

A Sociological Analysis of the Role of School Culture in Teachers' Educational Innovation Adoption: The Mediating Role of Innovative Organizational Climate in Elementary Schools

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Extended Abstract

Background:

Contemporary education systems face rapid scientific, technological, and social change that demands adaptive capacity and continuous innovation. Primary schools—central to children's cognitive, emotional, and social development—are particularly in need of pedagogical innovation to cultivate future-ready skills. Nevertheless, the diffusion and adoption of instructional innovations are often constrained by cultural and organizational barriers such as conservative norms, limited resources, and weak organizational climates. The present study adopts an organizational-sociology and diffusion-of-innovation perspective to investigate how teachers' perceptions of school culture influence their acceptance of instructional innovations, and whether an innovative organizational climate mediates that relationship in the context of primary schools.

Aim:

This research asks: *Does teachers' perception of school culture affect the acceptance of instructional innovations in primary schools, and does an innovative organizational climate mediate this relationship?* Four specific hypotheses guided the study: (H1) school-culture perceptions positively affect innovative organizational climate; (H2) school-culture perceptions positively affect instructional-innovation acceptance; (H3) innovative organizational climate positively affects instructional-innovation acceptance; (H4) innovative organizational climate mediates the relationship between school culture perceptions and innovation acceptance.

Methods:

A descriptive–correlational design employing structural equation modeling (SEM) was used. The population consisted of all primary school teachers in Kongavar County during the 1400–1401 academic year (N = 402). Using stratified random sampling (male/female strata), a sample of 196 teachers was selected based on Morgan's table. Data collection was conducted individually via online questionnaires (during the COVID-19 context). Instruments included three standardized, translated questionnaires: (a) the School Culture Scale (SCS; Grünert & Valentine / Klein-Schmidt adaptation) measuring leadership, collegial support, shared learning, professional development, teacher participation, and unity of purpose; (b) the Innovative Organizational Climate questionnaire assessing support for creativity and resource provision; and (c) the Instructional Innovation Acceptance scale (Anderson et al., 1998) measuring teachers' willingness to adopt new instructional methods. Construct validity was examined with confirmatory factor analysis (CFA); internal consistency reliability was assessed using Cronbach's alpha. Data were analyzed using descriptive statistics, correlation analysis, and SmartPLS SEM/path analysis.

Results:

The SEM results supported the hypothesized model overall and revealed the following standardized path coefficients and significance levels as reported in the manuscript:

- H1 (School culture → Innovative organizational climate): $\beta = 0.721$, $p < 0.01$. Interpretation: Teachers who perceive a more positive, collaborative, trust-based, and supportive school culture report substantially higher levels of an innovative organizational climate.

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- H2 (School culture → Instructional innovation acceptance): $\beta = 0.574$, $p < 0.05$. Interpretation: A participatory, flexible school culture directly increases teachers' propensity to adopt and use instructional innovations.
- H3 (Innovative organizational climate → Instructional innovation acceptance): $\beta = -0.238$, $p < 0.009$.

Note: The reported coefficient carries a negative sign in the manuscript, while the textual discussion treats the climate effect as facilitative. Given theoretical expectations and the accompanying narrative, this negative sign appears inconsistent and may reflect a typographical or reporting error. If interpreted in the theoretical direction implied by the manuscript text, the organizational climate exerts a positive and significant influence on teachers' acceptance of innovation (i.e., climate that provides psychological safety, managerial support, and permission to experiment increases adoption).

- H4 (Indirect effect: School culture → Climate → Adoption): reported indirect effect $\beta = -0.172$, $p < 0.10$.

Note: As with H3, the reported negative sign contrasts with the study's narrative; the authors interpret the indirect effect as a positive partial mediation, indicating that part of culture's impact on adoption is transmitted through the organizational climate.

Subgroup analyses indicated stronger culture→climate→adoption pathways in schools with stable, supportive leadership and frequent collaborative professional development. Pathways were attenuated in resource-constrained or highly centralized administrative settings. Robustness checks across alternate specifications confirmed the central pattern, but causality remains circumscribed by cross-sectional design.

Discussion:

The findings align with organizational theory: school culture establishes broad normative frameworks (trust, collaboration, shared goals) that predispose members to change, while organizational climate operationalizes those values into everyday conditions—support, autonomy, and resource access—that enable teachers to translate intent into practice. The partial mediation pattern suggests that culture affects adoption both directly (shaping values and willingness) and indirectly (by creating a climate that facilitates experimental behavior). The apparent negative coefficient signs reported for climate effects are inconsistent with both theory and the study's written interpretation; researchers should verify these signs in the analytic output and, if they are reporting errors, correct them in final reporting.

Limitations:

Key limitations include the geographic and sample scope (primary teachers from a single county), reliance on self-report measures (potentially leading to common-method variance), and a cross-sectional design that limits causal inference. Translation and adaptation of instruments, while psychometrically evaluated via CFA and Cronbach's alpha, also introduce potential measurement variance that future multi-informant or observational work could address.

Recommendations:

To enhance instructional innovation adoption in primary schools, interventions should combine cultural and climate strategies: cultivate participatory, trust-based cultures (shared pedagogical vision, collegial support) and intentionally build innovative climates (leadership encouragement, resource allocation, autonomy for experimentation, structured opportunities for collaborative professional learning). Policymakers should support training programs that develop leaders' capacity to foster both culture and climate, and monitor climate indicators regularly to identify and remove barriers to innovation.

Conclusion:

This study underscores that school culture and innovative organizational climate function as complementary drivers of teachers' acceptance of instructional innovations. By addressing both cultural foundations and proximal climate conditions, educational leaders and policymakers increase the likelihood that pedagogical innovations will move from isolated pilots to sustainable classroom practice.

Keywords: school culture, innovative organizational climate, instructional innovation acceptance, primary education, structural equation modeling, mediation
