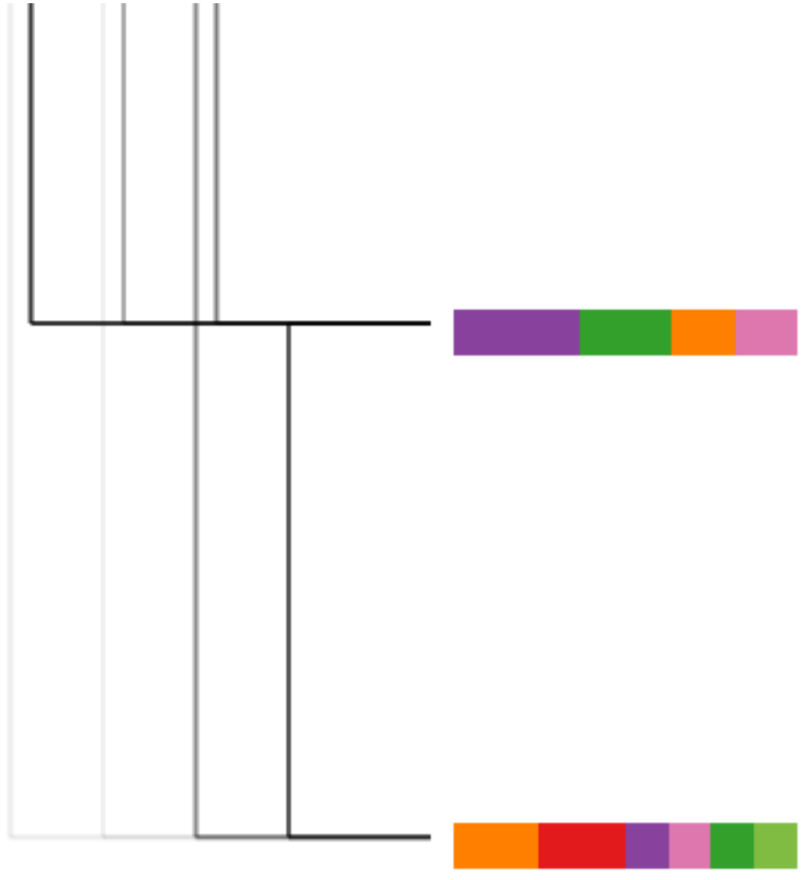


Cohesion

The text's ability to connect concepts is called cohesion. It consists of multiple linguistic features, not all covered here. While the reader's interpretation is subjective, it might be influenced by the text's cohesion.



263 Historical⁵ items¹ have similar⁷ complex² data² dimensions² as⁵ biographies⁶, as⁵ only the viewpoint is switched to objects⁷ instead⁷ of persons².

264 It reaches from combining³ maps¹ and⁷ timelines⁷ to specialized⁶ Space⁵- Time⁵ Cubes⁵.

265 As⁵ before¹, interactions⁴ like⁴ linking⁴, filtering⁴, and⁷ selecting⁴ and⁷ showing¹ details⁴ on demand⁴ play⁴ an important role.

161 Trajectories display the continuous movement behavior of an entity over space and time.

162 Mostly, they are visualized by three - dimensional Space - Time Cubes .

163 displays the movement behavior during a trip with a Space - Time Cube , where its path and stations are highlighted .

164 Furthermore , the path can be enriched with qualitative and quantitative information by coloring or varying the width .

165 It also can be enhanced by linking multimedia objects , whose details are displayed on demand .

Words of Topic 5

time space historical cube
 figures cubes dimensional
 highlight context comparing
 visualized interwoven spread
 interaction exploration connect enables
 able description trait propose triangle
 pattern hot

5 time space historical

CohExplore: Visually Supporting Students in Exploring Text Cohesion

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ABSTRACT

A cohesive text allows readers to follow the described ideas and events. Exploring cohesion in text might aid students enhancing their academic writing. We introduce CohExplore, which promotes exploring and reflecting on cohesion of a given text by visualizing computed cohesion-related metrics on an overview and detailed level. Detected topics are color-coded, semantic similarity is shown via lines, while connectives and co-references in a paragraph are encoded using text decoration. Demonstrating the system, we share insights about a student-authored text.

APPLICATION EXAMPLE

- Imbalanced structure in the Overview Panel: Only one chapter, “Visualizations of Historical Figures and Events”, has subchapters; Further, imbalanced similarity based on the similarity lines
- High similarity of the subchapters “Movement Behavior and Analysis of Historical Items”: Common themes one topic1 and five topic5
- Conclusion section has highly varying similarities between sentences: Varying pie chart colors indicate abrupt topic shifts (l. 263, l. 264, and l. 265); Absence of co-references might make the section harder to follow.

DOCUMENT OVERVIEW

- Displays similarities of chapters and paragraphs with similarity lines, ordered hierarchically
- Headings (B₁) column shows the hierarchical structure of the text
- Paragraphs column (B₂) displays the topic distribution of paragraphs as colored stacked bars

LEGEND

- Explains cohesion features and visual encodings
- Hovering highlights them in the interface

TOPIC BARS

- Show the discovered topics at the bottom as a horizontal stacked bar
- Color-coded consistently in the interface
- Hovering shows their word list

TEXT HIGHLIGHTING

- Selecting a paragraph shows the topic words in their respective color

TEXT PANEL

- Pie charts show the topic distribution of sentences
- Arcs depict the semantic similarity within a paragraph
- Text decorations display local features: co-references, connectives, and a word's topic
- Co-references are underlined in the first and given a grey background on subsequent occurrences
- Connectives are emphasized in **bold**