

An Interactive Knowledge-based Learning Environment for Transferring Health Knowledge

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This paper describes a narrative based interactive intelligent learning environment which aims to elucidate reasoning using interactive scenarios that may be used in training novices ICU nurses in the application of their knowledge and decision making. Its design is based on an approach to generating narrative from knowledge that has been modelled in specific decision/reasoning domains. The approach uses a narrative model that is guided partially by inference and contextual information contained in the particular knowledge representation used, the Generic/Actual argument model of structured reasoning. The approach is described with examples in the area of critical care nursing knowledge and training. A study of the effectiveness of this approach on learning outcomes was conducted with final year nursing students and provides evidence of significantly improved learning outcomes as well as engagement.