

# **CLUSTER ANALYSIS AS METHODOLOGICAL TOOL OF RESEARCH OF LIBRARIES**

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The simple technology of hierarchical agglomerative cluster analysis of twenty different libraries is presented, and described with the samples of classified features of the same size. The proximity matrix is built for conducting the cluster analysis, using the table "Library and classification criteria" and selecting the appropriate metric for calculating the distance of closeness between each library. This technology is implemented in an environment of Microsoft Excel-2003. It includes the creating the table "object-property", the building the proximity matrix, and the defining the structure of the dendrogram and the interpretation of clusters.

As a final procedure of the agglomerative hierarchical cluster analysis, the authors determined the dendrogram parameters, its construction and interpretation concerning the choice of clusters and their number. The building such a tree gives the hierarchical order of object clusters: the higher level is (greater distance between clusters is the vertical axis), the more objects are in clusters.

The application of cluster method contributes to the creating the algorithms of efficient information retrieval, and the building of evidence-based classification systems oriented to the librarianship. The method of hierarchical agglomerative cluster analysis can be used in typological or semantic distribution of the library stocks and studying the thematic and specific structure. This method can be considered as universal, which gives possibility to formalize the typological division of any objects in the field of librarianship and social communications.

Keywords – the cluster analysis , the object-property table, the proximity matrix, dendrogram, clusters.