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Data-driven diagnosis for idle and underutilized educational facilities

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Summary

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In the case of national and public buildings, issues related to underutilization have emerged with respect to both reserve use and public utilization. In particular, in large metropolitan areas, the policy necessity of complex utilization for optimal and efficient public use is being actively discussed. In contrast, in medium-sized cities and rural or fishing communities, policy attention is increasingly directed toward the sale or conversion of underutilized national and public buildings, largely due to population decline.

Among these, educational facilities require a strategic approach that considers complex use of idle spaces, conversion and sale of closed schools, regionally tailored utilization, and the development of partnerships with the private sector. The purpose of this study is to develop a diagnostic method for underutilized educational facilities and to propose policy responses for their effective utilization.

For the research, we examined the current status of national and public assets, as well as the present conditions and key issues concerning educational facilities, which constitute the focus of this study. We also reviewed the limitations and challenges of utilizing underutilized educational facilities. Furthermore, we developed a diagnostic tool, US-TI (Underutilized School Type Indicators), for assessing such facilities, and applied it in practice. Based on a realistically adjusted set of criteria, the diagnostic results forecast that by 2035 there will be 4,957 idle or underutilized schools. Classification of these schools showed that, among urban-type (U) categories, UDFC (Dense + Focused + Characteristic) accounted for the largest share at approximately

20%. Among non-urban-type (R) categories, RDSO (Dense + Shared + Ordinary) represented the highest proportion, at about 13%.

In response to the anticipated large-scale occurrence of underutilized educational facilities, this study explored potential policy measures. The proposed policy responses include the establishment of diagnostic measures for underutilized educational facilities, diversification of strategies for the utilization and complex use of idle spaces, and the development of customized approaches to increase the diversity of closed-school uses. In addition, the study proposes institutional improvements that are linked to national policies.

Keywords :

Educational facilities, Publicly owned buildings, Idle space, Multifunctional utilization