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MATHEMATICAL MODEL STRUCTURE OF HIERARCHICAL STANDARDS INFLUENCING THE DESIGN QUALITY  
OF ELECTRONIC EDITIONS FOR VISUALLY IMPAIRED CHILDREN

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**Research methodology.** The stages and technology system matrix analysis and graph theory have been applied for basic research results in the scientific work. Namely, to structurize relationships between factors influencing the design process of electronic editions for visually impaired children, the methods of graph theory have been applied. To build a hierarchical structured model of priority factors influencing the design of electronic editions, the methodology matrix with system analysis and the theory of hierarchical systems have been used.

**Results.** The main result is the selection of the set of electronic edition design factors. The graph of links between factors that affect the design process of electronic editions for visually impaired children has been constructed. The mathematical hierarchically structured models of priority factors which influence the design of electronic editions have been done. It will enable the stages of design editions to identify the main factors in the degree of their influence on the development of the edition.

**Novelty.** The links between the factors which influence the design process of electronic editions for visually impaired children have been formulated for the first time. The hierarchical model-based design factors with a graph of links between them, distance matrix and iterative procedures, which will ensure the continued use of stages in the development and optimization of electronic editions for visually impaired children, have been defined as well.

**The practical significance.** The practical implementation of the proposed model is that it will allow a full analysis of the stages of the electronic edition development focused on visually impaired children.