitri³, Nurhasanah Nurhasanah⁴ and Syarifuddin Syarifuddin⁵

¹Department of Psychology, Faculty of Psychology, Universitas Islam Negeri Maulana Malik Ibrahim Malang, Indonesia (ORCID: 0000-0002-1094-0501)

²Department of Islamic Education Management, Faculty of Islamic Education, Universitas Islam Negeri Kiai Ageng, Indonesia (ORCID: 0000-0003-0126-0210)

³Department of Islamic Education Management, Faculty of Islamic Education, Universitas Islam Negeri Sayyid Ali Rahmatullah Tulungagung, Indonesia (ORCID: 0000-0003-2776-0432)

⁴Department of Islamic Elementary School Teacher Education, Universitas Islam Ahmad Dahlan Sinjai, South Sulawesi, Indonesia (ORCID: 0000-0002-1589-3927)

⁵Department of Madrasah Ibtidaiyah Teacher Education, Sekolah Tinggi Ilmu Qur'an Amuntai, South Kalimantan, Indonesia (ORCID: 0000-0003-4417-9332)

Corresponding Author: Rahmat Aziz, azira@uin-malang.ac.id

Submitted: 1 December 2025 Revised: 14 February 2026 Accepted: 4 March 2026

Abstract

This study examines educational climate as a psychosocial context associated with university students' creative self-concept in everyday learning environments. It explores the relationships between learning-oriented, performance-oriented, and passive memorization-oriented educational climates and two dimensions of creative self-concept: creative self-efficacy and creative personal identity. A mixed-methods design was employed. Quantitative data were collected from 780 undergraduate students across 25 universities in Indonesia using standardized questionnaires and analysed through descriptive statistics, Pearson correlations, and multiple regression analyses. Qualitative data were obtained from open-ended responses on students' learning experiences and analysed using reflexive thematic analysis. The findings indicate that a learning-oriented educational climate is positively associated with both creative self-efficacy and creative personal identity, whereas performance-oriented and passive memorization-oriented climates show limited associations. Qualitative findings further reveal that learning-oriented climates are experienced through ideational autonomy, meaningful cognitive challenge, and relational support accompanied by constructive feedback, which make educational climate psychologically salient for students' creative self-perceptions. Overall, the study highlights educational climate not merely as a background condition but as a psychosocial and pedagogical context closely related to students' creative self-concept, contributing to a nuanced understanding of creativity in higher education.

Keywords: Creative self-concept; Creative self-efficacy; Educational climate; Higher education; Psychosocial context

1. Introduction

In higher education, creativity is increasingly understood as an outcome of everyday learning experiences rather than a rare individual talent. Universities are expected not only to transmit knowledge, but also to cultivate learning environments that encourage students to explore ideas, engage in meaningful thinking, and develop confidence in their creative capacities. Within this perspective, creativity emerges through interaction with pedagogical practices that value inquiry, reflection, and growth (Corrêa & Mourão, 2025; Dima et al., 2026; Habib et al., 2025). Students' creative development is therefore closely tied to how learning is structured, experienced, and supported in the classroom (Jensen, 2025; López et al., 2024). This shift highlights the importance of examining creativity as a pedagogical phenomenon shaped by educational conditions, rather than solely as a personal characteristic residing within individual students.

One important contextual factor associated with students' learning experiences is educational climate, which reflects how teaching practices, instructional values, and learning expectations are perceived by students. Educational climate captures the extent to which learning environments emphasize understanding, exploration, and participation, as opposed to performance comparison or passive memorization (González-Berruga, 2025; Huhemandula et al., 2025; Wang et al., 2023). When learning is framed as a process of growth and inquiry, students may feel encouraged to participate actively, engage with challenging tasks, and explore alternative ways of thinking (Li & Li, 2025; Tshering et al., 2024; Varela, 2021). Thus, understanding the educational climate provides a foundation for exploring how learning settings enable or constrain students' sense of creative capability.

Within pedagogical contexts, creativity is increasingly examined through students' creative self-

concept, which refers to how learners perceive themselves as creative in academic settings. Rather than focusing solely on creative performance, this perspective emphasizes students' beliefs and self-understandings that develop through everyday learning experiences. Creative self-concept is commonly reflected in students' confidence in generating ideas and the extent to which creativity becomes part of their academic identity (Beghetto & Karwowski, 2017; Karwowski et al., 2018). These internal creative perceptions are shaped gradually through interaction with instructional practices, feedback, and learning expectations (Benedek et al., 2025; Ishiguro et al., 2025). Viewing creativity through this lens allows educators to better understand how pedagogical environments influence not only what students produce, but how they come to see themselves as creative learners.

Although previous studies have highlighted the importance of supportive learning environments for fostering creativity, important gaps remain in understanding how educational climate is associated with students' creative self-concept in higher education. Much of the existing research has emphasized creativity as performance or observable outcomes, with less attention to students' internal creative beliefs and identities that develop through learning experiences (He & Zhang, 2025; Muñoz-Salinas et al., 2025). In addition, educational climate and creativity are often examined as related variables without sufficiently explaining the pedagogical processes through which classroom practices influence students' creative development (Jensen, 2025; Mangion et al., 2025) as a result, there is limited pedagogical and psychosocial understanding of how learning-oriented educational climates are enacted in everyday teaching and how they contribute to students' creative confidence and identity formation.

While prior studies have established associations between educational climate and student creativity, much of this literature has approached educational climate primarily as a contextual predictor of creative outcomes rather than as a psychosocial experience that is interpreted and internalized by students (Fang & Chang, 2023; Li & Li, 2025; Wang et al., 2023). As a result, educational climate has often been examined through variable-based relationships, with less attention to the ways in which everyday pedagogical practices, interaction patterns, and evaluative expectations make learning-oriented values psychologically meaningful to students. Rather than positioning creativity as a function of institutional conditions alone, this study highlights how learning-oriented educational values become psychologically meaningful to students through experiences of autonomy, cognitive challenge, and supportive interaction (Das et al., 2026; Kalmakov, 2026). By foregrounding creative self-concept rather than creative performance, the present study shifts attention toward the internalization processes through which pedagogical environments contribute to students' confidence in their creative capacities and to the incorporation of creativity into their academic self-understandings.

Methodologically, the study responds to this gap through a mixed-methods design that combines large-scale quantitative analysis with in-depth qualitative exploration. Existing higher education research has shown that learning experiences characterized by engagement, higher-order learning, collaborative interaction, and student-faculty contact are positively associated with students' creative self-concept (Álvarez-Huerta et al., 2021), while broader reviews likewise indicate that pedagogical strategies and interactive learning environments are central to creativity development in universities (Corrêa & Mourão, 2025). However, quantitative evidence alone is often insufficient to explain how these conditions are experienced by students in everyday teaching and learning contexts. Integrating qualitative accounts therefore makes it possible to interpret statistical associations in light of students' lived experiences and to identify the concrete pedagogical mechanisms through which educational climate may support creative self-efficacy and creative personal identity, including opportunities for ideational autonomy, meaningful cognitive challenge, and relationally supportive feedback.

Building on these considerations, the present study aims to examine the relationship between educational climate as a psychosocial context and creative self-concept among university students, with particular attention to creative self-efficacy and creative personal identity. Adopting a mixed-methods approach, the study seeks not only to determine whether educational climate is

associated with students' creative self-concept, but also to illuminate how learning-oriented values are enacted and interpreted in everyday higher education settings. By integrating students' perceptions of educational climate with their accounts of lived learning experiences, the study is expected to provide a more pedagogically grounded understanding of how university environments can intentionally foster students' creative confidence and identity.

2. Method

2.1. Research Design

The study employed an explanatory sequential mixed-methods design, in which quantitative data were collected and analysed first, followed by qualitative data to further explain and interpret the statistical results (Creswell & Clark, 2018). In the quantitative phase, the study examined the relationships between learning-oriented, performance-oriented, and passive memorization-oriented educational climates and students' creative self-efficacy and creative personal identity. The subsequent qualitative phase elaborated these findings by exploring students' lived learning experiences. Through open-ended responses, students described how pedagogical practices, classroom interactions, and relational support contribute to the development of creative confidence and identity. The integration of numerical and narrative strands was guided by the assumption that creativity represents both a measurable psychological disposition and a pedagogically constructed experience. By sequentially connecting statistical patterns with experiential accounts, the study aimed to generate findings that are both empirically grounded and pedagogically meaningful, offering a comprehensive understanding of how educational climate operates as a psychosocial mechanism that may foster or constrain creativity in higher education.

2.2. Participants

The study involved 780 undergraduate students drawn from 25 public higher education institutions across the western, central, and eastern regions of Indonesia. Participants were active students who had completed at least three semesters and were therefore familiar with everyday university learning activities. The sample consisted of 201 male students (25.8%) and 579 female students (74.2%), with a mean age of 20.53 years ($SD = 1.62$). This gender distribution reflects the broader demographic pattern of student enrolment in Islamic higher education institutions in Indonesia, where female participation is typically more prominent. The diversity of institutional backgrounds provided a broad context for examining students' perceptions of educational climate and creative self-concept.

Participants were recruited using a convenience sampling strategy through online questionnaire distribution. Participation was entirely voluntary, and respondents were informed that they could withdraw at any time without consequence. All responses were collected anonymously to ensure confidentiality and encourage honest reporting. The use of convenience sampling was guided by considerations of accessibility, geographic dispersion of institutions, and time efficiency, given the national scope of the study. Although this sampling approach does not allow for full population-level generalisation, the relatively large sample size and representation from multiple institutions provide meaningful descriptive and analytical value. The combination of quantitative survey data and qualitative open-ended responses further strengthened the study's capacity to capture patterns and variations in students' educational experiences across higher education contexts.

The qualitative findings provide an in-depth account of how educational climate is enacted and experienced by students in everyday learning situations. Of the 780 open-ended responses initially reviewed, empty ($n = 13$), overly brief and analytically insufficient ($n = 63$), and unrelated responses ($n = 86$) were excluded, resulting in 618 responses retained for analysis. All retained responses were subjected to inductive thematic analysis. Although both supportive and constraining teaching practices were identified during coding, the present article focuses on themes describing pedagogical conditions that foster creativity, in line with the study's research objectives. Rather than presenting isolated narratives, the analysis identifies shared patterns of meaning that illuminate the mechanisms underlying the quantitative relationships. Participant

quotations are identified using pseudonymous numeric codes (e.g., P124) to protect confidentiality.

2.3. Data Collection

Students' creative self-concept was assessed using the Short Scale of Creative Self [SSCS] developed by Karwowski et al. (2018). The SSCS consists of 11 items rated on a five-point Likert scale and measures two related but conceptually distinct dimensions: Creative Self-Efficacy (CSE; 6 items) and Creative Personal Identity (CPI; 5 items, including one item reflecting self-rated creativity). Creative Self-Efficacy reflects individuals' confidence in their ability to generate original ideas and effectively solve problems requiring creative thinking, whereas Creative Personal Identity captures the extent to which creativity is perceived as an important and defining component of one's self-concept. Initial validation studies reported satisfactory internal consistency, with Cronbach's α of .84 for CSE and .83 for CPI. In the present study, the SSCS was used to capture students' internal creative self-beliefs as relatively stable dispositions shaped through everyday academic experiences in higher education.

Educational climate was measured using the Educational Climate Inventory (ECI) developed by Krupat et al. (2017). The final instrument consists of 20 items rated on a four-point Likert scale and comprises three subscales identified through factor analysis: *centrality of learning and mutual respect* (10 items), *competitiveness and stress* (6 items), and *passive learning and memorization* (4 items). The first subscale assesses the extent to which the educational environment promotes intellectual growth, supportive faculty-student relationships, and mastery-oriented learning; the second captures perceptions of a performance-oriented climate characterized by competition, stress, and concern with appearance of competence; and the third measures the degree to which learning is experienced as passive and focused on memorization rather than active knowledge construction. Higher total scores indicate a more learning- or mastery-oriented climate. Previous validation studies reported satisfactory internal consistency for the three factors ($\alpha = .88, .80, \text{ and } .71$, respectively) and $\alpha = .95$ for the total scale.

In addition to the standardized questionnaires, qualitative data were collected through three open-ended questions designed to explore students' learning experiences related to creativity. These questions invited students to describe (a) learning activities that supported or hindered their creativity, (b) lecturers' pedagogical roles in fostering creative engagement, and (c) institutional practices perceived as encouraging or constraining creative development. The open-ended responses allowed students to articulate their experiences in their own words and provided contextual insights into how educational climate is enacted in everyday teaching and learning practices. These qualitative data were used to complement and explain the quantitative findings.

2.4. Data Analysis

Quantitative data were analysed using a combination of descriptive and inferential statistical techniques. Descriptive statistics were first employed to summarise students' perceptions of educational climate and levels of creative self-concept, including creative self-efficacy and creative personal identity. These analyses provided an overview of central tendencies and variability across the measured variables. Subsequently, multiple regression analyses were conducted to examine the extent to which different dimensions of educational climate predicted students' creative self-efficacy and creative personal identity. Each dimension of educational climate was entered simultaneously into the regression models to assess its unique contribution to the outcome variables. Model fit was evaluated using coefficients of determination and statistical significance levels to identify meaningful predictive relationships.

Prior to conducting the regression analyses, a series of assumption checks were performed to ensure the appropriateness and robustness of the statistical procedures. The normality of residuals was examined to confirm that the distribution approximated a normal pattern. Linearity between predictor and outcome variables was assessed through inspection of scatterplots, indicating linear relationships. Homoscedasticity was evaluated by examining residual plots to ensure that variance

was evenly distributed across predicted values. In addition, multicollinearity among predictors was assessed using variance inflation factor [VIF] values, which were within acceptable thresholds. These checks indicated that the data met the assumptions required for multiple regression analysis, supporting reliable interpretation of the results.

Qualitative data obtained from open-ended responses were analysed using thematic analysis following the reflexive framework proposed by Braun and Clarke (2019, 2021). The analysis began with familiarisation through repeated reading of the responses, followed by initial coding to capture meaningful features related to students' learning experiences and perceptions of pedagogical practices. Codes were then examined and organised into broader themes that reflected recurring patterns across the dataset. Themes were reviewed, refined, and defined to ensure coherence and relevance to the research focus. Integration of quantitative and qualitative findings occurred at the interpretation stage, allowing statistical relationships to be contextualised and explained through students' narratives, thereby providing a comprehensive understanding of how educational climate shapes creative self-concept in higher education.

3. Result

The results section presents the findings of the study by integrating quantitative and qualitative evidence to provide a comprehensive account of how educational climate is associated with students' creative self-concept. In line with the mixed-methods design, the results are organised into two complementary strands. Quantitative findings are reported first to describe patterns of students' perceptions of educational climate and creative self-concept and to examine the relationships among key variables. These numerical patterns are then elaborated through qualitative findings that capture students' lived learning experiences and illustrate how educational climate is enacted through everyday pedagogical practices. This structure allows the results to address not only the strength of observed associations, but also the contextual processes underlying them.

3.1. Quantitative Findings

The quantitative findings provide an empirical overview of students' perceptions of educational climate and creative self-concept, followed by analyses examining the relationships between these constructs.

Table 1

Descriptive Statistics of Educational Climate and Creative Self-Concept

<i>Variable</i>	<i>Mean</i>	<i>SD</i>
1. Learning-oriented educational climate	34.12	4.48
2. Performance-oriented educational climate	17.09	3.19
3. Passive memorization-oriented educational climate	9.74	2.81
4. Creative self-efficacy	17.74	3.86
5. Creative personal identity	14.56	3.46

Note. Performance-oriented and passive memorization-oriented educational climate scores were reverse-coded so that higher scores consistently reflected a more learning-oriented educational climate.

The quantitative findings provide an empirical overview of students' perceptions of educational climate and creative self-concept. As shown in Table 1, the learning-oriented educational climate obtained the highest mean score ($M = 34.12$, $SD = 4.48$), substantially exceeding the performance-oriented ($M = 17.09$, $SD = 3.19$) and passive memorization-oriented ($M = 9.74$, $SD = 2.81$) dimensions. Considering the possible score range of the learning-oriented subscale, this value indicates a relatively strong endorsement of mastery-focused and dialogical learning practices. The comparatively lower means for the other two dimensions, even after reverse coding, suggest that competitive and recall-based instructional approaches were perceived as less dominant characteristics of the academic environment. The moderate dispersion across dimensions further indicates meaningful individual differences in students' perceptions of educational climate.

Regarding creative self-concept, students reported higher levels of creative self-efficacy ($M = 17.74$, $SD = 3.86$) than creative personal identity ($M = 14.56$, $SD = 3.46$). This pattern suggests that confidence in one's creative abilities may develop more readily within instructional settings than the deeper integration of creativity into personal identity. The variability observed in both constructs indicates that creative beliefs are not uniformly distributed across students, implying that contextual support does not automatically translate into identity-level consolidation. Together, these descriptive patterns provide an empirical foundation for subsequent correlational and regression analyses examining how specific dimensions of educational climate contribute to distinct aspects of creative self-concept.

Table 2

Pearson Correlations among Educational Climate and Creative Self-Concept Variables

Variable	1	2	3	4	5
1. Learning-oriented educational climate	-				
2. Performance-oriented educational climate	.16**	-			
3. Passive memorization educational climate	-.09*	.62**	-		
4. Creative Self-Efficacy	.31**	.17**	.06	-	
5. Creative Personal Identity	.30**	.17**	.07*	.83**	-

Note. $p < .05^*$, $p < .01^{**}$

Pearson correlation analyses revealed that learning-oriented educational climate was moderately and positively associated with both creative self-efficacy and creative personal identity, indicating that students who experienced stronger learning-oriented values tended to report higher levels of creative self-beliefs and creative identity. In contrast, performance-oriented and passive memorization-oriented climates demonstrated only weak associations with creative self-concept indicators. Creative self-efficacy and creative personal identity were strongly correlated, supporting their conceptual relatedness while still justifying their separate examination. Overall, this pattern suggests that creativity-related self-concept is more closely linked to the presence of learning-oriented educational values than to the mere absence of performance pressure or passive learning practices.

Prior to conducting the regression analyses, several assumption checks were performed to ensure the appropriateness of the statistical procedures. The distribution of residuals was examined and found to approximate normality. Linearity between the predictor and outcome variables was assessed through scatterplots, indicating a linear pattern of relationships. Homoscedasticity was evaluated by inspecting the residual plots, which showed no systematic variance patterns. In addition, multicollinearity was assessed using variance inflation factor values, all of which were below the commonly accepted threshold, suggesting no serious multicollinearity issues. Taken together, these results indicated that the data met the assumptions required for regression analysis.

Table 3

Multiple Regression Analyses Predicting Creative Self-Efficacy and Creative Personal Identity

Predictor	Self-Efficacy B	p	Personal Identity B	p
Learning-oriented educational climate	0.22	< .001	0.19	< .001
Performance-oriented educational climate	0.12	.017	0.08	.108
Passive memorization-oriented educational climate	0.03	.537	0.02	.682
R ²	.111		.097	
F (3, 776)	32.29	< .001	27.85	< .001
N	780		780	

Note. B = unstandardized regression coefficient. Performance-oriented and passive memorization-oriented climates were reverse-coded so that higher scores reflect a more learning-oriented educational climate. $N = 780$.

Multiple regression analyses revealed a consistent pattern across both indicators of creative self-concept. Learning-oriented educational climate emerged as the strongest and most reliable

predictor of students' creative self-efficacy and creative personal identity. In contrast, performance-oriented educational climate showed only a small and unstable contribution, remaining significant for creative self-efficacy but losing significance when predicting creative personal identity. Passive memorization-oriented climate did not demonstrate a meaningful contribution to either outcome. Overall, educational climate explained a greater proportion of variance in creative self-efficacy than in creative personal identity, indicating that contextual learning values are more directly associated with students' confidence in their creative abilities than with the deeper integration of creativity into their self-concept. These findings suggest that the presence of learning-oriented educational values is more critical for fostering student creativity than merely reducing performance pressure or passive learning practices. Although the explained variance was modest, the findings are consistent with prior educational research, indicating that creative self-concept is shaped by multiple interacting factors beyond educational climate alone.

3.2. Qualitative Findings

The qualitative findings elaborate the quantitative results by illuminating how students experience educational climate in everyday learning contexts. Through inductive thematic analysis of open-ended responses, three overarching themes were identified that explain the pedagogical and relational mechanisms underlying the development of creative self-concept.

3.2.1. Theme 1: Space for exploration and ideational autonomy

This theme illustrates how creativity was fostered through learning environments that provided students with space for exploration and autonomy in generating ideas. Rather than experiencing autonomy merely as freedom of choice, students described it as a pedagogical condition that legitimised experimentation, uncertainty, and the development of ideas over time. Such spaces enabled students to move beyond fear of evaluation and engage more actively in creative thinking. Two interrelated subthemes highlight how ideational autonomy was enacted in everyday learning contexts.

Subtheme 1.1: Autonomy as Permission to Explore. Students consistently described that creativity emerged when lecturers granted permission to explore ideas, topics, and approaches without prescribing a single correct pathway. Assignments that allowed flexibility encouraged students to experiment with different perspectives and reduced dependence on predefined models.

The lecturer gave us the freedom to choose topics and approaches for assignments, which made me more confident to try different ideas. (Participant.124)

We were encouraged to explore ideas without being told which one was right. (Participant.165)

Having the chance to decide how to approach tasks made me feel more confident to experiment. (Participant.203)

These accounts indicate that autonomy functioned as an invitation to engage in exploratory thinking. By allowing multiple approaches and outcomes, lecturers repositioned creativity as an acceptable and valued component of academic work, supporting students' willingness to engage in ideational risk-taking.

Subtheme 1.2: Autonomy as psychological safety for incomplete ideas. Beyond freedom of choice, students emphasised that autonomy was experienced as psychological safety that legitimised tentative and unfinished ideas. Being allowed to express ideas that were still developing reduced fear of making mistakes and encouraged participation in creative dialogue.

At first I was unsure, but I realised it was okay to share ideas that were not perfect. (Participant.280)

Our ideas were listened to even when they were still developing. (Participant.304)

Class discussions made me feel safe to express ideas without fear of being wrong. (Participant.155)

These experiences suggest that ideational autonomy operates not only as structural flexibility, but also as emotional protection. By normalising uncertainty and incompleteness, lecturers created

learning spaces where creative thinking could evolve through dialogue rather than premature evaluation.

These subthemes demonstrate that space for exploration and ideational autonomy foster creativity by legitimising experimentation and reducing fear of failure. Autonomy functioned both as permission to explore and as psychological safety for developing ideas, enabling students to engage more confidently in creative processes. Such experiences contribute directly to the strengthening of creative self-efficacy by reinforcing students' belief in their capacity to generate and develop original ideas.

3.1.2. Theme 2: Meaningful cognitive challenge

This theme captures how creativity was fostered through learning activities that challenged students cognitively in ways that went beyond routine academic demands. Rather than perceiving challenge as pressure or difficulty alone, students described meaningful cognitive challenge as an invitation to think deeply, integrate knowledge, and generate original responses. Two interrelated subthemes illustrate how such challenges were experienced in everyday learning contexts.

Subtheme 2.1: Challenge beyond memorisation. Students frequently emphasised that creativity emerged when learning tasks moved beyond memorisation and reproduction of material. Assignments that did not prescribe a single correct answer encouraged students to explore multiple perspectives and construct their own solutions, positioning thinking itself as a valued academic activity.

The assignments did not have a single correct answer; we had to find our own creative solutions. (Participant.386)

The lecturer's questions pushed us to explain our reasoning, not just repeat what was in the slides. (Participant.123)

I felt challenged to think differently because there was no model answer to follow. (Participant.598)

These accounts indicate that cognitively open tasks functioned as catalysts for creative engagement. By disrupting habitual patterns of recall-based learning, lecturers prompted students to engage in analysis, synthesis, and idea generation, thereby strengthening confidence in their ability to think creatively within academic contexts.

Subtheme 2.2: Challenge through real-world relevance. Beyond openness, students highlighted the importance of challenges grounded in real-world issues and authentic contexts. Learning activities connected to social realities, professional problems, or everyday experiences were perceived as particularly stimulating, as they required students to apply knowledge creatively rather than treat it as abstract information.

Working on real-life case studies pushed me to look for new and original ideas. (Participant.212)

The tasks felt meaningful because they were related to problems outside the classroom. (Participant.512)

When assignments were connected to real situations, I became more motivated to think creatively. (Participant.364)

These experiences suggest that relevance amplifies cognitive challenge by making learning personally and socially meaningful. Authentic tasks encourage students to integrate theory with practice, evaluate alternative solutions, and recognise creativity as a practical and purposeful academic capacity rather than an abstract ideal.

These subthemes demonstrate that meaningful cognitive challenge is not defined by task difficulty alone, but by the quality and orientation of intellectual demands placed on students. Challenges that move beyond memorisation and connect learning to real-world contexts create conditions for deeper creative engagement. Such experiences contribute to the development of students' creative self-efficacy by reinforcing their belief that they can generate original ideas and apply knowledge flexibly in complex situations.

3.1.3. Theme 3: Relational support and constructive feedback

This theme highlights the relational dimension of educational climate, emphasising how supportive lecturer–student interactions and constructive feedback shape students’ creative engagement. Students described creativity as emerging not only from tasks or autonomy, but also from the quality of relationships that made learning emotionally safe and personally meaningful. Two subthemes illustrate how relational support and feedback functioned as pedagogical mechanisms fostering creative development.

Subtheme 3.1: Relational support as psychological safety. Students consistently described that creativity was more likely to emerge when lecturer–student relationships were characterised by approachability, respect, and emotional safety. Feeling accepted and supported reduced anxiety about making mistakes and encouraged students to express ideas more openly.

I felt comfortable sharing my ideas because the lecturer was open and did not make us afraid of being wrong. (Participant.280)

The atmosphere in class felt supportive, so I was not worried about being judged when I spoke. (Participant.456)

When lecturers listened seriously to our opinions, it made me feel safe to express my thoughts. (Participant.487)

These accounts indicate that relational support functions as a form of psychological safety that enables creative risk-taking. By fostering trust and reducing fear of negative evaluation, supportive relationships allow students to engage more fully in idea generation and creative expression within academic settings.

Subtheme 3.2: Feedback as process-oriented recognition. Beyond general support, students emphasised the role of feedback that recognised learning processes rather than focusing exclusively on final outcomes. Constructive feedback that framed mistakes as opportunities for growth helped students view creativity as a developing capacity rather than a fixed trait.

The lecturer provided feedback that focused on how we developed our ideas, not only on the final answer. (Participant.388)

Mistakes were discussed as part of learning, not something to be blamed. (Participant.110)

When my efforts and thinking process were appreciated, I felt more confident about my creativity. (Participant.345)

These statements suggest that process-oriented feedback contributes to the consolidation of creative personal identity. By acknowledging students’ efforts, strategies, and growth, lecturers affirm creativity as a valued and enduring aspect of students’ academic selves.

Table 4

Summary of Qualitative Themes and Subthemes

Theme	Subthemes	Core Description
Theme 1. Space for exploration and ideational autonomy	1.1 Autonomy as permission to explore	Creativity is fostered when lecturers legitimize exploration, allow multiple approaches, and normalize uncertainty, enabling students to take ideational risks and develop ideas over time.
	1.2 Autonomy as psychological safety for incomplete ideas	
Theme 2. Meaningful cognitive challenge	2.1 Challenge beyond memorisation	Creativity is supported through cognitively open tasks that require analysis and idea generation, particularly when learning activities are authentic and connected to real-world problems.
	2.2 Challenge through real-world relevance	
Theme 3. Relational support and constructive feedback	3.1 Relational support as psychological safety	Creativity emerges in emotionally safe lecturer–student relationships and is strengthened when feedback values learning processes, frames mistakes as growth, and affirms creativity as part of identity.
	3.2 Feedback as process-oriented recognition	

Note. Themes were generated through inductive thematic analysis of open-ended student responses.

These subthemes demonstrate that relational support and constructive feedback are central to the development of students' creative personal identity. Psychological safety enables students to take creative risks, while process-oriented recognition reinforces creativity as a meaningful and valued component of their academic identity. In this way, relational dimensions of educational climate complement cognitive and autonomy-related factors in shaping students' creative self-concept. The three qualitative themes illustrate how a learning-oriented educational climate is translated into concrete pedagogical practices and relational experiences. Ideational autonomy and meaningful cognitive challenge explain the processes through which creative self-efficacy is strengthened, while relational support and process-oriented feedback contribute to the development of creative personal identity. These qualitative mechanisms complement the quantitative findings and provide interpretative depth. To synthesise these insights, Figure 1 presents an integrated quantitative–qualitative model of the study's main findings.

Figure 1

Integrated Quantitative – Qualitative Findings

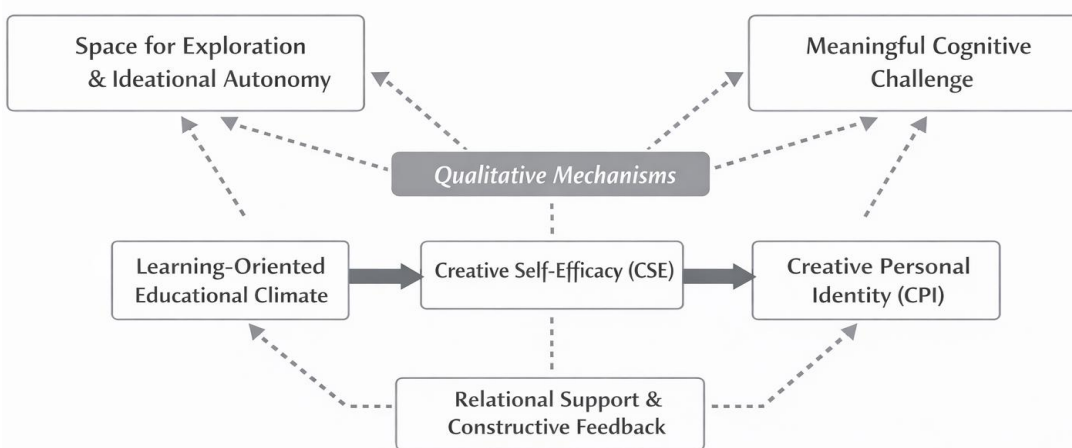


Figure 1 presents an integrated quantitative–qualitative model illustrating how educational climate is associated with students' creative self-concept in higher education. The central pathway summarizes the quantitative findings, showing learning-oriented educational climate as the strongest predictor of creative self-efficacy and creative personal identity. Surrounding this core relationship, qualitative themes highlight the pedagogical mechanisms through which educational climate is enacted in everyday teaching practices, including space for exploration and ideational autonomy, meaningful cognitive challenge, and relational support with constructive feedback. By visually integrating statistical relationships with students' lived learning experiences, the figure demonstrates how educational climate operates not merely as a contextual condition but as an active pedagogical mechanism fostering creativity.

4. Discussion

This study offers a nuanced understanding of how educational climate is associated with students' creative self-concept in higher education. The findings consistently show that a learning-oriented educational climate is strongly associated with both creative self-efficacy and creative personal identity, exceeding the influence of performance-driven or passive learning environments. This pattern reinforces the view that creativity is not merely an individual attribute, but a context-sensitive disposition that develops through meaningful learning experiences (Corrêa & Mourão, 2025; Fang & Chang, 2023). When educational environments emphasize exploration, understanding, and growth, students are more likely to internalize creative confidence and perceive creativity as an integral part of learning (Fikri et al., 2026; Li & Li, 2025; Mangion et al., 2025). In this way, educational climate emerges as an active pedagogical force that relates to how creativity is experienced and interpreted within academic settings (Putra et al., 2025).

The stronger association between learning-oriented educational climate and creative self-efficacy suggests that students' confidence in their creative abilities is particularly responsive to

contextual learning values. Creative self-efficacy is closely associated with experiences of autonomy, cognitive challenge, and opportunities to test ideas, all of which are characteristic of learning-oriented environments (Eyüp, 2023; Capron Puzozzo & Audrin, 2021; Orakcı, 2025). Such contexts provide repeated mastery experiences that reinforce students' beliefs in their creative capacity. Creative personal identity, however, appears less immediately influenced by short-term educational conditions, as it reflects a deeper and more stable integration of creativity into one's self-concept (Beghetto & Karwowski, 2017). This distinction indicates that supportive learning environments may initially enhance creative confidence, while the consolidation of creativity as part of personal identity requires more sustained and value-consistent experiences.

Although learning-oriented educational climate contributed to both dimensions of creative self-concept, its predictive strength was more pronounced for creative self-efficacy than for creative personal identity. This difference highlights the distinct psychological functions of these two constructs. Creative personal identity represents a more enduring self-definition, shaped not only by immediate learning experiences but also by long-term value alignment and repeated affirmation of creativity as personally meaningful (Culpepper & Gauntlett, 2024; Ishiguro et al., 2025). Consequently, changes in educational climate tend to be associated first in students' confidence to engage creatively before becoming integrated into their broader self-concept (Puente-Diaz & Cavazos-Arroyo, 2021). This pattern underscores the developmental nature of creative identity formation within higher education contexts.

In contrast, performance-oriented and passive memorization-oriented climates demonstrated limited contributions to students' creative self-concept. These findings suggest that creativity is not simply enhanced by reducing performance pressure or minimizing rote learning practices. Rather, the active presence of pedagogical values that encourage exploration, understanding, and engagement appears to be more salient for students' creative self-concept (Davletova et al., 2025; Qian et al., 2023). Performance-focused environments may still provide structure and motivation, yet without meaningful learning opportunities they offer limited support for the cultivation of creative self-beliefs and identity (Junya et al., 2025; Shumylo et al., 2022). This distinction emphasizes that fostering creativity in higher education requires more than the absence of constraints; it requires the intentional design of learning experiences that invite active participation.

The qualitative findings provide deeper insight into how a learning-oriented educational climate is enacted through everyday pedagogical practices. Rather than functioning as an abstract institutional characteristic, learning orientation became visible through concrete teaching behaviors, including providing space for exploration, posing meaningful cognitive challenges, and offering relational support accompanied by constructive feedback (Huhemandula et al., 2025; López et al., 2024). These practices illustrate how educational climate is experienced by students within classroom interactions. Students' narratives suggest that creativity is fostered not through isolated instructional techniques, but through coherent learning experiences that legitimize uncertainty, encourage idea development, and frame learning as an ongoing process (Aziz et al., 2024; Owusu-Agyeman & Pillay, 2023). Through these mechanisms, educational climate becomes psychologically salient in shaping creative self-perceptions.

The integration of quantitative and qualitative findings further indicates that different pedagogical mechanisms may be associated with differences in creative self-efficacy and creative personal identity. Opportunities for exploration and cognitively challenging tasks appear to primarily be more closely related to creative self-efficacy by enabling students to experiment with ideas and experience mastery within a supportive learning context (Capron Puzozzo & Audrin, 2021; Nugent et al., 2023). In contrast, relational support and process-oriented feedback seem more closely associated with the formation of creative personal identity, as they communicate sustained recognition of creativity as a valued personal quality (Benedek et al., 2025; Jin & Ye, 2022). This differentiation highlights the multidimensional nature of creative self-concept and demonstrates that educational climate operates through distinct yet complementary pathways.

These findings have essential implications for both theory and practice in higher education. Theoretically, the study supports a contextual view of creativity, positioning creative self-concept as a dynamic disposition shaped through ongoing interaction between individuals and their learning environments (Aziz et al., 2025; Sutton, 2025). Educational climate, therefore, should be understood not merely as a background condition but as an active pedagogical mechanism related to creative development (Božović et al., 2024; Roberts et al., 2025). Practically, the results suggest that fostering student creativity suggests the importance of intentional learning designs that emphasize exploration, meaningful challenge, and relational support. Lecturers play a crucial role in cultivating such environments by framing learning as a process of inquiry rather than performance alone.

Despite its contributions, this study has several limitations that should be considered when interpreting the findings. The use of self-report measures may introduce subjective bias, and the cross-sectional design limits conclusions regarding causal relationships. In addition, the study was conducted within a specific higher education context, which may influence how educational climate and creativity are experienced by students. Future research could address these limitations by employing longitudinal designs to examine the development of creative self-concept over time and by exploring diverse educational and cultural settings. Such efforts would extend the present findings while deepening understanding of creativity in higher education.

5. Conclusion

This study demonstrates that educational climate is closely associated with university students' creative self-concept, particularly through learning-oriented values embedded in everyday pedagogical practices. By integrating quantitative and qualitative evidence, the findings indicate that creativity is supported not simply by reducing performance pressure or avoiding passive learning, but by intentionally cultivating environments that encourage exploration, meaningful cognitive engagement, and supportive relationships. Learning-oriented educational climates appear especially salient in relation to students' creative self-efficacy, while sustained relational support contributes to the development of creative personal identity. These results position creativity as a disposition nurtured through context rather than a fixed individual attribute. Overall, the study underscores the importance of intentional pedagogical design in higher education to support students' creative self-concept and self-understanding.

Artificial Intelligence (AI) Use Statement: AI-based tools were used only for language editing and editorial support during manuscript preparation. All research design, data analysis, interpretation, and conclusions were conducted by the authors, and the use of AI tools did not affect the originality or integrity of the study.

Author Contributions: Rahmat Aziz: Conceptualization, Methodology, Investigation, Project administration, Writing – original draft. Mukhibat Mukhibat: Conceptualization, Theoretical framework, Investigation, Writing – review & editing. Agus Zaenul Fitri: Conceptualization, Theoretical framework, Investigation, Writing – review & editing. Nurhasanah Nurhasanah: Investigation, Data curation, Formal analysis, Writing – review & editing. Syarifuddin Syarifuddin: Investigation, Formal analysis, Writing – review & editing. All authors: contributed to the research process, critically reviewed the manuscript, and approved the final version.

Data Availability: The data supporting the findings of this study are available from the corresponding author upon reasonable request.

Declaration of Interest: The authors declare no conflict of interest.

Ethics Statement: Ethical approval for this study was obtained from the Research and Community Service Institute, State Islamic University of Maulana Malik Ibrahim Malang (Ethical Clearance No. 1900/LP2M/TL.00/07/2025, dated July 07, 2025). All participants provided written informed consent prior to data collection. Participant confidentiality and anonymity were maintained throughout the study, and the research procedures were conducted to ensure no harm to

participants and to report findings honestly and transparently.

Funding: This study was supported by the Directorate General of Islamic Higher Education, Ministry of Religious Affairs of the Republic of Indonesia, through the Institute for Research and Community Service (LP2M) at Universitas Islam Negeri Maulana Malik Ibrahim Malang. The funding was granted under Rector's Decree No. 886 of 2025.

References

- Álvarez-Huerta, P., Muela, A., & Larrea, I. (2021). Student engagement and creative confidence beliefs in higher education. *Thinking Skills and Creativity*, 40, 100821. <https://doi.org/10.1016/j.tsc.2021.100821>
- Aziz, R., Maimun, A., Hamid, A., Masturin, M., & Efiyanti, A. Y. (2025). An exploration of students' creativity through a mixed-methods study in the classroom. *Journal of Education and Learning*, 19(2), 650–657. <https://doi.org/10.11591/edulearn.v19i2.21649>
- Aziz, R., Mulyadi, M., Mangestuti, R., Hady, M. S., & Wahyuni, E. N. (2024). Exploring student and teacher perspectives on well-being development: A mixed-methods investigation. *Participatory Educational Research*, 11(1), 198–210. <https://doi.org/10.17275/per.24.12.11.1>
- Beghetto, R. A., & Karwowski, M. (2017). Toward untangling creative self-beliefs. In M. Karwowski & J. C. Kaufman (Eds.), *The creative self: Effect of beliefs, self-efficacy, mindset, and identity* (pp. 3–22). Elsevier. <https://doi.org/10.1016/B978-0-12-809790-8.00001-7>
- Benedek, M., Saretzki, J., & Lebudá, I. (2025). Why do you think you are creative? An analysis of sources and correlates of creative self-concept judgements. *Thinking Skills and Creativity*, 57, 101813. <https://doi.org/10.1016/j.tsc.2025.101813>
- Božović, S. G., Stojanović, T. M., & Simić, M. M. (2024). The connection between school climate and class climate. *Science: International Journal*, 3(1), 157–161. <https://doi.org/10.35120/sciencej0301157b>
- Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health*, 11(4), 589–597. <https://doi.org/10.1080/2159676X.2019.1628806>
- Braun, V., & Clarke, V. (2021). *Thematic analysis: A practical guide*. Sage.
- Capron Puozzo, I., & Audrin, C. (2021). Improving self-efficacy and creative self-efficacy to foster creativity and learning in schools. *Thinking Skills and Creativity*, 42, 100966. <https://doi.org/10.1016/j.tsc.2021.100966>
- Corrêa, R., & Mourão, L. (2025). Creativity in higher education: A systematic literature review. *International Journal of Educational Research*, 132, 102613. <https://doi.org/10.1016/j.ijer.2025.102613>
- Creswell, J. W., & Clark, V. L. P. (2018). *Designing and conducting mixed methods research* (3rd ed.). Sage.
- Culpepper, M. K., & Gauntlett, D. (2024). The construction of everyday creative identity. *Journal of Creativity*, 34(2), 100085. <https://doi.org/10.1016/j.yjoc.2024.100085>
- Davletova, A., Nazarova, A., Alzhanova, A., & Lazareva, Y. (2025). How does student creativity depend on teaching methods at the institute? Modern information technologies for education and creativity as manifestations of the specifics of the psyche. *Cogent Education*, 12(1). <https://doi.org/10.1080/2331186X.2025.2482502>
- Dima, A., Kotsidis, K., & Lafazanis, I. S. (2026). Drama education and artificial intelligence in sixth-grade geography lessons: An approach to cultivating critical thinking. *International Journal of Didactical Studies*, 7(2), e37844. <https://doi.org/10.33902/ijods.202637844>
- Eyüp, B. (2023). The effect of creative drama on the creative self-efficacy of pre-service teachers. *Journal of Pedagogical Research*, 7(4), 48–74. <https://doi.org/10.33902/JPR.202321418>
- Fang, Y.-H., & Chang, Y.-C. (2023). Effect of creative self-efficacy on creativity among college students: The moderating effect of college innovation climate. *International Journal of Higher Education*, 12(5), 128. <https://doi.org/10.5430/ijhe.v12n5p128>
- Fikri, R. A., Suwono, H., Susilo, H., & Kusairi, S. (2026). Fostering students' creative thinking through inquiry-design-based STEM water purification project. *Journal of Pedagogical Research*. Advance online publication. <https://doi.org/10.33902/JPR.202638877>
- Gonzalez-Berruga, M. A. (2025). Measuring educational quality in the classroom: Validation of the Effective Teaching in Secondary Education Questionnaire. *International Journal of Didactical Studies*, 6(1), 31584. <https://doi.org/10.33902/ijods.202531584>
- Habib, S., Vogel, T., & Thorne, E. (2025). Student perspectives on creative pedagogy: Considerations for the Age of AI. *Thinking Skills and Creativity*, 56, 101767. <https://doi.org/10.1016/j.tsc.2025.101767>
- He, W., & Zhang, K. (2025). From perceived school climate to creativity performance: The serial multiple

- mediation of creative self-efficacy and creativity motivation. *The Journal of Creative Behavior*, 59(3), 70045. <https://doi.org/10.1002/jocb.70045>
- Huhemandula, Liu, J., Bai, J., & Zaman, U. (2025). Responsibility climate and graduate creativity in higher education: The mediating role of learning climate and the moderating effects of teaching strategies. *Journal of Management Practices, Humanities and Social Sciences*, 9(4), 1. <https://doi.org/10.33152/jmphss-9.4.1>
- Ishiguro, C., Matsumoto, K., Agata, T., & Okada, T. (2025). The relationship between creative self-concept and activities of Japanese junior high and high school students: A two-year longitudinal study. *Thinking Skills and Creativity*, 57, 101831. <https://doi.org/10.1016/j.tsc.2025.101831>
- Jensen, J. B. (2025). Creativity in higher education. *Journal of Problem Based Learning in Higher Education*, 13(1), 1–24. <https://doi.org/10.54337/ojs.jpblhe.v13i1.11015>
- Jin, X., & Ye, Y. (2022). Impact of fine arts education on psychological wellbeing of higher education students through moderating role of creativity and self-efficacy. *Frontiers in Psychology*, 13, 957578. <https://doi.org/10.3389/fpsyg.2022.957578>
- Junya, Z., Yan, C., Junting, S., Xueqing, S., Moreira, P., & Cuiping, X. (2025). Exploring the application of teaching models to foster creativity in nursing students: A systematic literature review and Bayesian network meta-analysis. *International Journal of Nursing Practice*, 31(6), 70078. <https://doi.org/10.1111/ijn.70078>
- Karwowski, M., Lebuda, I., & Wisniewska, E. (2018). Measuring creative self-efficacy and creative personal identity. *The International Journal of Creativity & Problem Solving*, 28(1), 45–57.
- Krupat, E., Borges, N. J., Brower, R. D., Haidet, P. M., Schroth, W. S., Fleenor, T. J., & Uijtdehaage, S. (2017). The educational climate inventory: Measuring students' perceptions of the preclerkship and clerkship settings. *Academic Medicine*, 92(12), 1757–1764. <https://doi.org/10.1097/ACM.0000000000001730>
- Li, Z., & Li, Q. (2025). The effects of school climate on students' creativity: The mediating role of growth mindset and self-efficacy. *Thinking Skills and Creativity*, 57, 101851. <https://doi.org/10.1016/j.tsc.2025.101851>
- López, U. H., Vázquez-Vílchez, M., & Salmerón-Vílchez, P. (2024). The contributions of creativity to the learning process within educational approaches for sustainable development and/or ecosocial perspectives: A systematic review. *Education Sciences*, 14(8), 824. <https://doi.org/10.3390/educsci14080824>
- Mangion, M., Valqueresma, A., & Glaveanu, V. P. (2025). Exploring the impact of possibility thinking training on educators' creative self-perceptions: A mixed methods action research study in Maltese schools. *Methods in Psychology*, 13, 100198. <https://doi.org/10.1016/j.metip.2025.100198>
- Muñoz-Salinas, Y., Caro-Zúñiga, D., & Jeria, I. (2025). Creativity and preservice teachers: A literature review of an underexplored field (2014–2024). *Education Sciences*, 15(3), 395. <https://doi.org/10.3390/educsci15030395>
- Nugent, A., Carroll, A., Lodge, J. M., Matthews, K. E., MacMahon, S., & Sah, P. (2023). A qualitative exploration of expert perspectives on applying the science of learning to higher education. *Frontiers in Education*, 8, 1233651. <https://doi.org/10.3389/educ.2023.1233651>
- Orakçı, Ş. (2025). Autonomous learning and creative cognition: the mediating effect of gifted students' self-efficacy. *Frontiers in Psychology*, 15, 1301528. <https://doi.org/10.3389/fpsyg.2024.1301528>
- Owusu-Agyeman, Y., & Pillay, S. (2023). Insights and experiences of students about the factors that enhance relational pedagogy in higher education. *Journal of University Teaching and Learning Practice*, 20(6), 20. <https://doi.org/10.53761/1.20.6.20>
- Puente-Díaz, R., & Cavazos-Arroyo, J. (2021). Creative personal identity and creative mindsets, and their implications for creative potential and metacognition: A latent variable and a latent class approach. *Creativity. Theories – Research - Applications*, 8(2), 20–31. <https://doi.org/10.2478/ctra-2021-0015>
- Putra, Z. A. Z., Susilo, H., Suwono, H., & Ibrohim, I. (2025). Revealing the effect of problem-based learning combined with the use of digital mind map on students' creative thinking. *Journal of Pedagogical Research*, 9(3), 43–61. <https://doi.org/10.33902/JPR.202522991>
- Qian, J., Li, X., Liu, T., Zhang, M., & Li, K. (2023). Direct and indirect effects of self-directed learning on creativity in healthcare undergraduates: A chain mediation model of openness to challenge and diversity and creative self-efficacy. *Frontiers in Psychology*, 14, 1182692. <https://doi.org/10.3389/fpsyg.2023.1182692>
- Roberts, J., Duncan, P., & Mesek, M. (2025). Impactful creative pedagogy to enhance learning about innovation and creativity: Interview an innovator. *Journal of Perspectives in Applied Academic Practice*, 13(2), 59. <https://doi.org/10.56433/vtrtyg59>

-
- Shumylo, M., Isayeva, O., Khmilyar, I., Huziy, I., Yaremko, H., & Drachuk, M. (2022). Creativity as an essential aspect in medical education. *Creativity Studies*, 15(1), 182–198. <https://doi.org/10.3846/cs.2022.13320>
- Sutton, T. (2025). Thinking through practice: Re-envisioning Kolb through applied design pedagogy. *Journal of Perspectives in Applied Academic Practice*, 13(1), 14. <https://doi.org/10.56433/xsqbj14>
- Tshering, K., Dorji, P., & Jatsho, S. (2024). Enhancing students' behavioural and cognitive engagement through active learning strategies in physics. *International Journal of Didactical Studies*, 5(1), 23328. <https://doi.org/10.33902/ijods.202423328>
- Varela, J. J. (2021). Subjective well-being, bullying, and school climate among chilean adolescents over time. *School Mental Health*, 13(3), 616–630. <https://doi.org/10.1007/s12310-021-09442-w>
- Wang, Z., Wang, L., Miao, H., Yan, R., Shi, Y., Yuan, X., Wang, N., & Wang, F. (2023). Classroom climate and creativity: The indirect effect of autonomous motivation. *Journal of Applied Developmental Psychology*, 87, 101556. <https://doi.org/10.1016/j.appdev.2023.101556>