

# Designing Narrative Slideshows for Learning Analytics

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**Abstract—** The practical power of data visualization is currently attracting much attention in the e-learning domain. A growing number of studies have been conducted in recent years to help instructors better analyze learner behavior and reflect on their teaching. However, current elearning dashboards and visualization systems usually require a lot of time and effort into the exploration process. Moreover, the lack of communication power of existing systems constrains users from organizing the narrative of information pieces into a compelling data story. In this paper, we have proposed a narrative visualization approach with an interactive slideshow that helps instructors and education experts explore potential learning patterns and convey data stories. This approach contains three key components: guided-tour concept, drill-down path, and dig-in exploration dimension. The use cases further demonstrate the potential of employing this visual narrative approach in the e-learning context.

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