



Late teenagers  
Online  
Information  
Search

**LOIS**

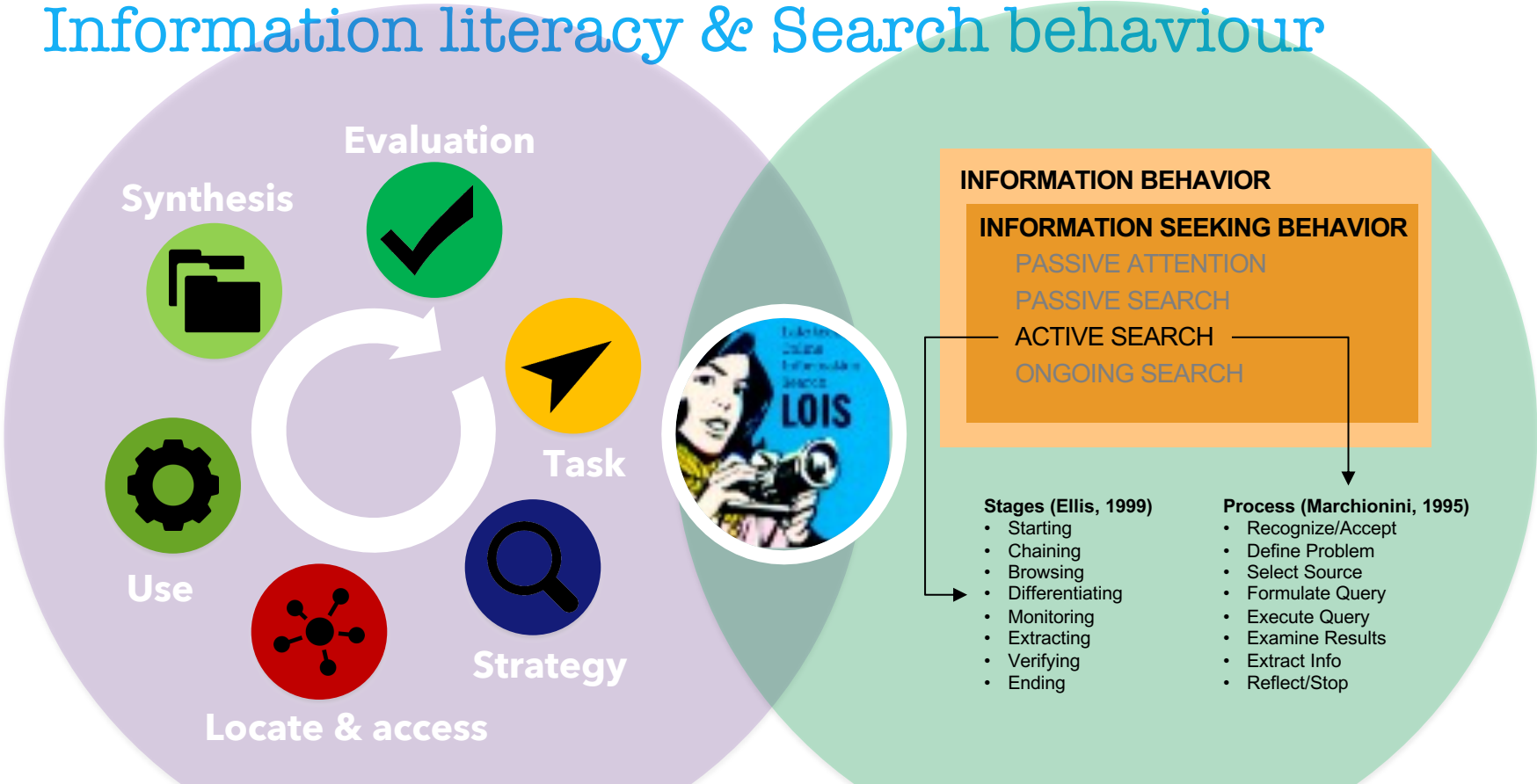
## Search stories and reflective search practices

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# Information literacy & Search behaviour



RAPIDLY  
CHANGING  
TECHNOLOGY



## **[self-reported] Information Literacy**

Self-Efficacy

Kurbanoglu (2006)

Use of different Search Strategies

Timmers/Glas (2010)

Cues for Evaluation of information

Lucassen et al. (2013)

Mediation by teachers

Madden (2018)

Attitudes towards searching

Liaw/Huang (2003)



## **actual search behavior**

Number of keywords

Duggan/Payne (2008)

Number of queries

Duggan/Payne (2008)

Number of visited pages

Thatcher (2008)

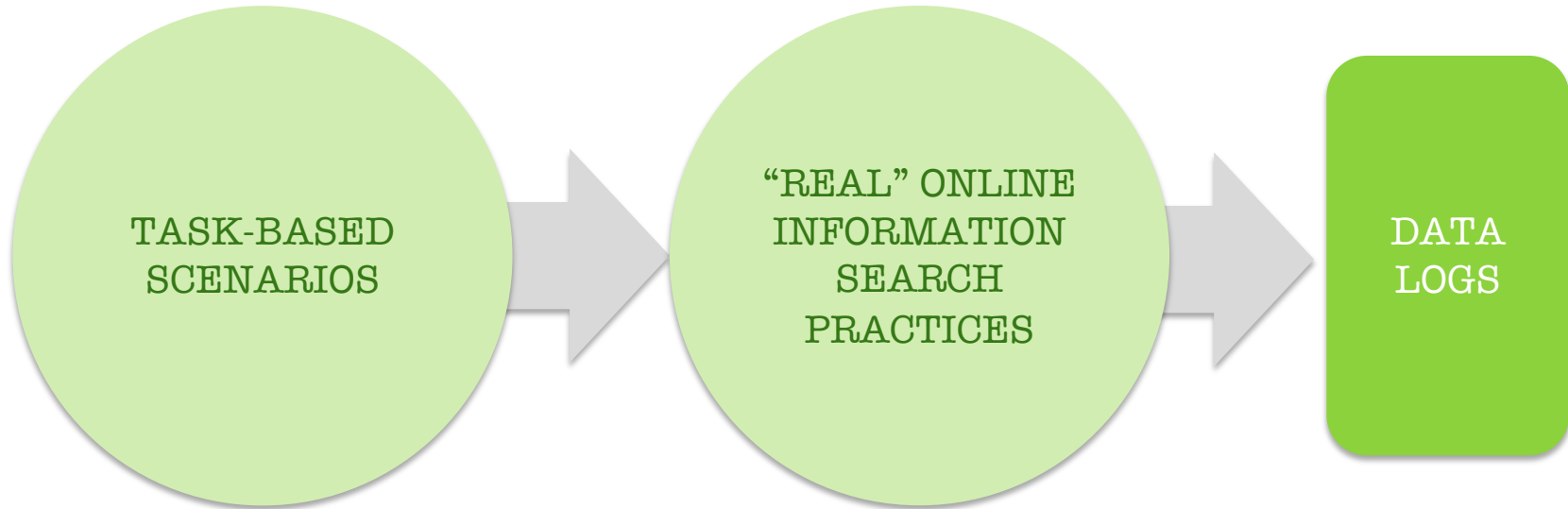
Depth of exploration

Tu/Shih/Tsai (2008)

Strategies (e.g. hub-and-spoke)

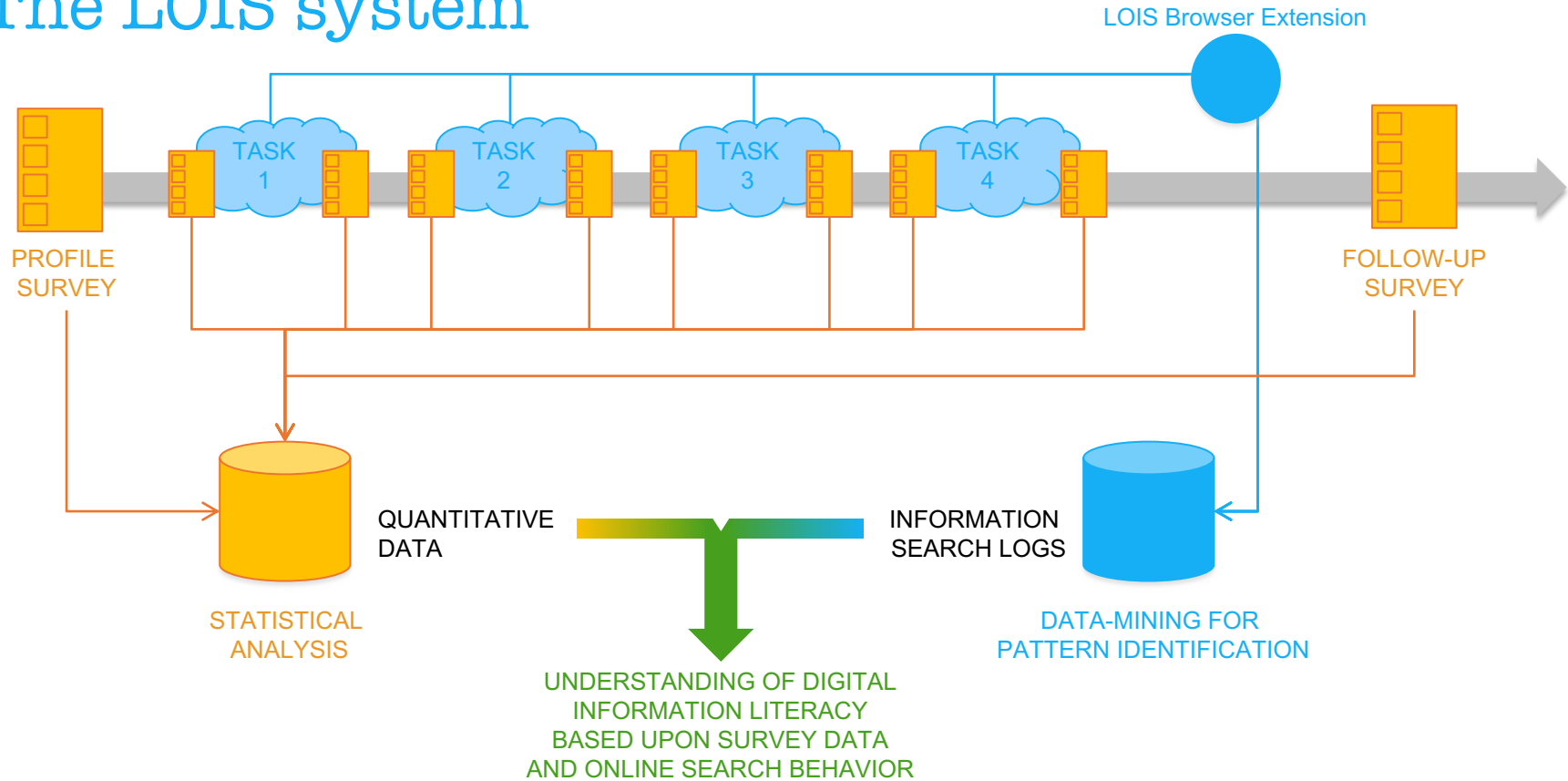
Thatcher (2008)

## The LOIS idea

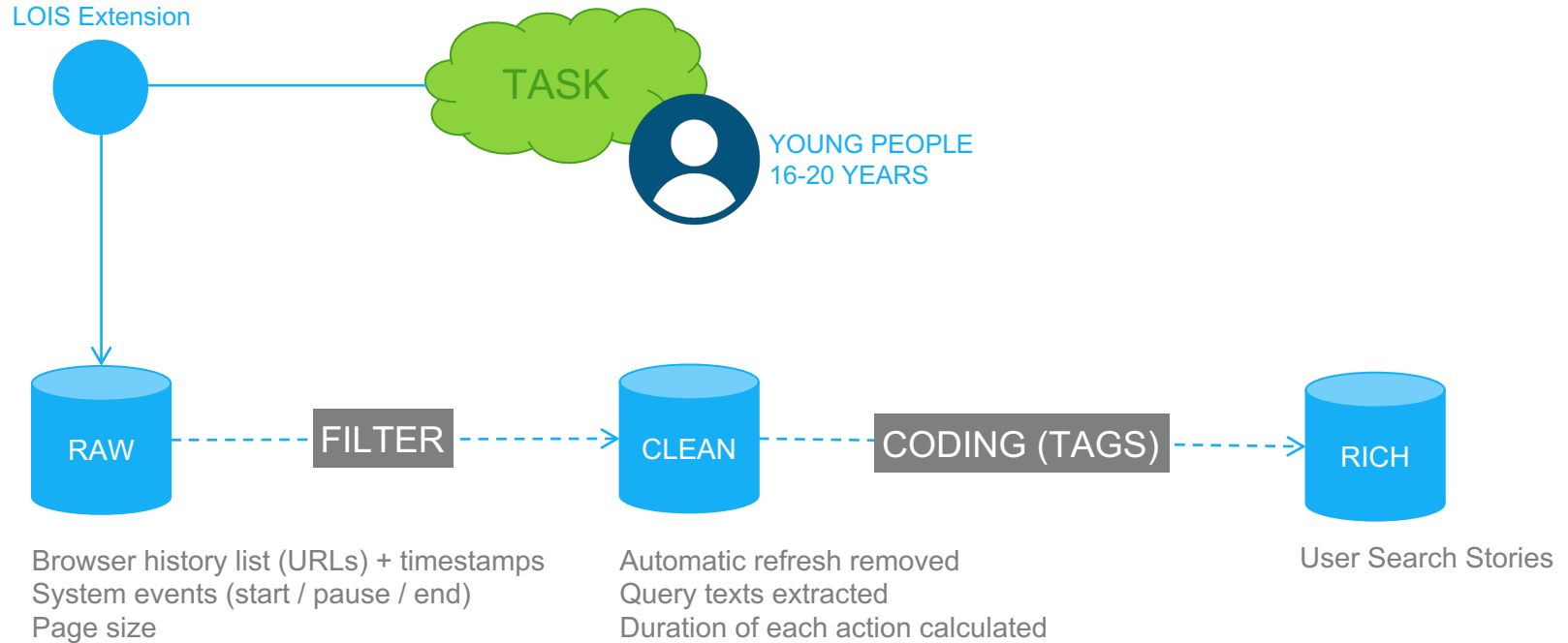


SUBJECTS ARE IN THEIR **PLACES**  
AT THE **TIME** THEY PREFER  
WITH THEIR **DEVICES**  
USING THEIR **ACCOUNTS**

# The LOIS system



## Data flow



## Task scenarios

Would a **vegetarian diet** be healthy for a 13-year-old girl? What advice would you give Anna? And what would you base this advice on?



Closed (yes/no)  
Serious topic

Marcello can **choose between a motorcycle, a nice bike, an e-bike or even an electric scooter**. What would you advise him to buy and why?



Open (explorative)  
Leisure topic

## Vegan diet search scenario

Your friend Anna is worried because her younger sister has decided to become a vegan. Anna thinks that this could be a good choice from an ethical point of view, both for the body and the environment – but her sister is only 13 years old... Isn't it too soon? Besides, her sister suffers from asthma and this health condition makes her weaker.

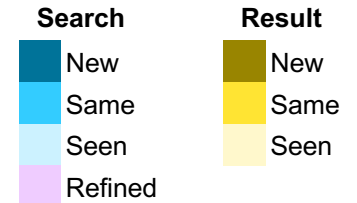
Opinions are divided: some argue that vegan food is healthy, others do not. What is the truth? Would a vegetarian diet be healthy for a 13-year-old girl? What advice would you give Anna? And what would you base yourself on?



## A minimal search

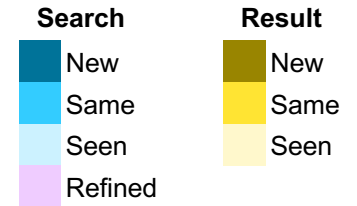
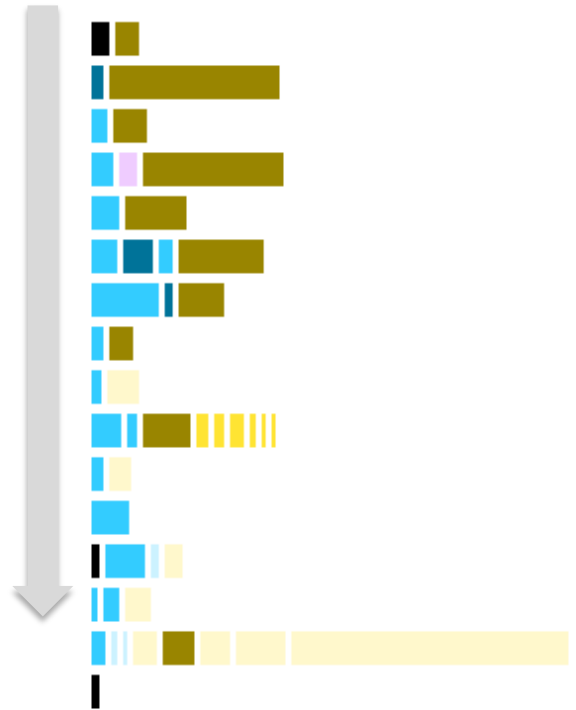
task\_1\_user\_195

Net duration: 182 | Episodes: 4 | Episodes avg: 91



# Extensive search

task\_1\_user\_189  
Net duration: 778 | Episodes: 16 | Episodes avg: 60

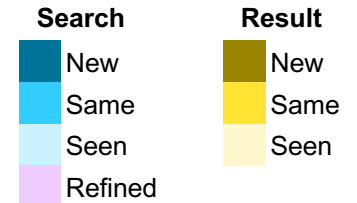


# Intensive search



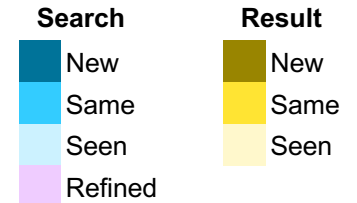
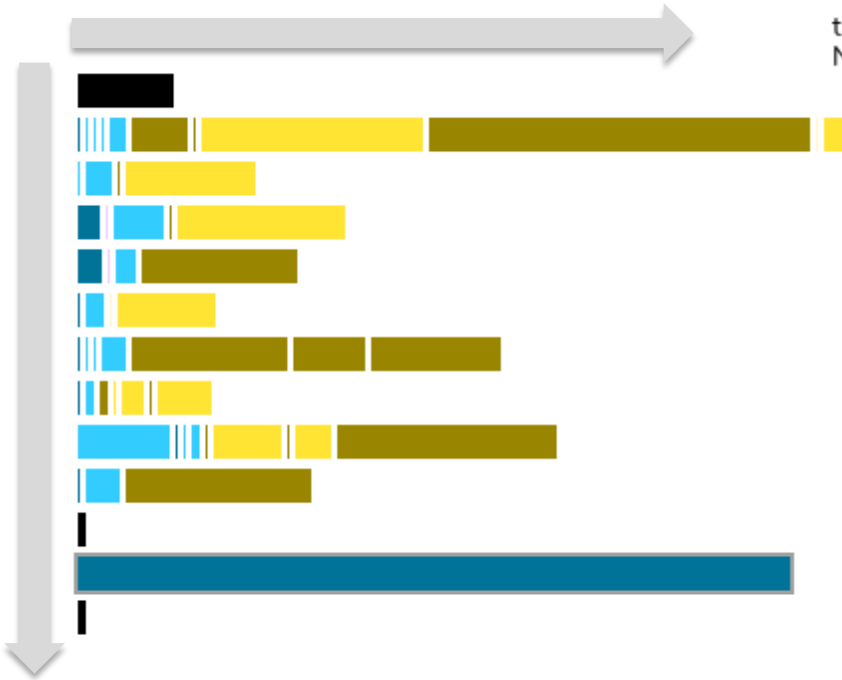
task\_1\_user\_49

Net duration: 1265 | Episodes: 9 | Episodes avg: 211



## Extensive+intensive search

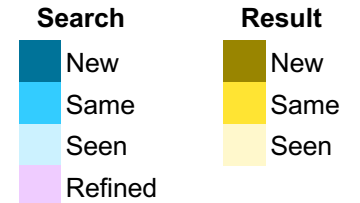
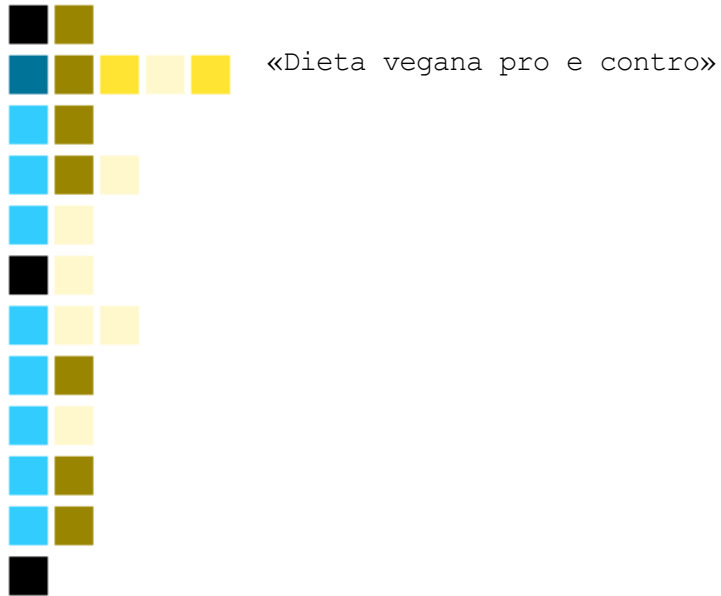
task\_1\_user\_243  
Net duration: 2063 | Episodes: 13 | Episodes avg: 207



# Single-query search

task\_1\_user\_38

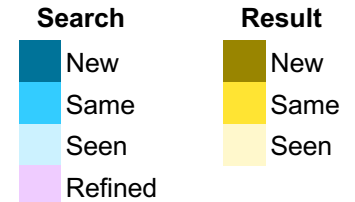
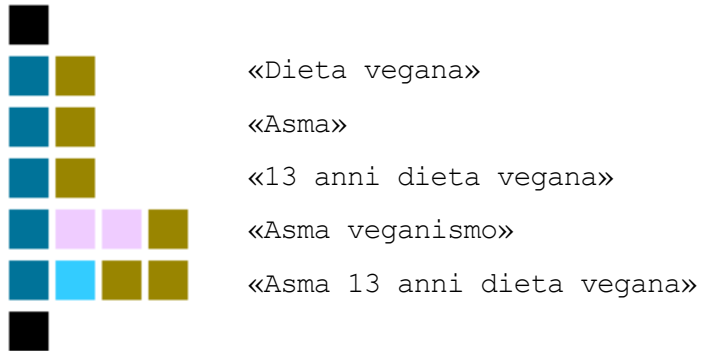
Net duration: 1426 | Episodes: 12 | Episodes avg: 159



# Changing queries

task\_1\_user\_46

Net duration: 208 | Episodes: 7 | Episodes avg: 42



## So what?

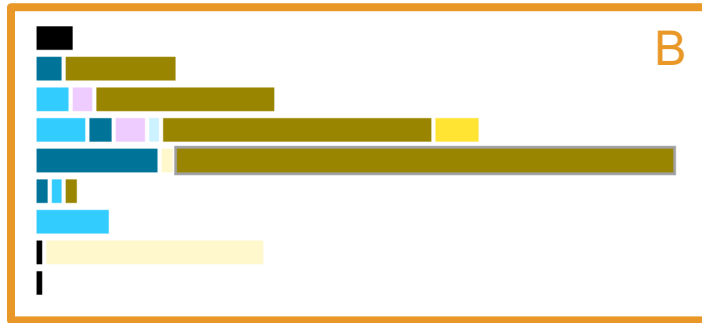
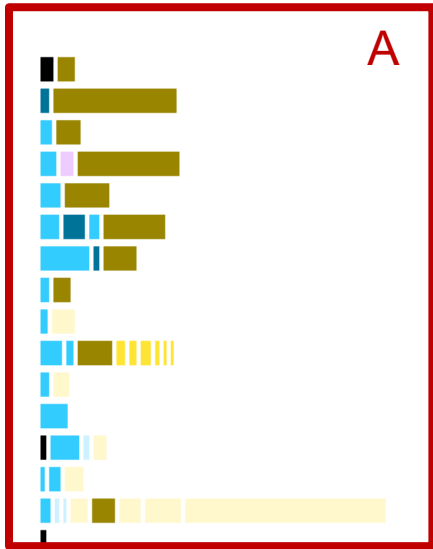
- We observe multiple search styles
  - (not yet statistically measured)
- How you adapt your search style depends on
  - The task (topic, relevance)
  - How much you already know
  - The situation (time available, context, etc.)
- We can improve our search if we are aware of this

## Meet the interactive version

- Interactive search story plots allow story exploration



## Affordance 1: compare search stories



A surveyed 11 documents for a short time

B dedicated time to read 4 documents

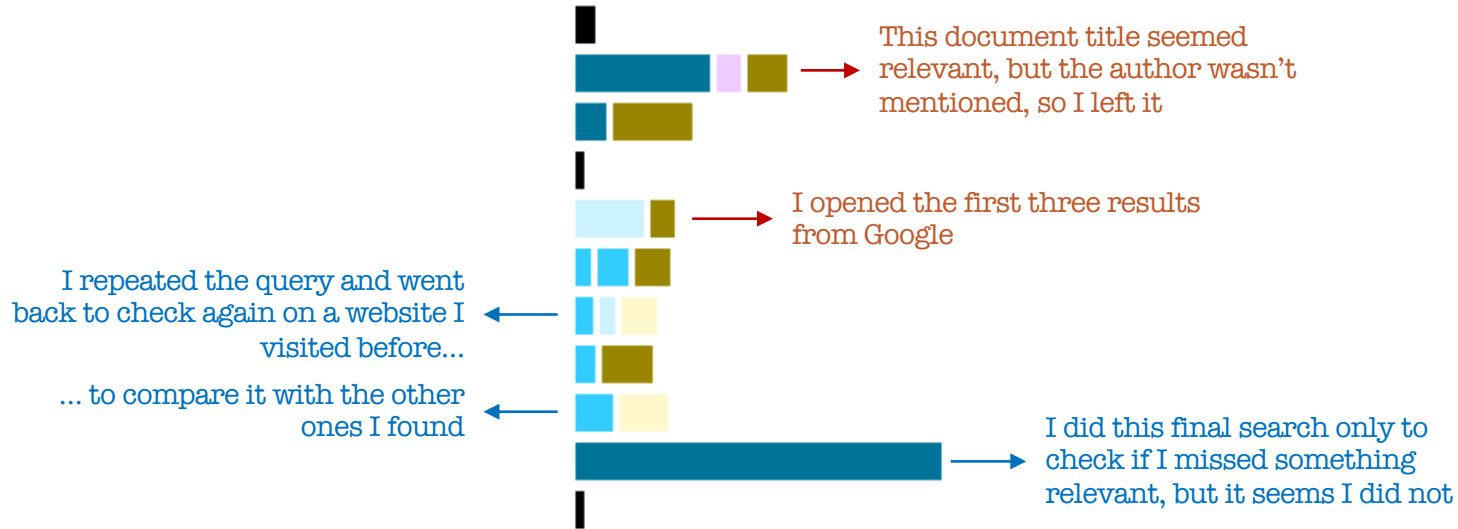
A explored 3 queries

B revised his queries in every episode

A revisited some web pages in the end

B revisited only one document in the end

## Affordance 2: annotate search stories



## Affordance 3: reflection

- How do I usually search?
- How do I change my search behavior to adapt to different tasks or topics?
- What could I improve in...
  - My queries
  - How I use time
  - My rhythm or speed
  - Etc.

## Q&A

[www.loisresearch.wordpress.com](http://www.loisresearch.wordpress.com)

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