Study on Eye Tracking Technique: Do digital media influence reading comprehension?

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Hot Tip

- Digital reading has become an important means of reading
Introduction

Reading based on a variety of electronic media terminal, such as electronic paper book, Tablet PC, personal computers, smart phones, smart TV,

Reading will lose its original depth that leads to fragmentation, one-dimensional and entertainment

"shallow reading"

Discussion

Argument

Zhang, Bing & Añaños, Elena (2014)
Introduction

Comparison between digital reading and paper reading

**Paper reading**
- Based on paper
- Normal reading 5 years ago
- Easy and not too many choice
  - Books, newspapers, magazines…

**Digital reading**
- Screen based
  - Interactivity, non-linearity, immediacy of accessing information, and the convergence of text and images, audio and video
- Popular now

Zhang, Bing & Añaños, Elena (2014)
Methodology

Read a 1000 words article, then answer 5 questions.
Methodology

Zhang, Bing & Añaños, Elena (2014)
Data analysis

❖ The study of heat maps
Data analysis

The study of visual attention

Fixation durations (Seconds spent in digital and paper reading = times with Fixations)

ANOVA
\[ p = 0.334 > 0.05 \]

NS

Zhang, Bing & Añaños, Elena (2014)
Data analysis

The study of visual attention

Fixation number (average in each support)

ANOVA
p = .000 < 0.05
Significance!

Zhang, Bing & Añaños, Elena (2014)
Data analysis

- Digital reading orbit

Zhang, Bing & Añaños, Elena (2014)
Data analysis

- The study of comprehension (%)

ANOVA
p = .449 > 0.05
NS
Conclusions

- Significant difference in hot spot map: GH
  - No significant difference in fixation duration: H1
  - Big significance in fixation times: H1
  - No significant differences in Comprehension rate: H2

Digital Media doesn’t influence reading comprehension!!!
Some References


Acknowledgment!

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Thank You for your attention!