How much logical structure is helpful in content-based argumentation software for legal case solving?

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Abstract: Current argumentation support software often employs graphical representations of logical relationships. Little is known about the extent to which logical structuring helps to increase a user’s task performance. In this research, various levels of graphical representation of the logical structure of legal subject matter are experimentally compared in terms of performance. It is shown that logical structuring significantly increases task performance, but we have found no evidence that the extensive representation of logical structure as employed by several contemporary software applications is more effective or usable than a simplified graphical representation that was previously implemented in an application called ArguGuide.