

Using Data Comics to Enhance Visualization Literacy

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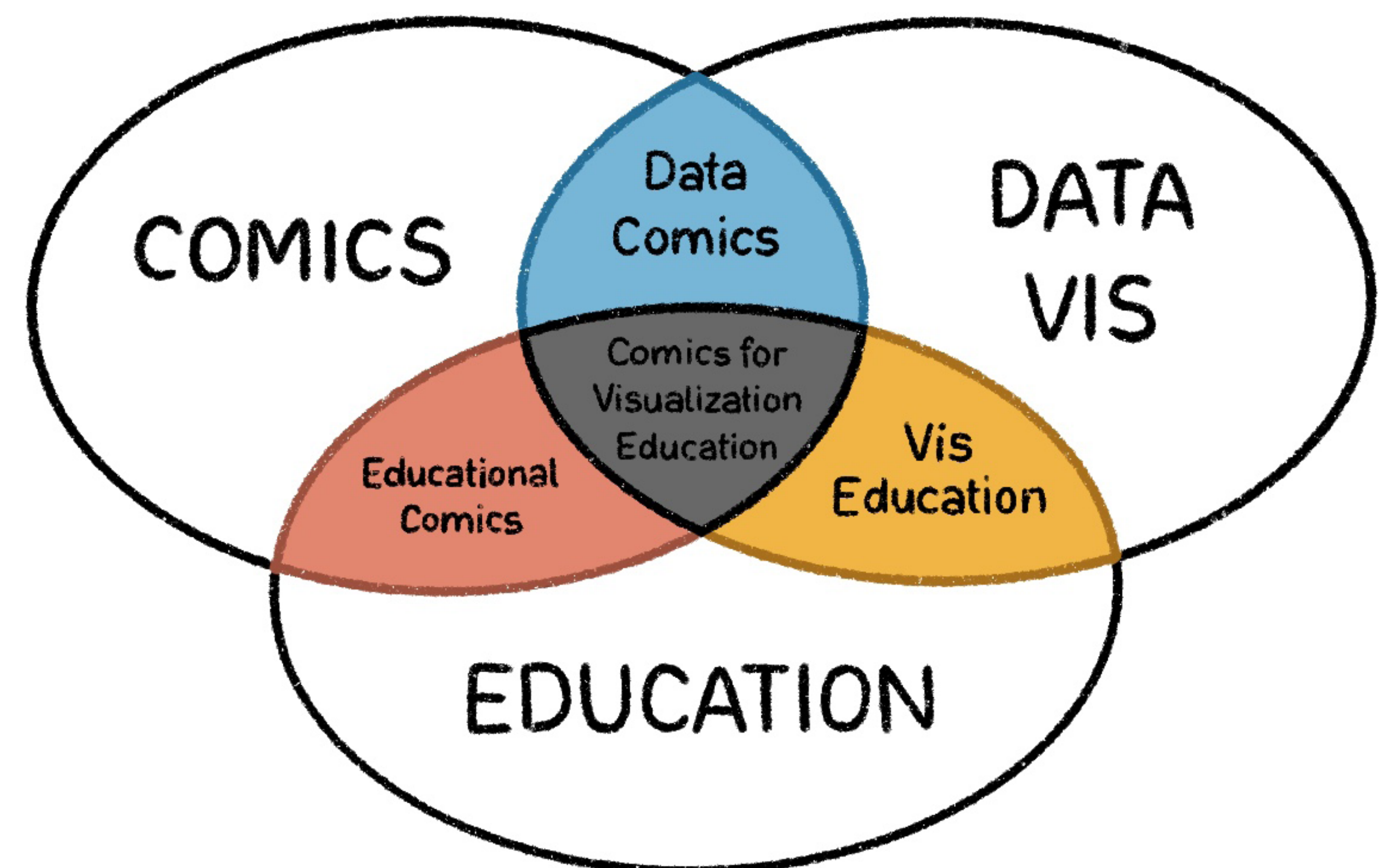
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Introduction

General education seldomly covers visualization techniques more complex than simple business charts. However, visualization literacy is becoming an important skill, which is why tailored, hands-on guides on understanding and solving problems with data visualizations are needed. Through a systematic literature survey, we provide an insight into the research landscape of using comics to teach visualization.



Educational Comics

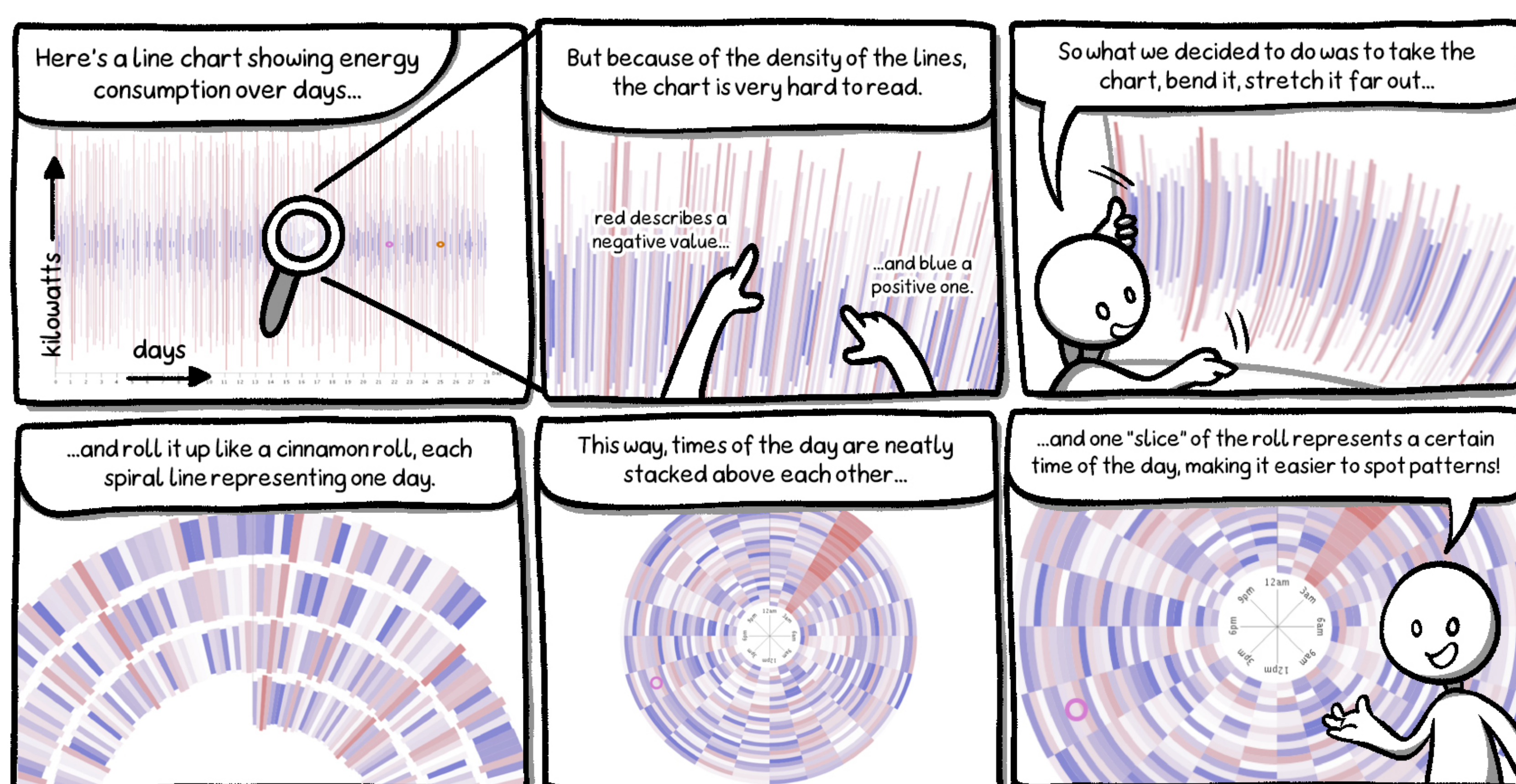
- Comics enhance engagement through multimodality, accessibility, and possibility for self-reference.
- A lot of comics are used in classroom contexts, but non-fiction comics for adults are becoming popular as well.

Data Comics

- Communicate Vis insights through the comic format.
- Enhance understanding.
- Studies on design patterns, authoring tools, and interactivity have been conducted.
- Teaching aspects have not been considered so far.

Visualization Education

- Hands-on activities preferred over sole didactic learning.
- Efforts are growing and research is carried out on teaching methods, interactive learning tools, visualization onboarding, user assistance, and guidance in visualization.



An example data comic explaining the visual mapping of a spiral chart based on a line graph. (Charts by Ruchikachorn and Mueller, 2015: <https://doi.org/10.1109/TVCG.2015.2413786>)

Conclusion & Future Work

We aim to expand our literature survey and address open questions that result from the combination of all research areas; such as how to facilitate comic creation, how to evaluate them, how they fare in terms of explicit vs. implicit teaching, or how to integrate them into interactive scenarios.