

Developing an Online History Educational System to Present the Progression of Spatial Regions

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Abstract

This research developed an online history educational System, named HES-SPATO2. It is unique in that it integrates the indispensable elements of history events such as person, space, and time for increasing the understandability of complicated history learning materials. HES-SPATO2 employed GIS concept of information layers and web-based technology to help students acquire skills for historical thinking. In HES-SPATO2, history learning objects can be formed by integrating the elements of history events to specify “who” initiated the history event, “whom” the event influenced, “what” they did, “when” the event happened, and “where” the event happened. HES-SPATO2 applied temporal logic to reason the temporal relationships between history events. It also applied spatial logic to reason the spatial relationships between regions. Combining temporal logic and spatial logic makes it possible to present not only movements of persons and explanation texts but also the progression of spatial regions along the history events in animation defined in each SPATO (Spatial, Person, Action/Attribute, and Temporal Object) and therefore makes the learning material more understandable. This system not only brings us the obvious advantage of anywhere-anytime learning but also provides ways to revitalize the teaching and learning of history.

Keyword : history educational system, GIS, temporal logic, spatial logic