Presentation

Inputlog 6.0: Eye tracking. Defining reading during writing.

Reference:
Defining reading during writing

- Reading the emerging text on the screen
- During pauses and production
- Different purposes
- Combine keystroke logging with eye tracking
- Explore and interpret characteristics and the function of reading during writing
- Define a pattern of reading during writing

Schematical overview

Reading during fluent and non-fluent writing

- Traditional pause threshold (2000ms)
- Cognitive activities between 200ms and 2000ms
- Take personal typing skill into account

Hunt and Peck

Monitor gazer
Set up experiment

- Participants (university students)
  - N = 16
  - Mean age = 21.9
  - Typing course
  - Monitor gazers
  - Used 10 fingers when typing
  - Dutch L1

1. Reading test
2. Descriptive writing task
3. Typing test
4. Sentence production tasks
   - Fluent writing
   - Non-fluent writing (spelling difficulty)
   - Non-fluent writing (revision at word level)
   - Non-fluent writing (revision at sentence level)

Set up experiment

- All sentences were controlled for
  - Number of words;
  - Number of characters;
  - Word length (M & SD);
  - Grammatical characteristics;
  - Word frequency.

- Sentences are dictated in an audio fragment

Personal pause threshold

- Based on typing test (2min)
  - Mean interkey pause time (+1sd)
  - Median interkey pause time (+1sd)
  - Mean interkey pause time within words (+1sd)
  - Median interkey pause time within words (+1sd)
  - Task optimum (fluency test inputlog)(+1sd)

Pause treshold

[Graph showing interkey pause times]
Percentage non-fluent writing

Mean production time

Number of fixations

Percentage of fixations

Mean fixation duration

Reading during writing

- Start from traditional reading measures
- Develop new measures
Example 1

Het egel-tje heeft de hele winter al gesl[

Example 2

Vandaag ga ik een taart bakken voor vrienden

Example 3

De reis-gids leidt ons door de smalle straten.

Blue = fluent written text
Orange = non-fluent written text
Example 4

Further explorations

- Not only look at individual fixations
- Are there regular patterns?
- How can we define these patterns?
- Data and process mining?
- Presentation by Jochen De Weerdt

Ik pak iedere ochtend de fiets richting werk