

# KNOWLEDGE ORGANIZATION IN PHYSICS TEXT BOOKS: A CASE STUDY OF MAGNETOSTATICS.

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### **Abstract:**

Textbooks often provide teachers and students a conception of how scientific knowledge is organized. Therefore, it is important to recognize what is the picture of knowledge conveyed by the textbooks. In this study, the knowledge organization in physics textbooks is analyzed from the viewpoint of how the basic elements in the topics of Biot-Savart and Ampere's law are structurally linked. The method of analysis is based on the interpretative analysis, which (a) recognizes basic elements and (b) identifies the categories of links that connect basic elements. Concept maps are used to represent knowledge of textbooks. The results indicate that content knowledge of textbooks consist of somehow identical basic elements and categories of links and thus different knowledge organizations. The possibility to recognize these differences in textbooks materials is a first step towards developing more effective teaching and learning solutions and curriculum plans.

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