

Multilingual Multimedia Thesaurus for Conservation and Restoration – Collaborative Networked Model of Construction

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Summary

Standardization and systematization of terminology within the area of cultural heritage preservation in Croatia will be done by a construction of a model of multilingual multimedia thesaurus through collaboration of experts for conservation and restoration implying the participation of different competences in a community of practice in a network based environment by use of information technologies.

A model of controlled dynamic vocabulary with hierarchically connected concepts will be constructed. The source language for thesaurus construction will be Italian, based on three basic relationships terms: equivalence, hierarchical and associative. The number of terms will be limited to cca. 500 preferred terms subdivided into hierarchies. The hypertextual and hypermedial thesaurus would be placed on a web for online browsing and upgrading. The multilingual lexical organization followed by multimedia presentations could be a benefit for the development of conservation and restoration profession in the field of cultural heritage preservation and for joining future European cultural projects. It could also play a significant role in the mobility initiatives aimed at study, conservation, restoration and the appreciation of historic and artistic heritage.

Key words: terminology, cultural heritage preservation, multilingual thesaurus, multimedia, collaborative system, community of practice, open network

Introduction

Guidelines for professional development in the area of cultural heritage preservation in Croatia underline the need for standardization and systematization of terminology within this interdisciplinary field. This could be done by a construction of a model of multilingual multimedia thesaurus using a collaborative system of a community of practice in a networked open environment. A model of controlled dynamic vocabulary with hierarchically connected concepts will be constructed through collaboration of experts by use of information technolo-

gies. The hypertextual and hypermedial thesaurus will be placed on a web for online browsing and upgrading.

Theoretical background

Theoretical background consists of the works of key authors in the field of thesaurus construction, international guidelines from the area of documentation of cultural heritage, the relevant ISO standards and existing thesauri of cultural heritage as well as previous experience and achievements in establishing a unified nomenclature and classification in Croatia.

The current historical moment is strongly influenced by the possibilities offered by new technologies, especially networks for research, dissemination and data archiving. Today it is possible to manage extensive data banks and thanks to multimedia environment it is possible to create a basis for context reflection. With numerous initiatives the European Commission encourages the linking of certain targets (usually to overcome language barriers within the EU) with the optimal use of information technologies. Among the initiatives are projects such as: Argos (Art and Restoration Glossary Operating System) financed under INFO2000, then PlasterArchitecture, (<http://www.palazzospinelli.org/plaster/>) and LMCR (Lessico multilingue tecnico-scientifico di conservazione e restauro) which are co-financed within the framework of EU Culture 2000.

Here are also examples of Paul Getty Foundation AAT - Art & Architecture Thesaurus, Altarpieces - illustrated basic terminology, and Conservation and Art Materials Dictionary Museum of Fine Arts, Boston (<http://www.mfa.org/conservation>) and others, and finally The multilingual thesaurus attached to the HEREIN project (<http://thesaurus.european-heritage.net/sdx/herein/thesaurus/introduction.xsp>).

Area of research

Research and analysis in the field of language of cultural heritage preservation refer to several different disciplines, each of which has an important role in the approach to the project of restoration and conservation of cultural heritage artefacts: the history of art, knowledge of techniques and materials for conservation and restoration of various artefacts, natural sciences such as chemistry and biology, etc. In case when language refers to different art techniques, their specific instruments and materials, research is linked to a variety of traditions, whose use of lexical meaning can take different values with respect to the period, the context and the geographical area of use. This complexity too is part of the specific cultural heritage to be preserved and transmitted.

In such a complex area demanding a variety of competences a starting point for building a Multilingual Thesaurus will be the analysis and comparison of existing relevant specialized texts from Italian and Croatian-speaking areas. Because professional terminology is characterized by higher levels of accuracy, its analysis and systematization seek conceptual professional knowledge. Thor-

ough inquiry into the relevant literature and existing thesauri, in co-operation between experts of this interdisciplinary field the structure of a database for compiling the Thesaurus will be determined.

Aim of research

The basic objective of this work is the creation of a model of multilingual multimedia Thesaurus in the field of art conservation and restoration with the use of a collaborative web-based environment that will provide an interdisciplinary approach to research and analysis of specialized texts where cooperation between cultural heritage professionals, IT and language experts will be possible. Thesaurus should support terminological uniformity and the correct interpretation of professional texts and manuals.

IT tools would enable the creation of an online Thesaurus that, although incomplete, would have the quality of practical applicability. The web-based network would be used as a laboratory for future building and updating a more exhaustive thesaurus which will start up continuous interaction between students, professionals and researchers in the field of art conservation and restoration from the Italian and Croatian contexts. Such a thesaurus would also help to overcome communicational and intercultural obstacles within this specific context.

In the introductory part a brief historical overview to the present day of the Italian and Croatian literature and lexicography in the field of art conservation and restoration will be shown. On the basis of relevant professional texts intercultural differences in art conservation-restoration profession between Croatian and Italian-speaking areas will be identified, all with the goal of standardization of terminology for the Croatian language in the field of art conservation and restoration.

The construction of a Multilingual multimedia Thesaurus will be started up through the collaborative system by creating a permanent network between institutions in the field of art conservation and restoration with the aim of developing, upgrading and homogeneous use of terminology.

Thesaurus would eventually contribute to the promotion of exchange of traditions, experiences, techniques, tools and different methods of art conservation and restoration workshops and schools, between Italy and Croatia.

Fundamental research review starts with the following hypothesis:

- The terminology of art conservation and restoration for Croatian language has not been systematically studied nor standardized
- Collaborative network tools provide a quality interdisciplinary approach and create a more precise contextual Multilingual Thesaurus construction.
- A construction of a Multilingual multimedia Thesaurus allows more accurate contextual understanding and lexical acquisition.
- Multilingual multimedia database contributes to consistency of translations of specialized texts.

Methodological procedures

Matter to be used in this research consists of relevant textual and, when possible, multimedia records from the theory of art conservation and restoration, both in Italian and Croatian, as of studies and manuals on the techniques and materials used in the preservation and restoration of tangible artifacts of cultural heritage. Methodology: the source language for thesaurus construction will be Italian, based on three basic relationships terms: equivalence, hierarchical and associative. The number of terms will be limited to 500 preferred terms subdivided into hierarchies. Comparative analysis of existing sources, data collection, translation, deductive methods of collecting terms, all in collaboration with a group of experts, inductive method of inclusion of new names, photographic collecting, descriptive methods for certain objects or procedures, collection of samples, statistical methods of processing the results, prescriptive methods through the proposal after analyzing the status, etc.

Research will be conducted in collaboration with students of undergraduate and graduate studies of the Department of Arts and restoration at the University of Dubrovnik, who study art conservation and restoration both in Croatian and Italian language, as well as in cooperation with their teachers and mentors in the profession, from the Croatian and Italian-speaking areas. Cooperation will be started up in an open network environment. Specialized articles and texts from the selected context will be analyzed with the aim of defining the relevant terminology.

Lexical equivalents between these two languages will be defined through comparison and translation. Equivalents, descriptors and definitions in Croatian language will be imported in the thesaurus, and where it will be possible, with the accompanying media and iconographic material that contribute to explanations of each term.

In order to demonstrate the usefulness of this model of Thesaurus construction research will be carried out on possibilities of thesaurus construction with a control group of students of Italian language in Croatia who have no knowledge of art conservation and restoration. In order to examine the consistency of professional texts translation with students of art conservation and restoration and a control group of students a model of multilingual multimedia thesaurus will be used when translating technical texts.

Expected scientific and practical contribution

Considering that in Croatia the terminology in the field of art conservation and restoration has not been systematically investigated a model of Multilingual multimedia Thesaurus of art conservation and restoration (with Croatian - Italian equivalents) based on models of some of the existing multilingual Thesaurus would be set up. Such a project would be in accordance with the guidelines of modern language technology projects in which the emphasis is on the development of the multimedia interface as a means for communication between hu-

mans and computers, as on the development of semantic-based system that would allow access to stored data.

We expect this study to provide new insights into the Croatian terminology in the field of art conservation and restoration, which would improve communication between experts and researchers in this area and enable participation in future European projects of cultural heritage preservation. We also hope to get insight into the degree of connection of collaborative tools and possibilities of creating Multilingual multimedia Thesaurus. These results could also contribute to illuminate the role of the use of e-technologies in the process of professional lexical acquisition.

Draft structure of a thesis

The work will consist of two parts: the first part will bring the actuality of a subject choice and selection of topics and will elaborate the organization of knowledge in the field of conservation and restoration of tangible cultural heritage, in the second part will appear a model Thesaurus with about 500 lemma in the form of alphabetical printing and hierarchical display.

Art conservation and restoration profession and legal background to these activities in Croatia and Italy will be presented. Review of relevant Croatian-Italian experiences in this area, as well as in the area of the establishment of computer databases and information systems of cultural heritage will be exposed.

A thesaurus as a controlled terminological dictionary will be analyzed followed by representation of Thesauri in Italian language in the field of art conservation and restoration and the world's leading multilingual Thesauri for cultural heritage.

The need for construction of a thesaurus of art conservation and restoration for Croatian language will be exposed and the collaborative approach within the community practice for its modeling will be described.

The results of research conducted in the area of lexical acquisition in developing and applying a thesaurus in a network environment and application of Thesaurus in translating technical texts in the field of art conservation and restoration.

Conclusion

The network of relevant institutions and experts for conservation and restoration implying the participation of different competences will be organized with the scope to build a thesaurus for conservation and restoration with scientifically detailed definitions subscribed by two languages, Italian and Croatian, to decrease the terminological confusion around the subject. The hypertextual and hypermedia thesaurus would be placed on a web for online browsing and upgrading. The results of the model of Thesaurus construction could be continued to achieve the systematic accomplishment of a complete multilingual Thesaurus of conservation and restoration. The multilingual lexical organisation followed

by multimedia presentations could be a benefit for the development of conservation and restoration profession, for the cultural heritage preservation and for joining future European cultural projects. It could also play a significant role in the mobility initiatives aimed at study, conservation, restoration and the appreciation of historic and artistic heritage.

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