Does a Split-View Aid Navigation Within Academic Documents?

MOTIVATION

Reading Habits

Paper is still the dominant medium for reading academic documents [2].

Reasons are:
- Ease of Annotation
- Physical Comfort
- Tangibility
- Portability
- Ease of Navigation
- Better Comprehension

Prior Research Findings

Paper-like navigation provides more flexibility and better support for reading and working with academic documents [1, 6, 7,9].

Pearson et al. [6]:
- Digital version of reading desk
- Mimicked key properties of physical book on a desk

Chen et al. [1]:
- Multiple interconnected devices
- Spread out papers to remove space limitations

Our Investigation

We designed two distinct navigation options on an electronic device.

Provide:
- More paper-like handling
- Better intra-document navigation
- Support hyperlinked navigation without scrolling through the text
- More freedom to layout the text according to the readers needs
- Least possible distraction of reading flow

PROTOTYPE
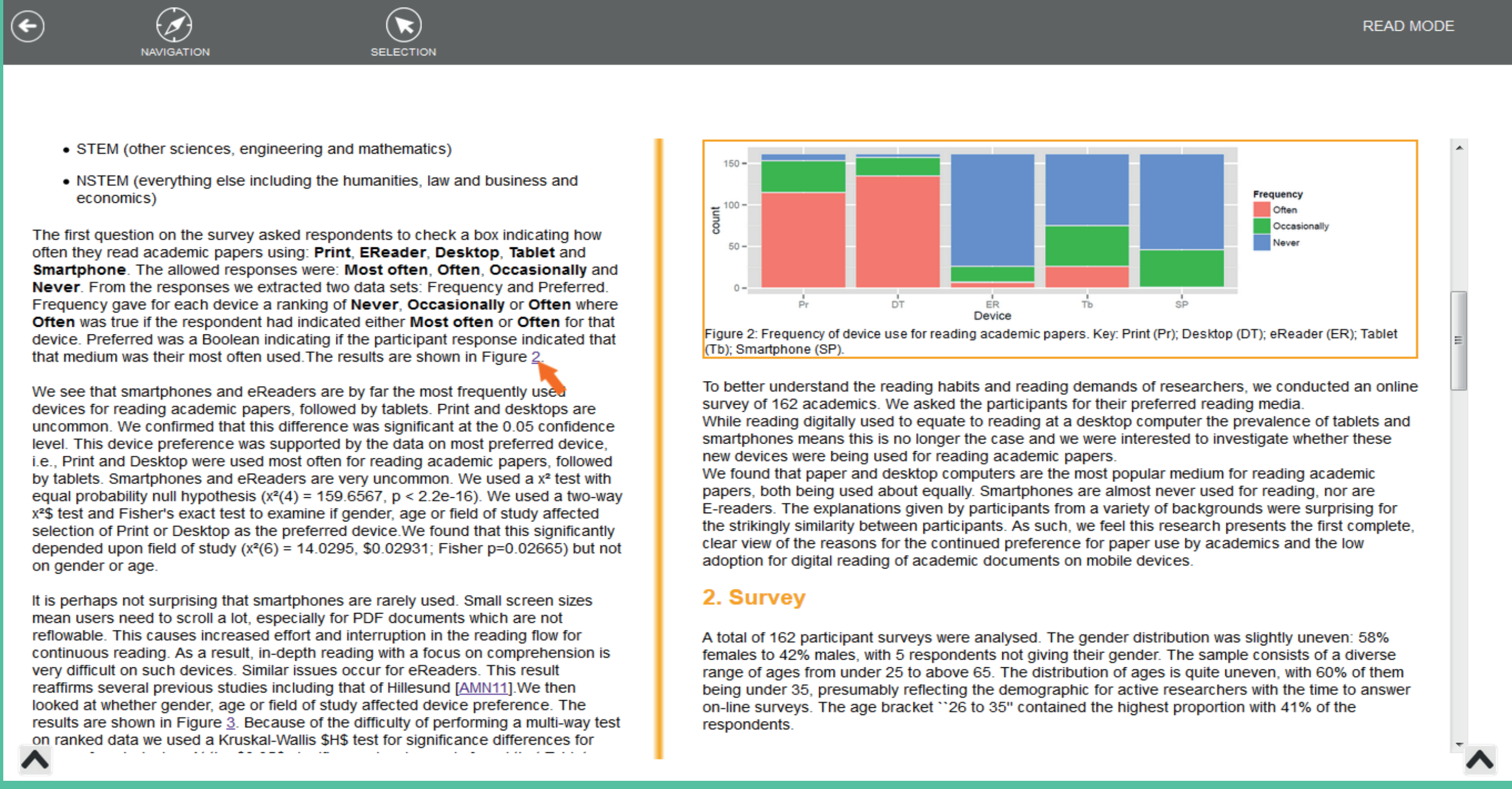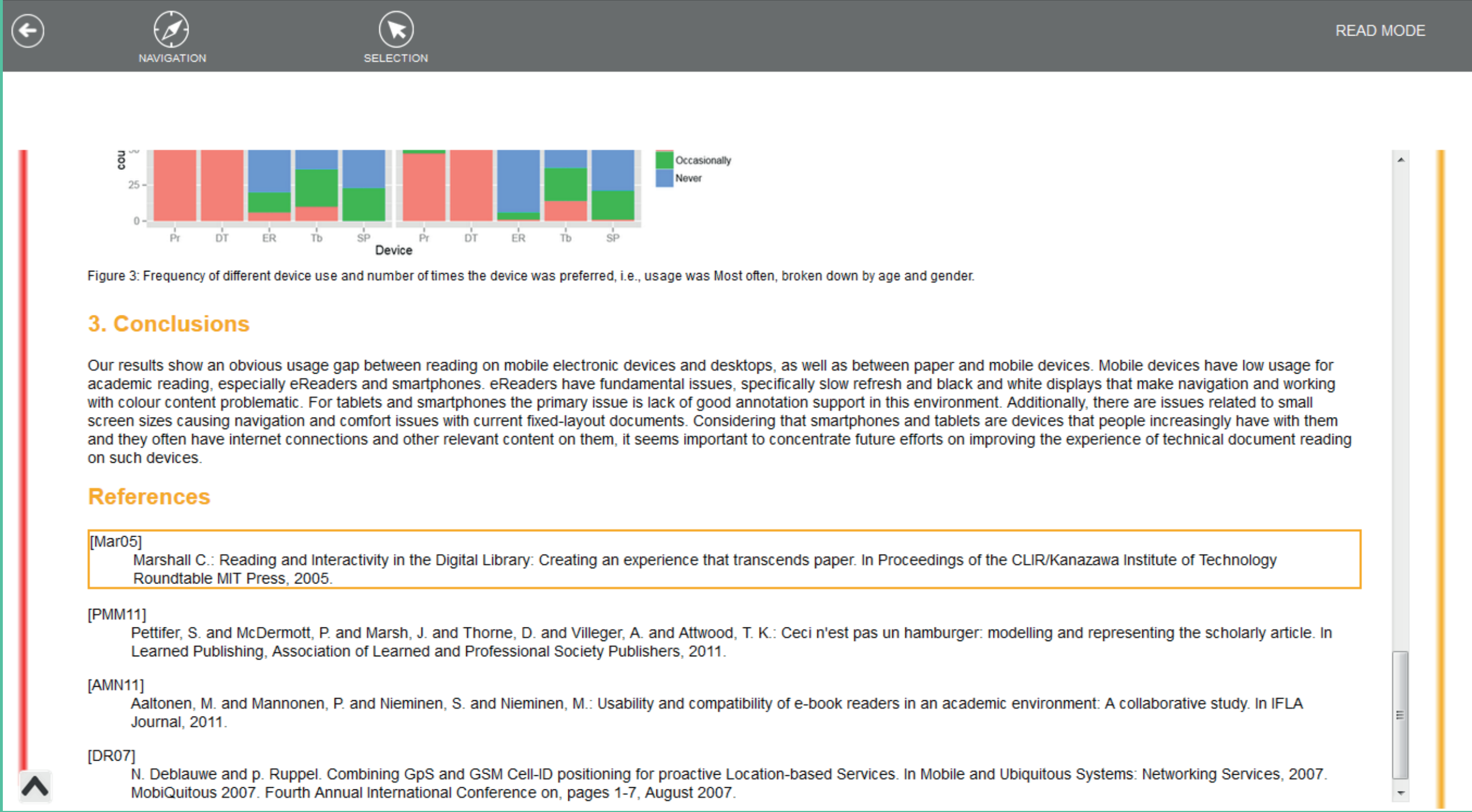
vs.

1-column layout / single reading view
WebView

2-column layout / reading view + contextual view
SplitView

FINDINGS

User Study

Qualitative user study / 8 participants (23 - 36ys)
Comparison of WebView and SplitView
2 texts / 8 errors

1. Task: Performance
   - Read text
   - Find errors

2. Task: Preference
   - Provide feedback on preferred views
   - Suggest improvements

Results

Performance:
- Participants did not identify many errors
- The faster they read the less errors were found
- The type of view used did not affect performance

Preference:
- SplitView navigation was preferred (7 of 8)
- Only one person (a frequent digital reader) preferred the WebView

Future Work

Suggestions:
- More interactive exchange between columns
- Additional columns, e.g. for overview
- „SelectView" for placing selected items
- Provide hyperlinked overviews for each reference (link to appearance in text)
- Enhance viewing options of graphics

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