

USABILITY EVALUATION OF CLINICAL GUIDELINES ON THE WEB USING EYE-TRACKER

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Clinical guidelines

“Systematically developed statements to assist practitioner and patient decisions about appropriate healthcare for specific circumstances” [1]

[1]: M. J. Field and K. N. Lohr, Clinical Practice Clinical guidelines: Directions for a New Program vol. 90: National Academies Press, 1990.

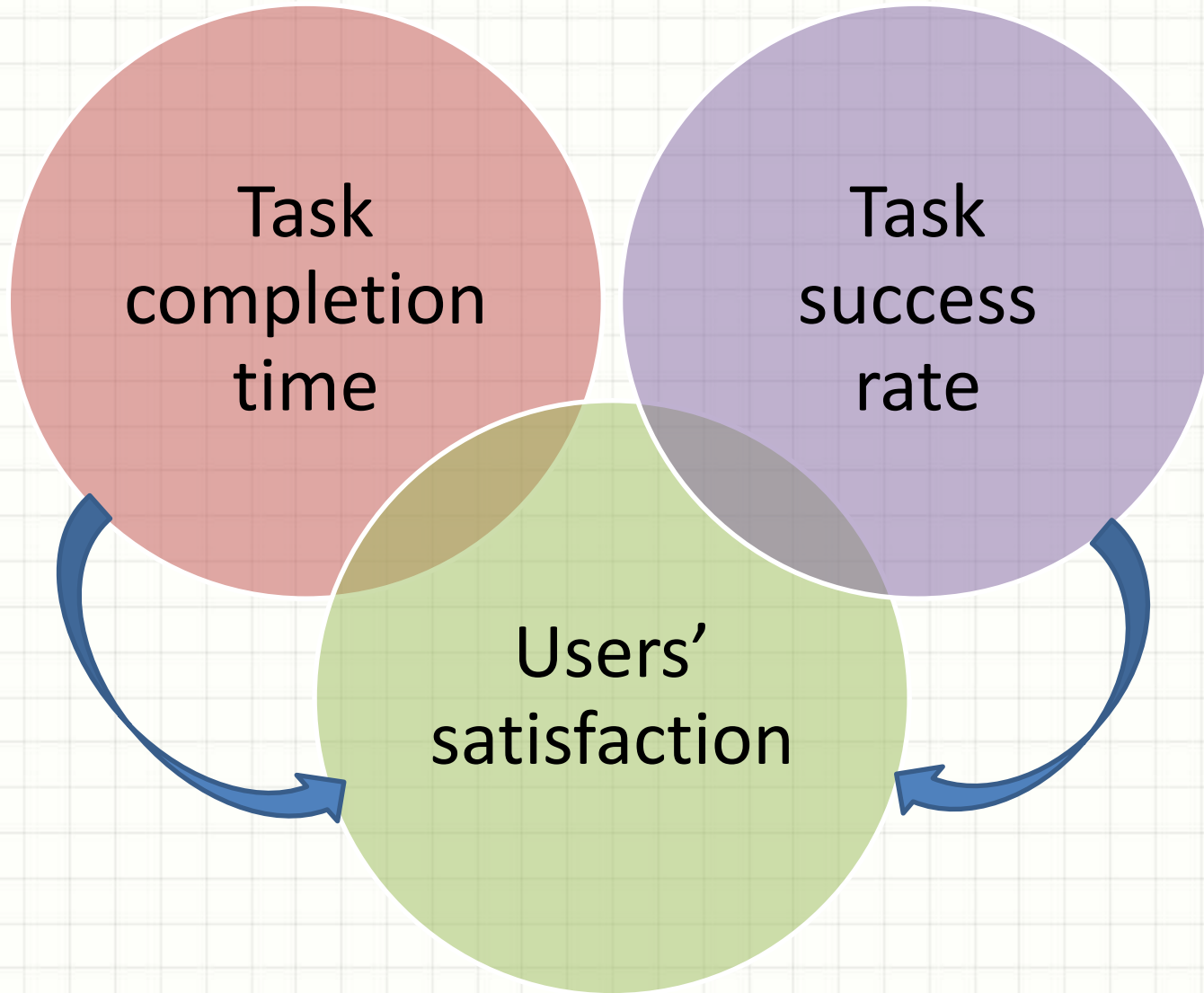
Motivation

- Publishing guidelines on the web → Improves accessibility

To investigate

- User experiences (perception and objective success) in finding answers to clinical questions
- Measuring users performance

with different clinical guidelines published on the web



Task
completion
time

Task
success
rate

Users'
satisfaction

Number of
mouse clicks

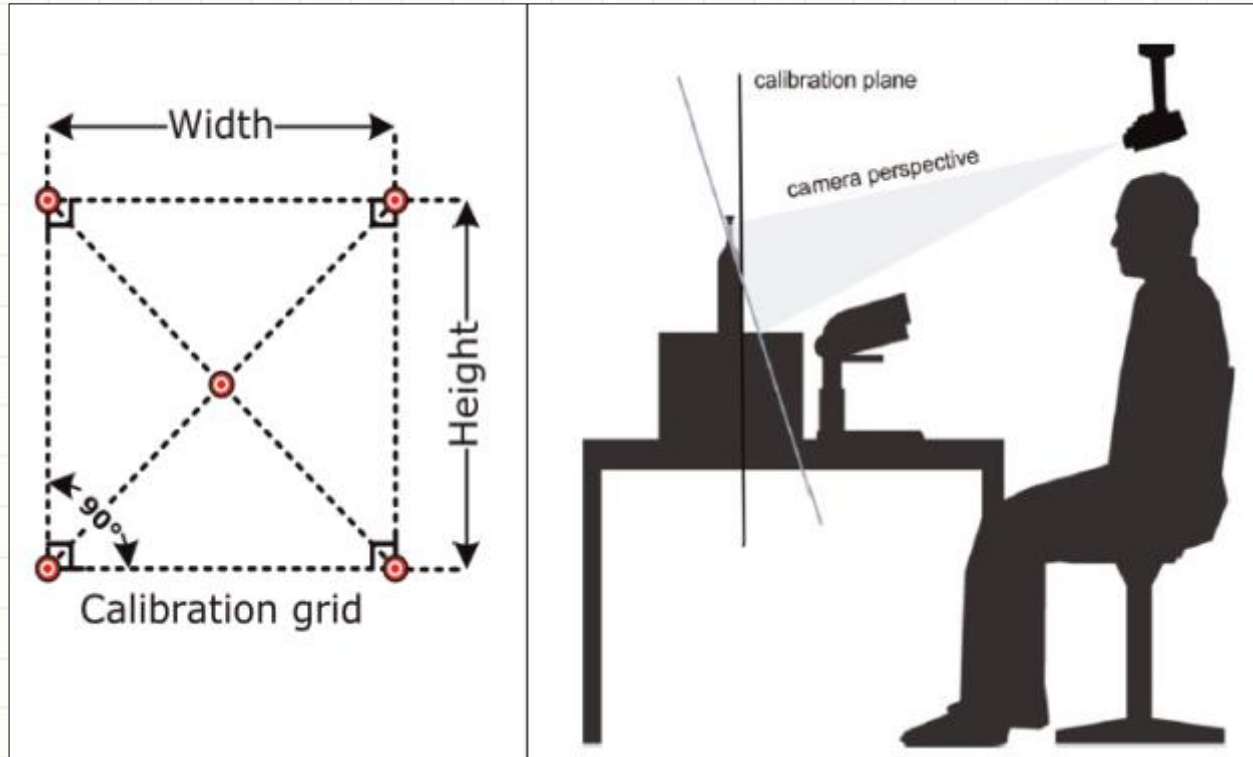
The diagram consists of two blue arrows pointing in opposite directions, one to the left and one to the right. They are connected at their inner ends by a white, curled ribbon-like shape. The left arrow contains the text 'Number of mouse clicks' and the right arrow contains the text 'number of tries using search-function'.

number of tries
using search-
function

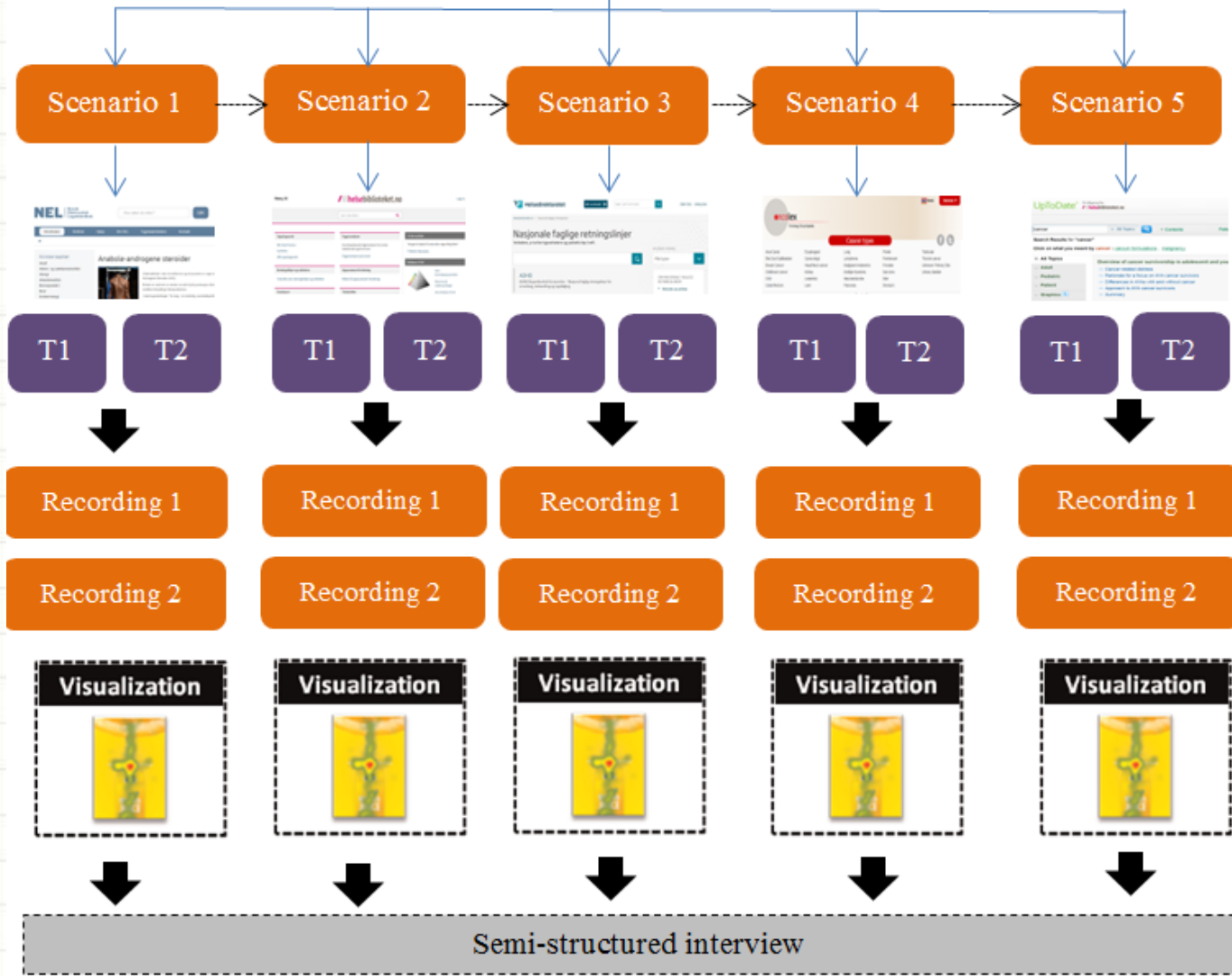
Selected websites

- **Legehandboka.no:** 600000
- **Helsebiblioteket.no:** over 2000,000
- **Helsedirektoratet.no:** 1000,000
- **Oncolex.org:** 400,000
- **UpToDate.com:** 23 million (monthly)
(90% of academic medical centres in the United States
more than one million clinicians in 174 countries rely on UpToDate)

Tobii Eye-tracker



Case study



Statistics

Tables

Charts

Methods



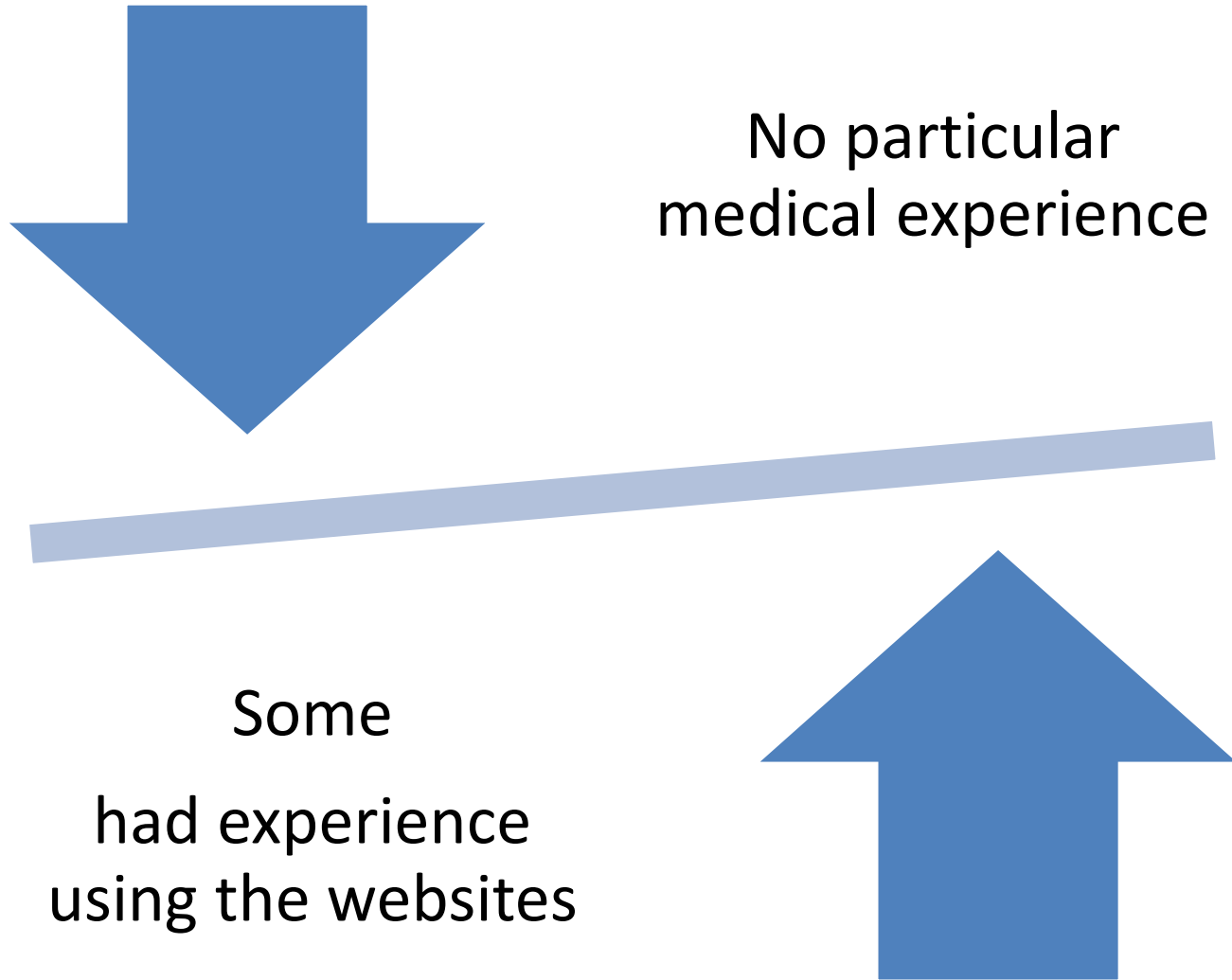
Voluntary 5th and 6th medical students

Pre-test questionnaire

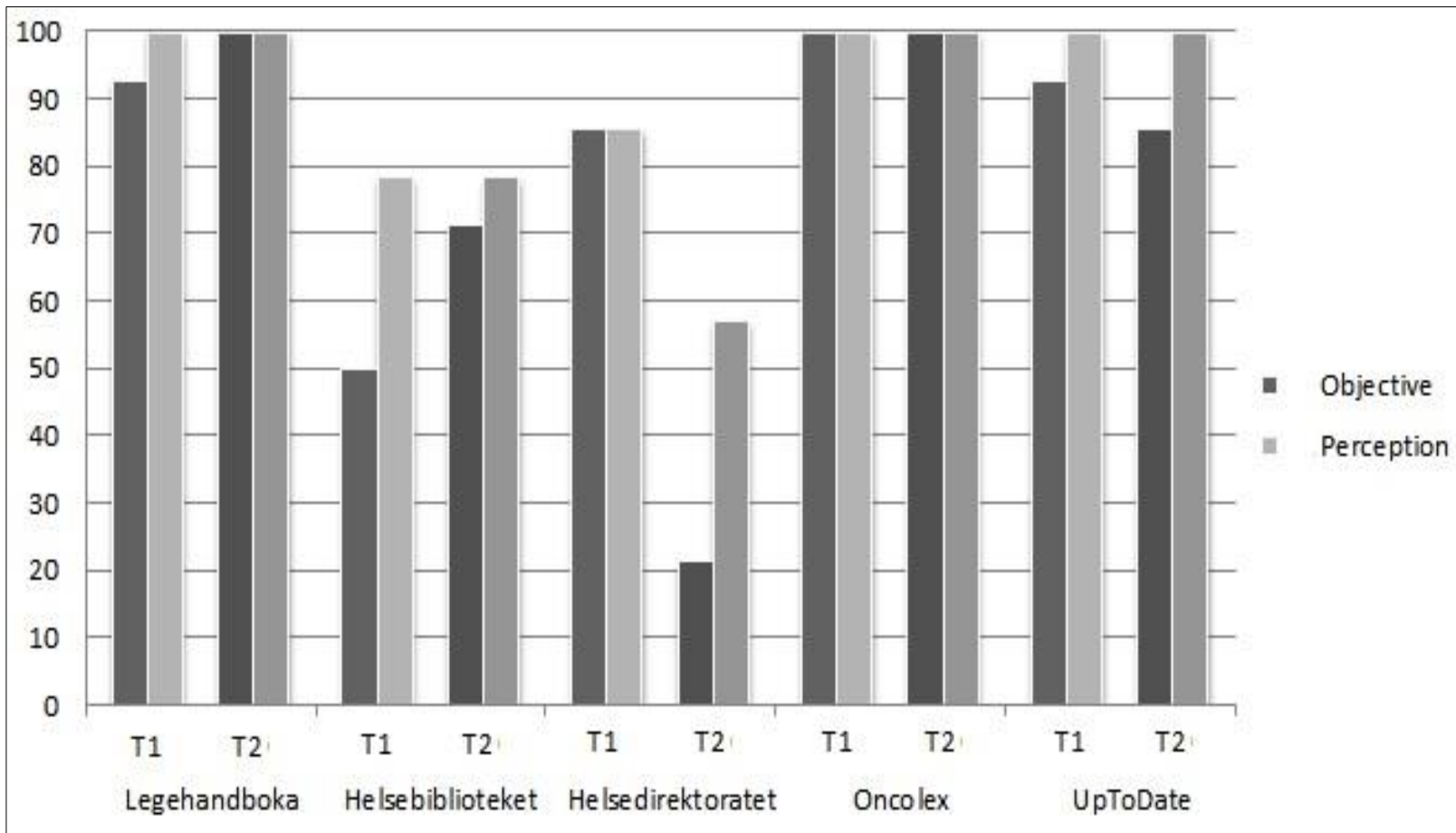
Scenario-based (lung, bowel, prostate, breast, and colon)

Semi-structured interview

Results: Pre-test questionnaire

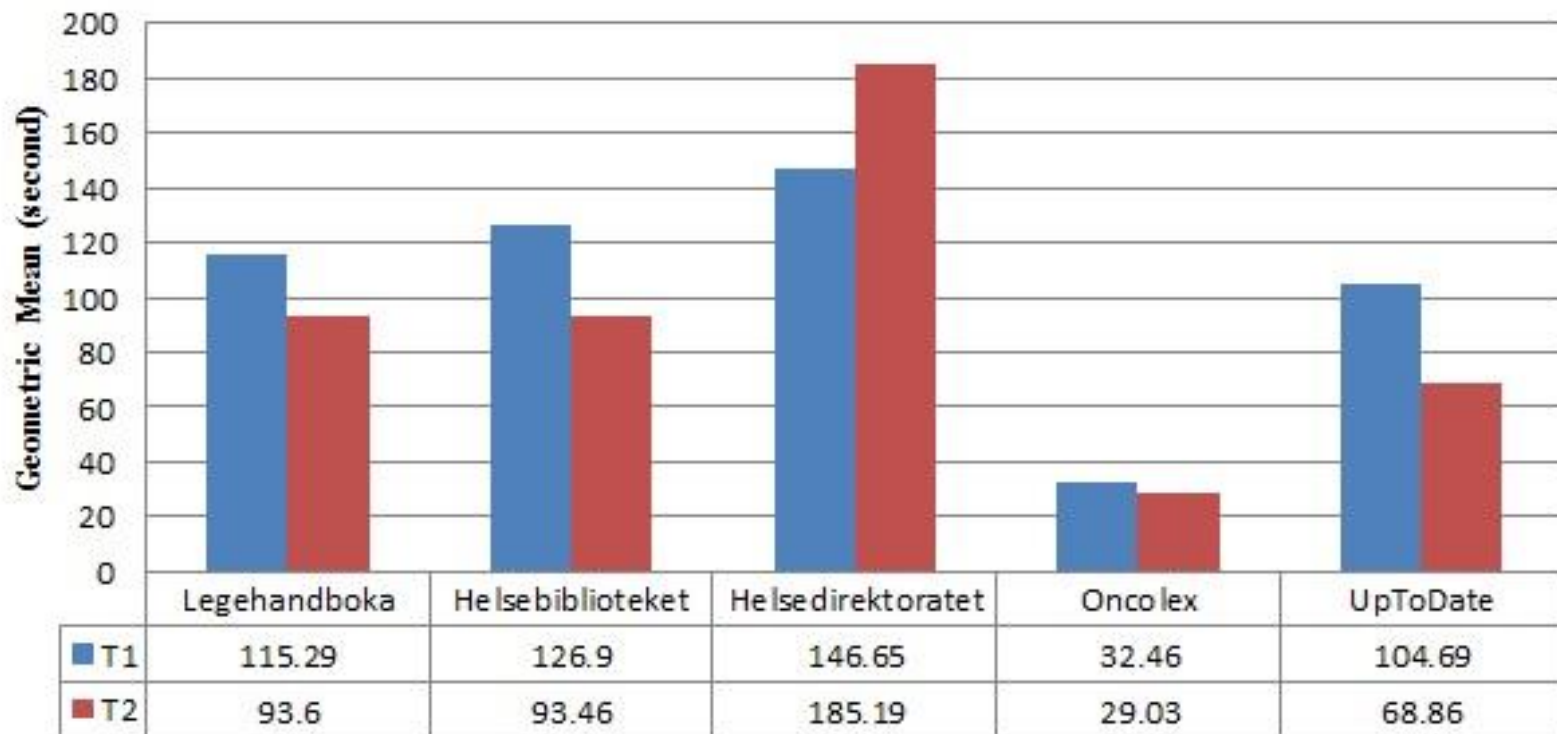


Results: Objective success rate VS. users' perception of success rate



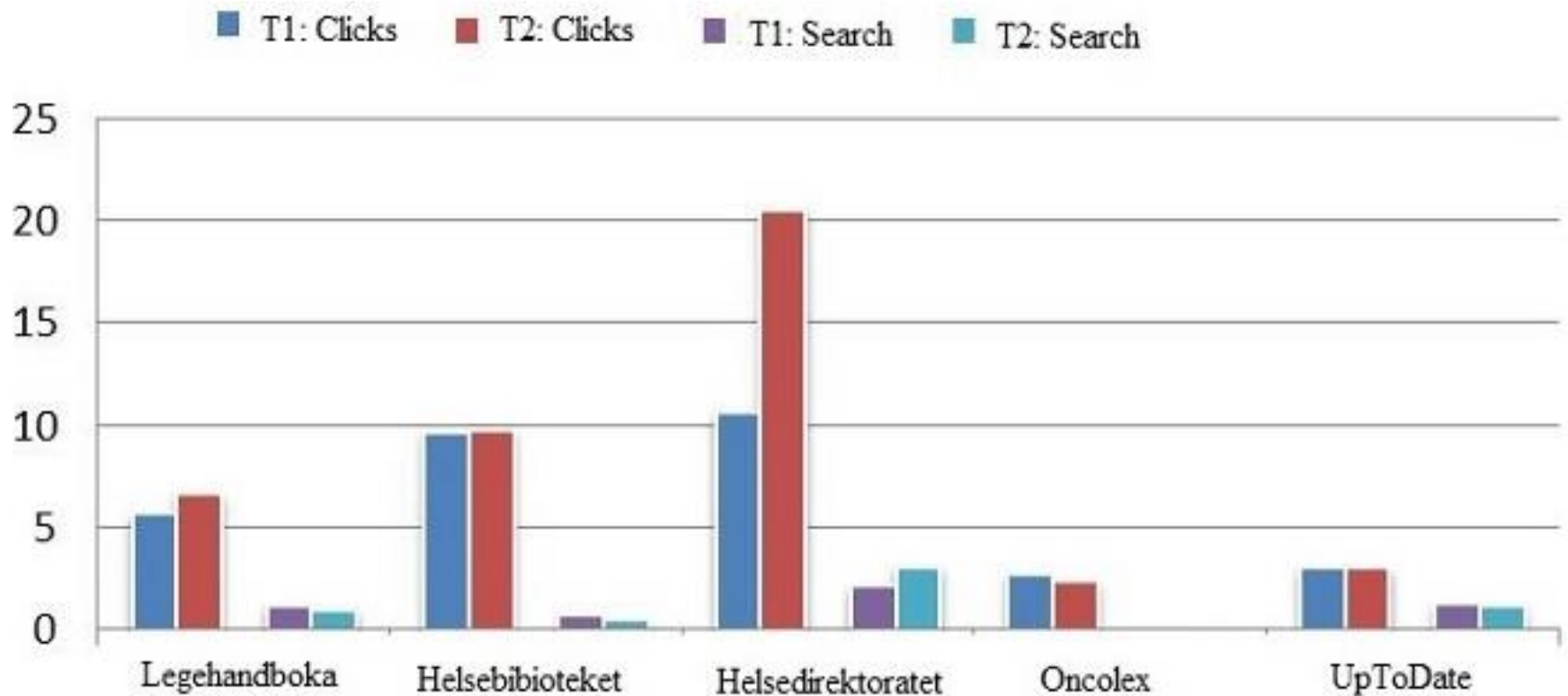
Results:

Task completion time



Results:

Number of mouse clicks & using search-function



1

- Users looked for the navigation bar as a first choice when searching

2

- No navigation bar = 'back' button

3

- No navigation bar = Struggle in identify their current position

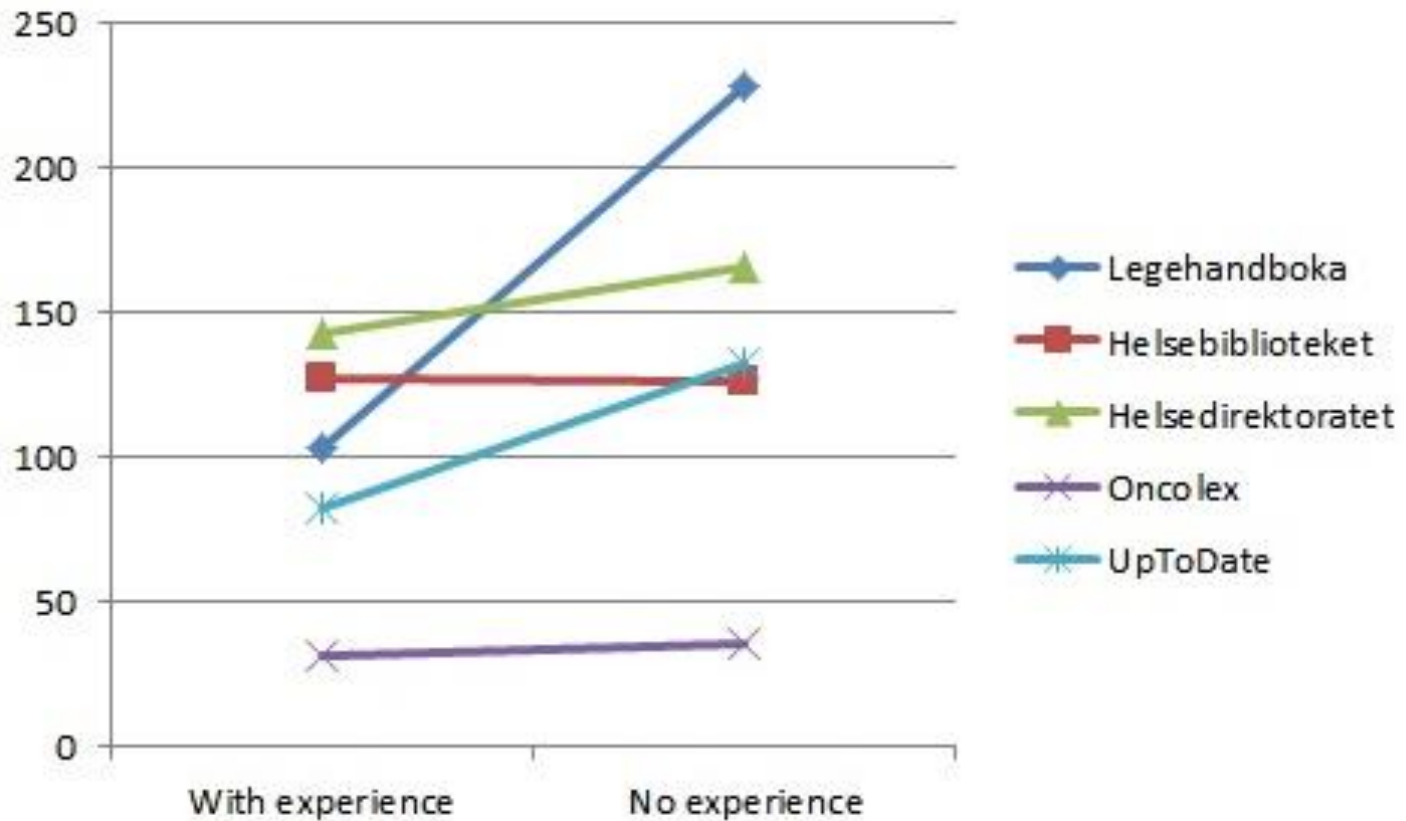
4

- Redirection to other webpages was challenging

7

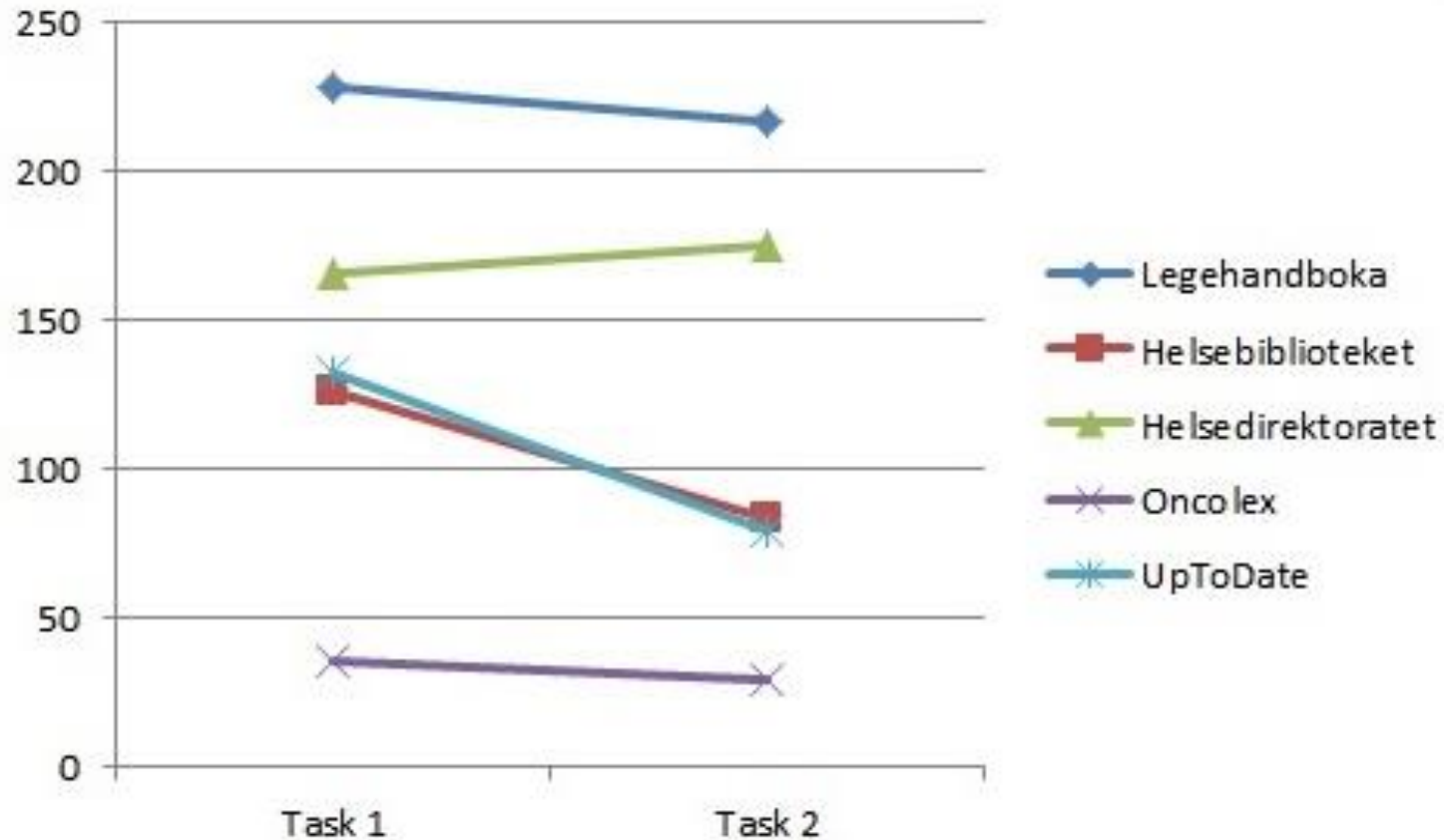
- Preferred navigation bars to search functions
- Prefer to use UpToDate for self-education

Task completion time users with prior experience versus users without experience



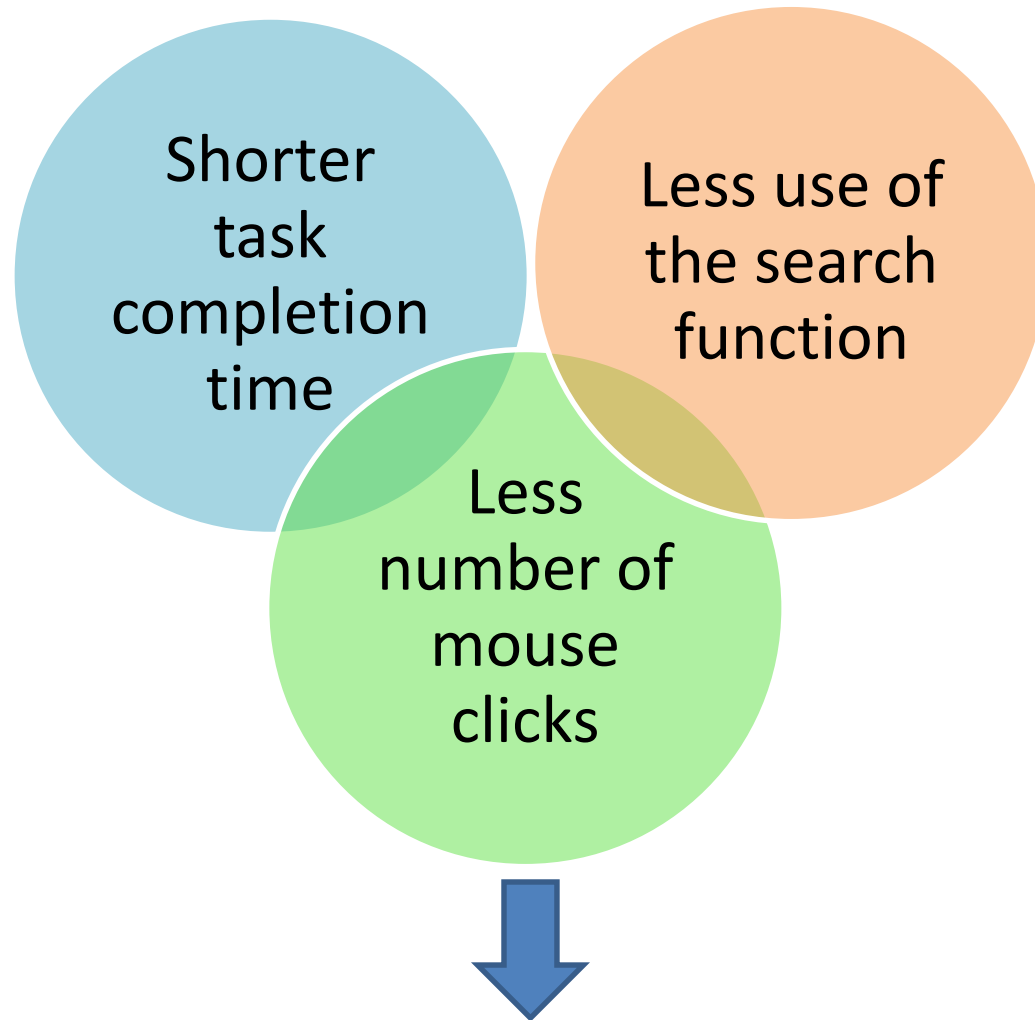
Task completion time

Only users without prior experience



Increase speed with practice?

Conclusion



Conclusion

**Users' perceived success rate
was not reliable**



**Evaluation of guideline websites
presentation format**

**Layout
navigation bar
search function
usability**

