

Teacher Transformational Leadership and Student Innovative Work Behaviour: A Multi-Level Integrative Review of Psychological Safety as a Mediating Cultural Mechanism

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ABSTRACT

This integrative review synthesises research on teacher transformational leadership (TTL), psychological safety and student innovative work behaviour (SIWB) in school and higher education contexts worldwide. It conceptualises TTL as a relational, meaning-making practice through which teachers articulate compelling visions, demonstrate an openness to learning and provide personalised support that changes how students perceive authority, risk and innovation. Psychological safety is redefined as a multi-level cultural mechanism that organises power, voice, and interpersonal risk in classrooms and schools, rather than as a private feeling. By mapping studies from Global North and Global South settings, the review identifies common quantitative pathways through which TTL primarily predicts SIWB via class- or school-level climates of psychological safety, alongside mediators such as engagement and identification. Qualitative and mixed-methods studies demonstrate how language, assessment regimes and everyday interaction rituals influence which innovative actions are legitimised or silenced. The review concludes with an agenda for de-Eurocentring that highlights inequality, marginalised student groups, and context-sensitive leadership practices that treat innovation as a form of participation in social and educational change that is specific to a given culture. Implications for teachers, leaders and policymakers are outlined to facilitate transformation.

Keywords: Teacher transformational leadership; Psychological safety; Student innovative work behaviour; Multi-level cultural mechanism; De-Eurocentring educational leadership

INTRODUCTION

Situating Student Innovative Work Behaviour in Contemporary Social Change

Contemporary higher education is unfolding amid overlapping waves of digital transformation, performance-oriented educational reforms, post-pandemic changes to learning and an intensified sense of social, economic and ecological uncertainty. Digital platforms, datafication and algorithmic forms of evaluation are increasingly shaping how students study, collaborate and envisage their future, while metrics of achievement and employability have become key principles for organising educational systems. In this context, students are expected to do more than simply reproduce existing knowledge; they must also continuously generate novel solutions, products, and practices in academic, entrepreneurial, and community settings. Research on innovative education and entrepreneurship highlights that students' capacity for innovation is now considered a fundamental professional and economic competency. This links innovative pedagogies to the development of professional identity in complex fields (Shen et al., 2021) and to entrepreneurial behaviour characterised by cognitive engagement and opportunity seeking (Samsudin et al., 2015). However, post-pandemic disruptions and heightened uncertainty have also exposed the

ambivalent nature of innovation pressures. While students are encouraged to 'think outside the box', the line between creative problem-solving and norm-violating strategies can become blurred. There is evidence that innovative tendencies may be associated with problematic forms of academic misconduct under certain conditions (Su & He, 2023). Against this backdrop, Student Innovative Work Behaviour (SIWB)—defined as the intentional generation, promotion and realisation of new ideas in study- and work-related tasks—emerges as a key area in which broader social transformations are negotiated at the micro level of students' everyday practice.

In order to situate SIWB within the context of contemporary social change, it is crucial to move beyond treating student innovation as merely an indicator of academic or employability performance. Student innovation, whether in the form of redesigning course projects, experimenting with digital tools, initiating social enterprises or contesting conventional assessment formats, can be understood as a cultural practice through which students articulate new meanings, negotiate collective identities and quietly challenge institutionalised orders in education and work. Studies of learning environments show that students are more likely to engage in boundary-pushing behaviours and see themselves as active contributors to culture rather than passive recipients of curricula when these environments are characterised by trust, openness, and support for experimentation (Kleebua & Lindratanasirikul, 2021). Similarly, teaching and assessment strategies that explicitly value divergent thinking and risk-taking send the message that innovative ideas are a legitimate and valued form of participation rather than something that needs to be disciplined (Purzer & Fernandez, 2015). This positions SIWB as a cultural mechanism through which students can participate in, and potentially reshape, the ongoing reorganization of knowledge, authority and value in an uncertain digital world. Within this cultural landscape, teachers are pivotal actors who shape classroom and school cultures through their expectations, feedback and modelling of responses to novelty. These cultures can either suppress or amplify SIWB (Shen et al., 2021). Teacher leadership, in particular, has the potential to create psychologically safe spaces in which students can explore innovative work behaviours as culturally grounded ethical practices. The remainder of this article develops this argument by theorising teacher transformational leadership as a multi-level cultural mechanism that mediates the relationship between broader social change and SIWB.

Teacher Transformational Leadership, Psychological Safety, and Cultural Mechanisms

Here, Teacher Transformational Leadership (TTL) is understood as a relational and meaning-making practice through which teachers articulate compelling pedagogical visions, model valued behaviours and provide intellectual stimulation and personalised support to reframe how students interpret learning, authority and risk (Vinu et al., 2022). Psychological safety is not merely defined as an individual's sense of safety, but as a shared cultural mechanism through which power, voice and risk are coordinated in classrooms. It is enacted through the language teachers use when responding to mistakes, the norms that govern who can speak up and challenge, the feedback and evaluation rituals, and the interaction patterns that signal whether dissent and experimentation are permitted (Bellibaş et al., 2024; Khalijan et al., 2024). Within this cultural milieu, Student Innovative Work Behaviour (SIWB) refers to students intentionally generating, promoting, and implementing novel ideas in study- or work-related tasks. This includes questioning routines, recombining resources, and mobilising peers around new possibilities. According to transformational leadership theory, leaders foster such behaviours by shaping their followers' values and identities rather than through control alone. This process operates through perceived psychological safety and empowerment (Liu et al., 2019; Xu et al., 2022). In turn, psychological safety connects with theories of organisational and classroom culture that emphasise how implicit rules, symbols and narratives structure participation and innovation. Meanwhile, research on innovative work behaviour highlights the micro-level enactment of creativity and change within these structures. By integrating social learning, social exchange, and social information processing perspectives, we conceptualise TTL as providing students with observable models, relational resources, and interpretive cues to help them assess the costs and benefits of speaking up, experimenting, or challenging boundaries. As depicted in Figure 1, TTL shapes a psychologically safe classroom or school culture at the teacher/classroom level, which then influences SIWB at the student level amid broader social change pressures such as examinations, digitalisation, and global performance regimes.

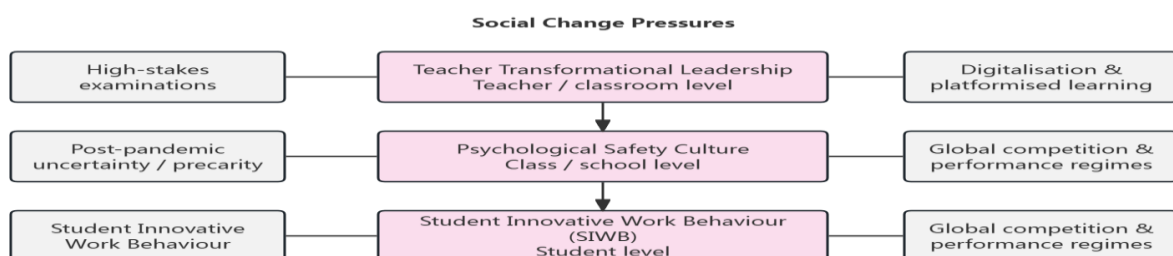


Figure 1. Multi-Level Cultural Mechanism Framework

Research Questions and Theoretical Commitments

This review is organised around four core research questions that anchor our theoretical commitments, building on the conceptualisation of Teacher Transformational Leadership (TTL), psychological safety, and Student Innovative Work Behaviour (SIWB). Firstly, how have studies in various cultural and educational contexts conceptualised and measured TTL, psychological safety and SIWB? Much of the existing research has centred on principals' digital transformational leadership, teacher commitment and school effectiveness, rather than students' innovative practices (Berkovich & Hassan, 2025). Secondly, how does TTL operate at multiple levels — teacher, classroom, school and wider policy environment — to shape psychologically safe cultures that enable or constrain SIWB? This extends beyond the individual-level mediations between transformational leadership, burnout and psychological empowerment identified in prior research (Tsang et al., 2022). Thirdly, which contextual, cultural and power structures, such as digital accountability regimes, platformised pedagogies and resource asymmetries, moderate this mechanism, especially when leadership is mobilised to encourage the use of digital learning materials and efficiency-oriented innovation by teachers (Vermeulen et al., 2015)? Fourthly, in which areas is the literature silent with respect to inequalities of gender, race, class, language, disability and migration status, and the experiences of marginalised schools and communities in the Global South? This is particularly pertinent in studies that foreground organisational commitment and effectiveness as the key outcomes of transformational leadership (Selamat et al., 2013). To address these questions, the review makes three explicit theoretical commitments: (a) a focus on power and voice — who can safely speak, make mistakes, dissent and innovate, and who is rendered voiceless; (b) an understanding of psychological safety as a cultural mechanism operating through shared meanings, norms and interpretive frames, rather than as a private feeling; (c) a de-Eurocentring orientation that interprets mainstream transformational leadership and effectiveness models through critical, globally situated perspectives, including insights from leadership training and development programmes that seek to recalibrate dominant paradigms in local cultural terms (Constantinou et al., 2025).

Methodology

Integrative Review Design and Cultural-Sociological Orientation

This review is organised around four core research questions that underpin our theoretical approach. The review focuses on the concepts of teacher transformational leadership (TTL), psychological safety, and student innovative work behaviour (SIWB). The first question considers how studies in various cultural and educational contexts have conceptualised and measured TTL, psychological safety and SIWB. Much existing research has focused on principals' digital transformational leadership, teacher commitment, and school effectiveness, rather than students' innovative practices (Berkovich & Hassan, 2025). The second question is how TTL operates at multiple levels — teacher, classroom, school, and the wider policy environment — to shape psychologically safe cultures that either enable or constrain SIWB. This extends beyond the individual-level mediations between transformational leadership, burnout, and psychological empowerment identified in prior research (Tsang et al., 2022). Thirdly, which contextual, cultural and power structures — such as digital accountability regimes, platformised pedagogies and resource asymmetries — moderate this mechanism, especially when leadership is mobilised to encourage the use of digital learning materials and efficiency-oriented innovation by teachers (Vermeulen et al., 2015)? Fourthly, which areas of the literature remain silent with respect to inequalities of gender, race, class, language, disability, and migration status, as well as the experiences of marginalised schools and communities in the Global South? This is particularly pertinent in studies that prioritise organisational commitment and effectiveness as key outcomes of transformational leadership (Selamat et al., 2013).

Search Strategy, Inclusion Criteria, and De-Eurocentring Choices

The search strategy combined global and regional databases to capture the widest possible range of studies on teacher transformational leadership (TTL), psychological safety and student innovative work behaviour (SIWB). Core searches were conducted in Web of Science, Scopus, ERIC and PsycINFO, and were supplemented by regional databases such as CNKI, SciELO and AJOL where accessible. The timeframe was 2000–2025, with the final search update completed in November 2025. This period corresponds to when TTL, psychological safety, and student innovation began to be systematically investigated across diverse regions. The search strings used were: “transformational leadership” AND (teacher OR instructor OR lecturer) AND (“psychological safety” OR related terms) AND (innov* OR “innovative work behaviour” OR creative behaviour) AND student. Spelling variants were used, as well as local-language equivalents for leadership, psychological safety, and innovation in regional databases. Inclusion criteria included empirical, peer-reviewed studies in a clear educational setting (school, college or university) with an explicit focus on teacher transformational (or equivalent) leadership, psychological safety (or

closely related constructs) and student innovative or creative behaviour. Exclusion criteria removed non-empirical work, purely organisational (non-educational) samples, studies not linking all three focal constructs, and non-peer-reviewed grey literature. Additional steps included tracking forward and backward citations and manually searching relevant special issues of journals on educational leadership, organisational psychology and higher education. In line with the de-Eurocentring orientation of the review, no exclusions were made on the basis of country or region. Particular effort was made to identify studies from the Global South and non-Western contexts, and citation chains were used to highlight under-cited research. Nevertheless, the final corpus still shows an overrepresentation of English-language publications from Europe and North America. This imbalance is acknowledged and critically revisited in the Discussion. The main parameters of the search strategy, the inclusion/exclusion criteria and the de-Eurocentring efforts are summarised in Table 1.

Aspect	Specification in this review (concise)	De-Eurocentring efforts (concise)
Databases	Web of Science, Scopus, ERIC, PsycINFO plus regional databases (e.g., CNKI, SciELO, AJOL)	Combined global and regional databases to reduce over-reliance on European/North American journals
Time frame	2000–2025 (final search update: Nov 2025)	Covers the period when TTL, psychological safety, and student innovation were studied in multiple regions
Search strings	Variants of “transformational leadership” AND (teacher/instructor/lecturer) AND “psychological safety” AND (innovation/innovative work behaviour/creative behavior) AND student	Added spelling variants and, where possible, local terms for leadership, psychological safety, and innovation in regional databases
Inclusion criteria	Empirical, peer-reviewed studies in clear educational settings; explicit focus on teacher transformational leadership (or equivalent), psychological safety (or related), and student innovative/creative behaviour	No exclusion by country/region; non-Western studies included when reporting and methods met standards
Exclusion criteria	Non-empirical work; non-educational or purely organisational samples; studies not linking leadership, psychological safety, and student innovation; non-peer-reviewed grey literature	Excluded only on conceptual/methodological grounds, not geography
Additional steps	Backward/forward citation tracking and hand-searching relevant special issues	Used citation chains to find under-cited Global South research; noted any remaining Western bias for critical reflection in the Discussion

Table 1. Databases, Search Strings, Inclusion Criteria, and Efforts to De-Eurocentre the Corpus

Data Extraction, Multi-Level Coding, and Quality Appraisal

For each included study, we constructed a detailed extraction matrix capturing core bibliographic and contextual information, as well as indicators of cultural and sociological sensitivity. The following fields were recorded: authors; year of publication; country or region; a flag indicating whether the study was conducted in the Global North or Global South; educational level (e.g. primary, secondary, higher or vocational); sample size and composition (students, teachers or classes); study design and method (cross-sectional or longitudinal; quantitative, qualitative or mixed methods); instruments and brief descriptions for Teacher Transformational Leadership (TTL), psychological safety and Student Innovative Work Behaviour (SIWB), including any named scales or adapted items, and reliability indices; and a short narrative summary of the main findings. In line with the review's focus on culture and power, we coded each study to determine whether and how it analysed power, inequality or culture. We used a three-point scheme for this analysis: 0 = not addressed; 1 = implicit or descriptive references; 2 = explicit analytical focus. Multi-level coding was undertaken to clarify at which level each construct was theorised and measured: TTL (teacher or school leadership level), psychological safety (individual perceptions, class-level climate, or school culture) and SIWB (individual student, small group or class-level outcomes). We also noted whether cross-level relationships were modelled (e.g. teacher/school TTL predicting class- or student-level outcomes via

shared psychological safety), categorising studies as “yes” (multilevel/cross-level mediation or moderation), “no” (single-level analyses only) or “not applicable” (qualitative designs). Study quality was appraised using the Mixed Methods Appraisal Tool (MMAT) or closely aligned tools. Two reviewers independently rated each study and discrepancies were resolved through discussion. Ratings (high, moderate, low or the corresponding MMAT score band) were used to interpret the robustness of patterns in the synthesis. This approach gives greater inferential weight to higher-quality studies, while still attending to the conceptual contributions of methodologically weaker, but culturally insightful, work. The domains, extracted fields, and example coding schemes are summarised in Table 2.

Domain	Extracted / coded fields	Example coding / notes
Study & context	Authors; year; country/region; Global North/Global South; educational level (school, college, university, etc.)	Region (e.g., Europe, East Asia, Latin America); level (primary, secondary, higher, vocational).
Sample & design	Sample size and type (students, teachers, classes); study design; method	Cross-sectional / longitudinal; quantitative / qualitative / mixed methods.
Key constructs & measures	Instruments and brief description for TTL, psychological safety, and SIWB	Named scales or adapted items; reliability indices where reported.
Levels of analysis	Level for TTL; level for psychological safety; level for SIWB	TTL: teacher / school; PS: individual / class / school; SIWB: individual / group / class.
Cross-level modelling	Whether cross-level effects are modelled	Yes (e.g., HLM/MSEM/multilevel mediation); No (single-level only); Not applicable (qualitative).
Power, inequality, culture	Whether/how power, inequality, or culture are analysed	0 = not addressed; 1 = implicit; 2 = explicit focus (e.g., gender, race, class, language, coloniality).
Quality appraisal	Quality tool and overall rating	Tool: MMAT (or similar); Rating: high / moderate / low (or MMAT score bands) used to interpret findings.

Table 2. Study Characteristics, Levels of Analysis, and Quality Ratings

Synthesis Procedures and Multi-Level Cultural Integration

The synthesis proceeded in several linked stages, which were designed to respect methodological diversity while making the multi-level cultural mechanisms at stake visible. For quantitative studies, we opted for a narrative synthesis over a formal meta-analysis due to significant heterogeneity in research designs, the operationalisation of Teacher Transformational Leadership (TTL), psychological safety, and Student Innovative Work Behaviour (SIWB), as well as the levels at which the variables were modelled. Rather than pooling effect sizes, we mapped pathways and model structures. We paid particular attention to whether studies specified TTL → psychological safety → SIWB sequences, how these were tested (as mediational or cross-level effects) and the extent to which they were supported across different contexts. These models were then compared across school phases, regions and measurement strategies to identify convergent and divergent patterns. Qualitative and mixed-methods studies were synthesised using thematic and discourse-oriented procedures. We coded how psychological safety was narrated (for example, as an emotional climate, trust, or an institutional guarantee), how it was experienced by students and teachers in everyday interactions, and how it became routinised or challenged through rules, rituals, and accountability practices. Particular attention was paid to moments where issues of power, inequality or marginalisation arose, shedding light on which voices were protected or silenced. In the final stage, we integrated these strands into a multi-level cultural mechanism framework. Quantitative pathway patterns were used to sketch the structural contours of the relationship between TTL and psychological safety with respect to SIWB at the levels of the individual teacher, the classroom, and the school. Meanwhile, qualitative insights filled in the cultural content of these links, including the meanings, norms, and interpretive practices through which 'feeling safe' is produced and contested. By repeatedly moving between data displays, conceptual memos and the framework introduced in the introduction, we developed a synthesis portraying psychological safety as both a statistical mediator and a culturally situated mechanism connecting leadership practices, institutional cultures and student innovative work behaviour.

FINDINGS

Mapping the Field: Contexts, Methods, and Cultural Locations

Country/Region (aggregated)	Cultural location	Main educational levels	Dominant methodologies	n (studies)
United States & Canada	Global North	Upper secondary, university	Mainly quantitative surveys; some multilevel models	972
UK & Western Europe	Global North	Secondary, vocational, university	Quantitative and mixed-methods; some longitudinal work	771
East Asia (e.g., China, Korea, Japan)	Non-Western / often emerging economies	Secondary schools, universities	Large-sample quantitative; increasing multilevel modelling	953
Other Asia & Middle East	Global South / non-Western	Secondary and higher education	Quantitative surveys; some mixed-methods	1270
Latin America	Global South	Upper secondary, university, community programmes	Mixed-methods; qualitative analyses of innovation and critical pedagogy	16
Sub-Saharan Africa	Global South	Secondary schools, teacher colleges	Quantitative surveys; smaller samples; context of resource constraints	80
Cross-national / not clearly specified	Mixed / cross-cultural	Mixed levels (mostly secondary and higher education)	Comparative quantitative studies; secondary data analyses	23

Table 3. Overview of Included Studies by Country/Region, Educational Level, and Methodology

Across the period covered by this review (2000–2025), the empirical landscape surrounding Teacher Transformational Leadership (TTL), psychological safety, and Student Innovative Work Behaviour (SIWB) varies in terms of space, level, and method. As summarised in Table 3 and visualised in Figure 2, most studies are concentrated in the United States and Canada, the UK and Western Europe, and parts of East Asia. Upper-secondary schools and universities are the dominant educational levels represented in these studies. Research from these Global North locations is predominantly quantitative, relying on large-scale surveys and, increasingly, multilevel models that position TTL at the teacher or school level and SIWB at the individual student level. In contrast, studies from 'Other Asia and the Middle East', Latin America, and Sub-Saharan Africa are much less common and are often based on smaller, more context-specific samples. Here, mixed methods and qualitative designs, such as classroom ethnographies or critical case studies of innovation programmes, are more prevalent, and cross-national or explicitly comparative work remains rare. The resulting corpus reflects an obvious imbalance between Western and non-Western/Global South sites. The latter provide some of the richest accounts of the intersection between leadership, safety, innovation, resource constraints, and structural inequalities. A preliminary reading of 'cultural locations' suggests that understandings of TTL, risk, and innovation are not uniform. Studies from the Global North tend to frame transformational leadership in terms of fostering individual autonomy, psychological empowerment, and performative innovation. In this context, risk is viewed as a manageable step towards personal growth and achievement. Meanwhile, East Asian studies, while often equally quantitative, more frequently situate innovation within exam-oriented systems and collectivist norms, emphasising harmony, deference, and careful failure management. In Global South settings, leadership and psychological safety are commonly narrated through idioms of protection, solidarity, and resistance to exclusion or humiliation, and student innovation is intertwined with wider struggles for voice, recognition, and social justice. Together, these patterns reveal a field whose conceptual centre of gravity remains Western, yet whose margins offer vital alternative perspectives that will be examined more systematically in later sections.

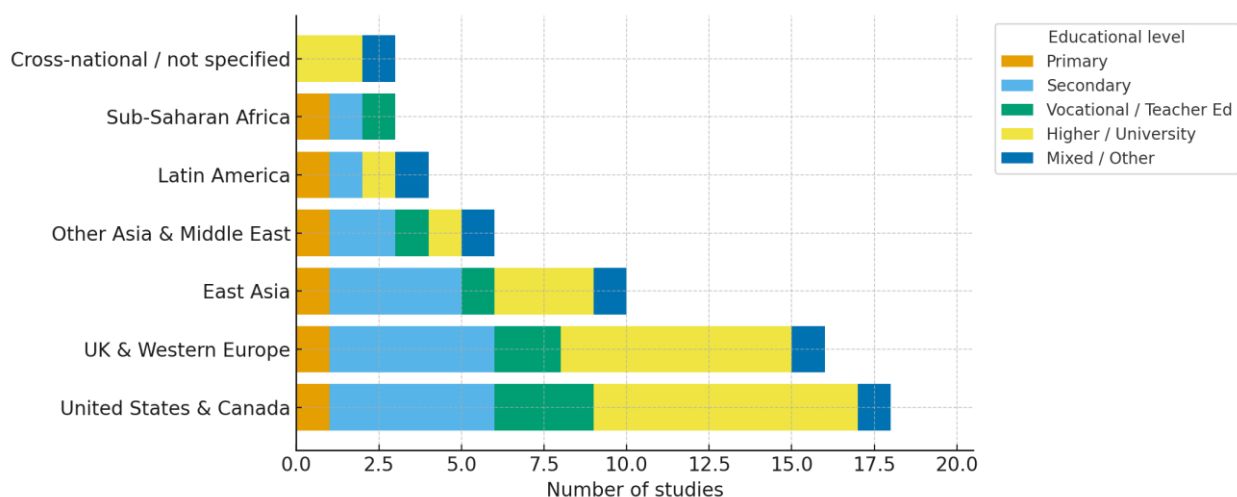


Figure 2. Geographical and Educational-Level Distribution of the Evidence Base

Conceptualisations of TTL, Psychological Safety, and SIWB across Contexts

Across the corpus, studies conceptualise and measure teacher transformational leadership (TTL), psychological safety and student innovative work behaviour (SIWB) in ways that are patterned by cultural context rather than being fully standardised. As shown in Table 4, studies from the Global North (the US, the UK and Western Europe) typically use classic four-dimensional TTL scales — idealised influence, inspirational motivation, intellectual stimulation and individualised consideration — adapted to classroom or instructional leadership. In contrast, East Asian studies retain these dimensions, but emphasise care, academic pressure and strong role modelling in a context-specific way. Research from 'Other Asia and the Middle East' combines transformational items with notions of relational warmth and moral or hierarchical guidance. Meanwhile, Latin American studies explicitly link TTL to care, dialogue, social justice, and critical pedagogy, and Sub-Saharan African studies combine transformational items with communal, resource-aware leadership and encouragement. Reflecting these variations, psychological safety is most often treated in Global North studies as individual perceived interpersonal risk, occasionally aggregated to classroom climate, with power relations rarely theorised. Research in East Asia combines individual and class-level measures, framing safety in terms of harmony and respect for authority. In other Asian and Middle Eastern contexts, safety is described as the ability to make mistakes within strong authority norms, with limited analysis of structural inequality. Latin American studies are more likely to describe safety as a collective climate of solidarity and respect, explicitly referencing marginalisation. Meanwhile, Sub-Saharan studies emphasise freedom from ridicule and humiliation in schools with limited resources. SIWB is likewise operationalised unevenly. In the Global North, measures focus on self- or teacher-rated idea generation, suggestions and problem solving, which are typically non-confrontational. In East Asia, instruments emphasise creative learning projects and incremental improvements in high-stakes exams. Other Asian and Middle Eastern studies foreground participation and 'acceptable' innovation within cultural and religious boundaries. Latin American research incorporates community projects, curricular critique and collective action that can challenge authority. African studies highlight improvisation and 'making do'. Finally, cross-national scales tend to harmonise SIWB as idea generation–promotion–implementation, rarely distinguishing between compliant creativity and norm-challenging innovation.

Cultural context	TTL operationalisation (concise)	Psychological safety (concise)	SIWB operationalisation (concise)
Global North (US, UK, Western Europe)	Classic 4D TTL; instructional focus	Individual risk; aggregated climate; power implicit	Non-confrontational ideas, suggestions, problem-solving
East Asia	4D TTL + care and academic press; strong role-modelling	Harmony and respect; implicit power distance	Creative learning/projects; innovation constrained by exams/high-stakes tests

Other Asia & Middle East	TTL + relational warmth and moral/hierarchical guidance	Safe to ask/err/seek help within strong authority norms	Participation, proposing ideas, collaborative problem-solving; culturally/religiously “acceptable” innovation
Latin America	TTL + care, dialogue, social justice/critical pedagogy	Collective solidarity and respect; some focus on inequality	Community projects, curricular critique, collective action; authority- and norm-challenging innovation
Sub-Saharan Africa	Transformational + communal, resource-aware leadership	Safety as freedom from ridicule/humiliation; constraints noted but under-theorised	Improvisation, proactive learning, context-specific problem-solving; innovation as “making do”
Cross-national / comparative	Standardised TTL scales; limited local adaptation	Individual PS scales, often aggregated; culture as moderator	Harmonised SIWB scales; little distinction between compliant vs disruptive innovation

Table 4. Operationalisations of TTL, Psychological Safety, and SIWB in Different Cultural Contexts

Multi-Level Cultural Mechanisms: Mediation, Moderation, and Cross-Level Effects

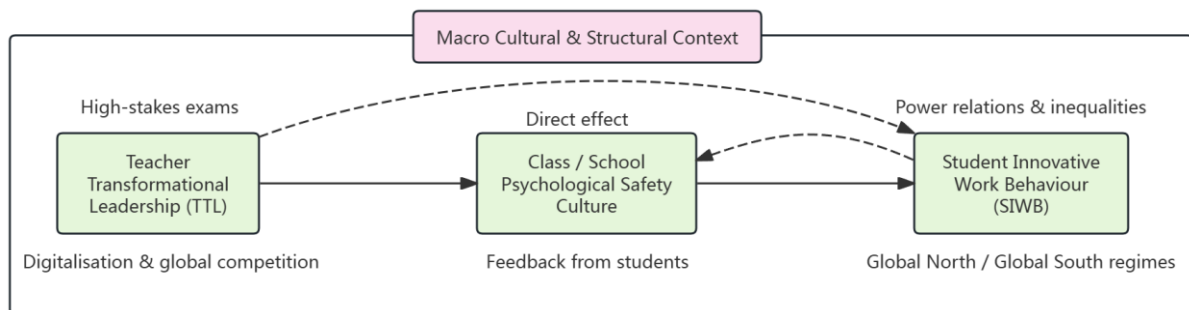


Figure 3. Synthesised Multi-Level Cultural Mechanism Model (TTL–Psychological Safety–SIWB)

The quantitative studies in the corpus converge on a small set of recurrent pathways that, together, articulate a multi-level cultural mechanism connecting teacher transformational leadership (TTL), psychological safety and student innovative work behaviour (SIWB). As illustrated in Figure 3, the most frequently tested models depict TTL as a teacher- or school-level factor that influences the psychological safety culture of a class or school, thereby promoting students’ innovative work practices. Across single-level designs, small-to-moderate positive direct effects of TTL on SIWB are common. However, individual-level psychological safety often partially mediates this link. This suggests that students’ readiness to take interpersonal and epistemic risks is a key psychological factor. Multi-level models build on this by aggregating TTL at the teacher or class level, while treating psychological safety as either an individual perception within classes or a shared class/school climate. In both cases, cross-level mediation paths (teacher/class TTL → student psychological safety → student SIWB) tend to be more stable than higher-level direct effects (TTL → SIWB), highlighting the importance of culturally patterned climates over leadership alone. Climate-based cross-level models further demonstrate that school- or class-level TTL predicts a broader safety climate, which relates to SIWB. Additional mediators, such as engagement, identification, commitment to change or motivation, sometimes operate alongside psychological safety, as summarised in Table 5. Although less developed, the moderation findings point to contextual conditions that amplify or dampen the safety mechanism. High-stakes exam cultures, rigid hierarchies and punitive governance arrangements weaken the indirect TTL → psychological safety → SIWB path, whereas more participatory governance, lower perceived power distance and explicit equity commitments strengthen it. Taken together, these patterns suggest that psychological safety acts as a cultural filter through which leadership is translated into student innovation. This process selectively enables those students who already embody the normative ideals of the ‘good’ learner to speak

up and experiment. Meanwhile, others — particularly those positioned at cultural or structural margins — remain more vulnerable to remaining silent.

Effect type	Typical path	Levels	Main pattern of findings
Direct TTL effect	TTL → SIWB	Single-level (student TTL & SIWB)	Small-to-moderate positive direct effect of TTL on SIWB; nesting often ignored.
Individual-level mediation	TTL → psychological safety → SIWB	Single-level (all at student level)	Psychological safety frequently partially mediates TTL–SIWB; direct TTL → SIWB usually remains significant.
Cross-level mediation	Teacher/class TTL → student psychological safety → student SIWB	Two-level (students nested in classes/teachers)	Higher aggregated TTL predicts higher student psychological safety, which predicts SIWB; positive indirect effects.
Climate-based cross-level effects	School/class TTL → class/school climate (safety) → student SIWB	Two–three levels (student–class–school)	TTL shapes shared climate; climate relates to SIWB; indirect paths more stable than direct higher-level TTL → SIWB paths.
Other mediators	TTL → engagement/identification /motivation → SIWB (± psychological safety)	Single- or multi-level	Engagement, identification, or motivation partially explain TTL–SIWB links; psychological safety sometimes included as additional mediator.
Conditional / moderated effects	TTL → psychological safety → SIWB, moderated by context (e.g., culture, power distance, resources)	Single- or multi-level	Limited evidence; some studies find stronger indirect effects in less hierarchical or more supportive contexts; moderators underused.

Table 5. Summary of Mediating and Cross-Level Effects across Studies

Silences, Inequalities, and Marginalised Voices in the Literature

The picture that emerges across the corpus is one not only of uneven geographical coverage, but also of systematic silences around social inequality and marginalised student groups. As summarised in Table 6, very few studies prioritise the experiences of students from low socioeconomic backgrounds, ethnic and racial minorities, migrants and refugees, and sexual and gender minorities in their analyses of transformational leadership, psychological safety, and innovative work behaviour; most treat samples as socially undifferentiated or only report demographics descriptively. Gender is usually included as a control variable rather than being examined as a dimension that structures who speaks, who takes 'risky' innovative actions, and who is penalised for stepping outside of expected roles. Similarly, class, race/ethnicity, language and disability are rarely theorised as factors influencing exposure to unsafe classrooms or access to supportive leadership. Global South and non-Western systems are underrepresented, with evidence dominated by Anglophone and European settings, and research conducted in English or other globally dominant languages. Linguistic hierarchies and the medium of instruction, which are central to determining who can joke, question or critique, are almost invisible in mainstream models of psychological safety and social identity-based work (SIWB). These gaps are not merely technical limitations; they reflect the cultural power structures inherent in the production of academic knowledge itself. Elite, well-resourced schools and universities are disproportionately considered the 'normal' places where TTL and student innovation are observed, while community schools, alternative programmes and under-resourced public institutions rarely have definitional authority. The result is a field in which the leadership practices, risk perceptions and forms of innovation of privileged groups are implicitly universalised and the everyday negotiations of safety and creativity among marginalised students are statistically diluted or conceptually absent. Recognising these silences is therefore the first step towards re-centring the question of which classrooms should define the standards for effective TTL, and which voices are persistently excluded.

Domain	Main silence / inequality	Implications / needed attention
Social groups	Low-SES, racial/ethnic minority, migrant and sexual minority students rarely foregrounded or disaggregated.	Centre these groups; routinely report and analyse TTL, psychological safety, and SIWB by social position.

Gender	Gender treated mainly as a control; little analysis of who speaks, who risks, who is silenced.	Study gendered patterns of voice and “risky” innovation, and how TTL practices reproduce or challenge them.
Global South & non-Western contexts	Evidence dominated by Anglophone/European systems; Global South work sparse and weakly theorised.	Expand and theorise Global South research; use locally grounded concepts and measures.
Language & voice	Linguistic hierarchies and medium of instruction largely invisible in safety/innovation models.	Examine how language regimes shape who feels safe to question, joke, or criticise.
Power & authority	Classroom power, sanctions, and discipline rarely theorised in TTL–safety–SIWB links.	Frame psychological safety as power-laden; analyse formal and informal sanctions and exclusions.
Assessment & regimes	High-stakes testing and performanceism noted but not analysed as unequal constraints on risk-taking.	Investigate how assessment regimes differently limit/enable innovation for marginalised vs privileged students.
Research sites & “normality”	Elite and well-resourced schools overrepresented; alternative/community schools under-studied.	Diversify sites; question assumptions that high-status institutions define “normal” leadership and innovation.
Table 6. Key Silences and Inequalities Identified in the Literature		

DISCUSSION

Psychological Safety as a Cultural Mechanism of Power, Voice, and Risk

Returning to the multi-level framework in Figure 3, it is clear that psychological safety is best understood as a cultural mechanism that organises power, voice and risk, rather than as an individual emotional state. Studies of voice behaviour demonstrate that culturally ingrained cognitive styles can encourage or discourage speaking up, as they alter what constitutes “appropriate” risk-taking. Psychological safety plays a pivotal role in translating these styles into actual voice behaviour (Yang et al., 2021). In school settings, similar mechanisms operate through classroom language, rituals and rules. For example, how teachers respond to mistakes, how participation is counted, who is allowed to interrupt and whose humour or critique is taken seriously all signal which students are authorised to speak and which are expected to remain silent. Teacher Transformational Leadership (TTL) can disrupt these hierarchies by actively creating playful, low-stakes spaces for experimentation that recode risk as collectively shared rather than individually dangerous (Yang & Wang, 2020). However, TTL may also leave underlying power structures intact, or even intensify them, when praise, mentoring and leadership opportunities are primarily directed towards high-achieving or norm-conforming students. This implicitly defines them as legitimate innovators, while positioning others as ‘at-risk’ or peripheral. Further research on self-sacrificial leadership underscores that leaders’ willingness to assume costs on behalf of their followers enhances psychological safety and encourages voice (Zhang et al., 2020). However, this dynamic can still be distributed selectively along lines of achievement. Behaviour or social identity? When conceptualised in this way, psychological safety becomes part of the cultural politics of schooling. It is the medium through which institutions decide whose knowledge is worth the risk of disruption, whose critique can be tolerated and whose silence becomes normalised. Therefore, a culturally attuned account must ask not only whether classrooms are ‘safe’, but also for whom, in relation to which norms, and at what cost to those who remain unheard.

Classrooms as Sites of Cultural Reproduction and Social Change

When viewed through a cultural-sociological lens, classrooms and schools emerge as pivotal spaces where broader societal norms concerning authority, obedience, competition, and risk are both perpetuated and challenged. Research on English as a Foreign Language (EFL) classroom culture shows that patterns of interaction, shared expectations, and the emotional atmosphere in the classroom can have a significant impact on whether students feel psychologically safe enough to participate, speak up, and experiment. This highlights the close connection between culture, safety, and participation (Tu, 2021). Building on this insight, we distinguish three

ideal-typical patterns of classroom culture: reproductive/compliance-oriented, contested/stratified and transformative/justice-oriented. Each of these patterns is associated with a different configuration of authority, psychological safety and forms of student innovative work behaviour (SIWB), as summarised in Table 7. In reproductive cultures, high-stakes exams, strict hierarchies and competitive grading present risk-taking as dangerous, and 'innovation' is limited to polite, teacher-approved suggestions that leave assessment regimes and curricular authority intact. In contested or stratified classrooms, teacher transformational leadership (TTL) may rhetorically invite participation, yet exam pressure and disciplinary rules remain powerful, producing an uneven safety net whereby advantaged students feel freer to speak, while marginalised peers remain cautious. Transformative cultures, by contrast, resemble grassroots change initiatives in other educational organisations, where everyday practices are deliberately reshaped to democratise voice and redistribute power (Berger et al., 2018). Here, TTL aligns with justice-oriented aims by using authority to create an environment in which critique, dialogue and collaborative problem-solving can flourish. This approach fosters a sense of collective psychological safety, encouraging everyone to question norms rather than viewing it as the privilege of a confident few. Comparative leadership research suggests that such empowering environments are not exclusive to transformational leadership; for example, servant leadership can also encourage psychological safety and innovative behaviour by emphasising care, humility, and the growth of followers (Xiao et al., 2025). In diverse institutional and cultural settings, the relationship between TTL, psychological safety and social identity-based work (SIWB) oscillates between reproduction and transformation. In exam-driven systems, this relationship is often compressed towards compliance. However, in more participatory or justice-oriented environments, student innovation itself can become a form of resistance and voice that prefigures wider social change.

Classroom cultural pattern	Authority, norms, and risk	Psychological safety configuration	Typical SIWB form
Reproductive / compliance-oriented	Strong hierarchy; emphasis on obedience, correctness, competition, and avoiding mistakes; risk-taking discouraged.	Safety = not being humiliated if one is compliant; dissent and critique perceived as risky.	“Polite” or teacher-approved ideas that do not challenge rules, assessments, or teacher authority.
Contested / stratified safety	Mixed messages: participation invited but high-stakes tests and strict rules remain; some groups feel safer than others.	Uneven safety: high-achieving / privileged students feel safer to speak; marginalised students remain cautious or silent.	Incremental, low-risk innovations (e.g., small task improvements) concentrated among already-advantaged students.
Transformative / justice-oriented	Authority used to open space for critique, dialogue, and experimentation; mistakes treated as learning resources.	Broad, inclusive safety to question, disagree, and tell uncomfortable truths, especially for marginalised students.	Critical and collaborative innovation that can question curricula, assessment norms, and wider social inequalities.

Table 7. Classroom Cultural Patterns: From Reproduction to Transformation

Implications for Teachers, School Leaders, and Policymakers across Contexts

In order to translate these insights into practice, coordinated action is required from teachers, school leaders and policymakers across diverse systems. At a classroom level, teachers can promote psychological safety as part of their daily practice by using invitational language, normalising mistakes publicly, and designing activities that encourage students to work together to create criteria, analyse texts, and provide each other with formative feedback. Studies of leadership for learning show that, when curiosity and professional development are encouraged within a psychologically safe environment, adults become more willing to experiment with their teaching methods. This insight can be reflected in how teachers structure opportunities for students to inquire and innovate (Savas et al., 2025a). This also involves actively addressing patterned silences, such as identifying those who rarely volunteer and offering alternative contribution methods (e.g. small groups or written/digital input). It also involves deliberately redistributing 'risky' roles, such as presenting controversial ideas, towards those who are typically marginalised. This ensures that innovation opportunities are not only available to high-status students. For school leaders, evidence on psychosocial safety climates suggests that leadership styles emphasising care, ethical responsibility, and shared influence are more likely to sustain cultures in which multiple adults feel responsible for safeguarding expression and experimentation (Athanasios, 2025). In practice, this involves incorporating 'safe failure' into evaluation and disciplinary systems, protecting teachers who experiment with alternative curricula or assessment methods, and employing school-level policies to legitimise transformational classroom practices rather

than penalising them as deviations. In terms of policy, research on learning-centred leadership mediated by psychological safety and collaboration suggests that reforms to the system can either restrict or expand the scope for such cultures (Savas et al., 2025b). Reforms to the curriculum and assessment that remain focused on performance metrics are likely to treat innovation as a means of optimising test scores. However, frameworks that explicitly recognise psychological safety, critical dialogue and collaborative problem-solving as valuable outcomes can support a shift towards education that is effective, critical, civic and genuinely innovative.

Theoretical Contributions and Future Research Agenda

This review outlines a programme for future research and makes three main theoretical contributions. Firstly, it redefines psychological safety as a cultural mechanism that shapes power, voice and risk rather than as an individual emotion. It demonstrates how leadership practices, institutional rules and social hierarchies collectively determine who can speak up, make mistakes and innovate. Secondly, it connects educational leadership research with cultural sociology and innovation studies. It positions transformational leadership in education alongside post-heroic, shared and servant leadership, which can also encourage agentic, change-oriented behaviour when safety is secured collectively (Bilal et al., 2019). Thirdly, it proposes a multi-level framework linking Student Innovative Work Behaviour (SIWB) to broader social change processes through class- and school-level psychological safety cultures, which are embedded within macro regimes of assessment, governance, and inequality. This extends the emerging secure-base perspective on leadership in education (Khalijan et al., 2024). Building on these contributions, future research should adopt multi-level, longitudinal designs to trace the unfolding dynamics of TTL–safety–SIWB over time. It should also make explicit cross-cultural comparisons that theorise the local meanings of authority, care and innovation. In line with the journal's commitment to de-Eurocentring, there is an urgent need for in-depth qualitative and participatory studies with schools and marginalised groups in the Global South that examine how students interpret safety and innovation themselves, including in digital and hybrid learning spaces where new forms of surveillance, algorithmic visibility and peer comparison reconfigure risk. Finally, researchers should design empirical tests of the propositions and pathways articulated in our synthesised model. For example, they could investigate whether collective forms of leadership that emphasise service, shared responsibility, and mutual protection yield more inclusive patterns of SIWB via psychological safety than more individualised, performance-driven models (Kyambade et al., 2024). Such work would refine the cultural mechanism framework and inform context-sensitive interventions aimed at transforming classrooms from sites of reproduction into laboratories of democratic social change.

CONCLUSION

Synthesising the Main Insights on TTL–Psychological Safety–SIWB

Taken together, the evidence reviewed in this article suggests a consistent, albeit context-dependent, link between teacher transformational leadership (TTL) and student innovative work behaviour (SIWB). In various settings, leadership practices that articulate compelling objectives, demonstrate an openness to learning and provide personalised support have been linked to more frequent and ambitious innovation among students and early-career teachers. This finding is consistent with previous studies in higher education and teaching, which have shown that transformational or learning-oriented leadership fosters innovative work and teaching behaviours (Khan et al., 2019; Tong & Jiang, 2025). Our integrative framework clarifies that this relationship rarely operates as a simple direct effect; rather, psychological safety functions as a multi-level cultural mechanism through which classroom discourse, peer norms, assessment regimes and institutional histories determine who feels able to question, experiment and challenge existing arrangements. When class or school cultures distribute 'voice rights' widely by treating mistakes as valuable learning opportunities, dissent as legitimate and marginalised perspectives as worthy of consideration, TTL is more likely to translate into collaborative, socially attuned SIWB. Where safety is uneven or conditional, however, innovation tends to be restricted to already-privileged groups. Finally, the synthesis highlights that contextual and cultural factors, such as power distance, exam intensity, resource constraints and histories of marginalisation, profoundly moderate the TTL–safety–SIWB chain. This reinforces recent work on collective readiness to innovate in schools serving disadvantaged communities (Beckmann & Klein, 2025). Therefore, the central insight is not merely that 'good leadership boosts innovation', but that leadership matters insofar as it reconfigures the cultural politics of safety and risk, opening (or closing) spaces in which students can practise innovation as a form of participation in ongoing social change.

Contributions to Cultural Analysis, Global South Perspectives, and Educational Change

This review also addresses cultural analysis and social change, treating educational spaces as pivotal arenas in which broader conflicts over language, values, and identity are played out. Research into 'language revolutions' reminds us that schools are located at linguistic crossroads where competing social projects, such as national cohesion, global competitiveness and local identity, are negotiated through everyday pedagogical choices (Odugu, 2020). Similarly, critiques of English-language voluntourism and global citizenship programmes demonstrate how seemingly progressive initiatives can perpetuate hierarchies of value and voice, favouring certain forms of cosmopolitan identity while marginalising others (Jakubiak, 2020). By tracing Teacher Transformational Leadership (TTL), psychological safety, and Student Innovative Work Behaviour (SIWB) as culturally mediated mechanisms, our synthesis contributes to these debates by showing how classroom micro-practices of recognition, sanction, and 'safe failure' translate abstract global discourses into concrete opportunities, or barriers, for student participation in social change. At the same time, the review emphasises the importance of perspectives from the Global South, non-Western communities and marginalised groups, reflecting evidence that higher education shapes values and civic attitudes rather than merely equipping students with skills (Koshy et al., 2023). We therefore argue that educational change agendas must move beyond institutional and technical adjustments, such as new curricula, assessments and leadership frameworks, to foreground cultural mechanisms. This involves considering how power, voice and risk are configured in classrooms, staff rooms and policy discourses, which values and languages are considered legitimate, and how leadership can be mobilised to cultivate psychologically safe cultures in which diverse students can practise innovation as a form of democratic agency.

Limitations and Final Reflections

This review has several limitations that should be taken into account when interpreting its findings. Firstly, our searches were conducted primarily in English and in a finite set of major databases, so relevant work published in other languages, local journals or non-indexed outlets is likely to be underrepresented. Secondly, the included studies vary in design rigour, sample size and analytic depth. Beyond these technical issues, the corpus itself reflects broader patterns of group-based inequality in educational research, where the experiences of marginalised students and institutions are less visible (Marx et al., 2019). As scholars of cultural transmission have demonstrated, educational practices are embedded in wider systems that perpetuate class-based and racialised advantages and disadvantages, frequently through everyday coaching and classroom interactions that seem 'normal' (Calarco, 2014). Therefore, our synthesis of Teacher Transformational Leadership (TTL), psychological safety, and Student Innovative Work Behaviour (SIWB) should be read as a starting map rather than a complete terrain. In an era characterised by intensifying uncertainty, risk, and inequality, cultivating psychologically safe classroom cultures is not only a means of encouraging student innovation, but also a form of social practice, fostering critical judgement, civic responsibility, and collective imagination in the face of entrenched hierarchies. Research on how children explain differences in the classroom shows how quickly they may see inequality as natural or deserved (Goudeau & Cimpian, 2021). This highlights the importance of keeping the mediating cultural mechanism at the centre of future work on leadership and innovation, and asking in every context how power, voice and risk are configured, for whom, and what the implications are for educational justice.

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