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The Impact Of Physical And Social Changes On Culture-Oriented Educational Environments: A Sociological Approach (Case Study: Qom Metropolis)

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Article Einfo

Abstract

Culture-oriented educational environments play a role beyond mere knowledge transmission, serving as a platform for cultural and social reproduction, and exerting a direct influence on students' learning quality and psychological well-being. In the metropolitan area of Qom, physical characteristics and socio-cultural components, such as spatial perception and interaction patterns, affect stress reduction, enhancement of mental tranquility, and reinforcement of students' social relationships. Conversely, neglecting physical and social standards may result in academic decline and psychological disturbances. This study employs a sociological approach with a mixed-methods design (qualitative–quantitative). The statistical population comprised high school students, and using G*Power software, the sample size was determined as 596 individuals. After data screening, 587 valid questionnaires (51 items based on a Likert scale) were analyzed. Confirmatory factor analysis with a covariance-based approach was applied to evaluate validity and model fit. The findings indicate a significant relationship between the physical quality of culture-oriented schools and students' psychological well-being. These results emphasize that enhancing the physical and social quality of schools—through optimal design, organization, and strengthening of cultural-social foundations—can facilitate cognitive development, mental health, and student flourishing, while at the macro level, reinforcing the social capital of the community.

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Extended Abstract

Introduction

The educational institution has always reflected social, cultural, and physical transformations within society, with schools serving as both educational and cultural spaces that play a crucial role in reproducing values, norms, and social capital. In metropolitan contexts, educational environments face challenges in preserving culture-oriented identities amid physical changes driven by urban development and evolving educational needs, as well as social, familial, and cultural transformations. The physical transformation of schools—from traditional classrooms to multifunctional and flexible spaces—represents not only architectural considerations but also responses to educational demands and societal expectations. Simultaneously, social changes, such as cultural diversity and shifts in family structures, have altered the expectations of students and parents, influencing the overall quality of the educational environment. From a sociological perspective, schools, as social environments, provide a setting for teacher-student interactions and reflect cultural values; physical changes are effective only when aligned with social and cultural transformations. Otherwise, they may lead to cultural conflicts, reduced sense of belonging, and a decline in learning quality. Therefore, examining the simultaneous impact of physical and social changes on the culture-oriented identity of educational environments is essential. The city of Qom, as a prominent case study, offers the opportunity to analyze how physical and social transformations in schools align with or contradict societal cultural values and to what extent they preserve and reproduce the culture-oriented identity of educational spaces. This study addresses the research question: How do physical and social changes in Qom affect the culture-oriented identity of educational environments? It hypothesizes that alignment between these changes and social-cultural transformations enhances culture-oriented identity and students' social capital, whereas misalignment weakens them.

Methodology

This correlational study employed a mixed-methods design (qualitative–quantitative) with a sociological approach to examine the impact of physical changes and socio-cultural components on students' psychological well-being in culture-oriented schools in Qom. The mixed-methods approach enabled simultaneous analysis of quantitative relationships between school physical quality and psychological well-being, as well as students' social perceptions and experiences. The statistical population consisted of high school students in Qom, with a sample size of 596 determined using G*Power (effect size = 0.05, confidence level = 99%, power = 95%), and after data screening, 587 valid questionnaires were analyzed. Systematic probabilistic sampling was employed, and data collection tools included a 51-item Likert-scale questionnaire and semi-structured interviews. The questionnaire measured the independent variable (physical quality, including temperature and materials, spatial organization, spatial perception, landscape and view, structure and layout) and the dependent variable (students' psychological well-being). Instrument validity was confirmed through CVI, CVR, and expert review, and reliability was verified via Cronbach's alpha. Quantitative data were analyzed using descriptive statistics and covariance-based confirmatory factor analysis (CFA), while qualitative data were examined through content analysis and thematic coding to identify patterns of social interaction, spatial perception, and cultural factors influencing students' psychological well-being. Measurement indices included physical components such as temperature, materials, spatial organization and layout, lighting and color, natural elements, and landscape, as well as psychological well-being indicators, including physical, mental, and behavioral states, and life satisfaction, all analyzed to evaluate the relationship between culture-oriented educational environments and students' mental health.

Results And Discussion

The findings indicated that the physical quality and socio-cultural components of culture-oriented schools in Qom have a significant impact on students' psychological well-being. Analysis of 587 valid questionnaires using statistical tests, including KMO, Bartlett's test, exploratory factor analysis, and structural equation modeling (PLS), identified six main physical and socio-cultural factors explaining approximately 79.41% of the variance in psychological well-being. Key indicators included temperature and materials, spatial organization and layout, spatial perception, environmental landscape and view, and socio-cultural interactions, all directly associated with students' mental health. The results highlight that simultaneous attention to physical and social dimensions of schools reduces stress, enhances mental tranquility, strengthens social relationships, and promotes students' social capital. Factor loadings, R^2, and GOF indices all indicated high reliability, validity, and quality of the research model. The study concludes that the physical environment of schools functions not only as an architectural dimension but also as a platform for social interactions and active learning experiences. Alignment between physical changes and socio-cultural components positively affects students' psychological well-being and sense of belonging. Culture-oriented educational environments, when physical and social transformations are synchronized, can play a crucial role in fostering cognitive, psychological, and social development of students. The study recommends that the design of future schools prioritize spatial flexibility, active student participation, and concurrent consideration of cultural and social dimensions to transform schools into hubs of social and cultural development.