

## On the Introduction of Geographic Information System in Urban Planning Education: A Case of Practicum in Urban Masterplanning

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Geographic Information System (GIS) has come to be widely used in Urban Planning Education. However, pedagogy of GIS has not been established yet and GIS is often regarded just a tool.

This study aims to provide educational material utilising GIS in Urban Planning Education and discuss its significance. The case is on the practicum in urban planning at College of Policy and Planning Sciences, University of Tsukuba, in which students are required to propose urban masterplan of Tsuchiura city. They are required to show not only conceptual design but also quantitative analysis. In this practicum, land-use/location model and transportation model are provided for their quantitative analyse. As a transportation model, JICA-STRADA is employed. We developed an original Excel-based land-use/location model named CUET, which stands for Computable Urban Economic Model for Tsukuba-Tsuchiura Area.

Beside those applications, this study introduced GIS so as to help students learn heuristic approach and make the most use of the models. We employed ArcGIS and developed an environment which enables easy data conversion. This brings about the desired results beyond that students exploit the models. We are now developing a new system in which CUTE and JICA-STRADA are linked with ArcGIS by Visual Basic for Application. The new system is expected to enable ArcGIS to work as the core and interface of both land-use/location and transportation models.

Reference: Tsutsumi, M., Mutoh, S., and Okamoto N. (2005): On the Roles and Tasks of Land-Use Model in University Education: The Case of a Practicum at College of Policy and Planning Sciences, University of Tsukuba, Proceedings of Infrastructure Planning Vol.31 (CD-ROM: No.176).

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