

The Analysis of Mapping Bilingual Lexical Semantics for Knowledge Organization Systems

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The study aims to examine the process of mapping knowledge organization systems of different languages (English and Chinese). Specifically, this study analyzes the types of vocabulary equivalence and the types of matches between conceptual structures, and the related issues. Data are collected from the terms from the Art & Architecture Thesaurus (AAT) developed by Getty Research Institute (US), and the controlled vocabularies from National Palace Museum (Taiwan) participating in Taiwan e-Learning and Digital Archives Program (TELDAP). In respect of data analysis, mapping analysis and content analysis are both adopted. Results of the study show that among the four types of vocabulary equivalence, “exact equivalence” is the type that appears most frequently, followed by “partial equivalence” (species-genus relationship), “non-equivalence” and “inexact equivalence.” As for the similarity between conceptual structures of different systems, the degree of similarity can be divided into four types, including: (1) similar structure, transferring part of the structure of source language (SL) into the system of target language (TL) by using the method of modeling; (2) similar structure, but the structure of SL needs to be expanded or revised; (3) dissimilar structure, the term in TL can be partially mapped to the term in SL; (4) lack of structure, no matches between TL and SL. Final conclusions of this research are: (1) the vocabularies in different languages and knowledge organization systems under the same domain can be highly compatible (including the degree of vocabulary equivalence, and high similarity between conceptual structures), though there might be cultural-specific concepts and terms that are not mutually included yet. The next step is to further develop and design a conceptual structure that can incorporate more perspectives and viewpoints. (2) According to the case study of TELDAP, preliminary findings indicate that the conceptual structure and terms of AAT can fulfill most of needs of the case of the National Palace Museum, providing larger contextual structures and linking with in-depth terms in the National Palace Museum. The result has great significance for the future design and development of Chinese AAT, which can not only save the cost of building a whole new system, but also advance the development and interoperability of Chinese-English bilingual knowledge organization systems in the domain of art.