



***Snapchat for the Mind***  
**In Search of “Real Reading”**

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# “Like Most” about Reading in Print

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- “real reading”
- “it feels more authentic”
- “you are able to lose yourself in the words and you can read forever without thinking about anything else”
- “It feels more real as if you are actually reading a book”

# This Talk is About ...

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- Print vs. digital reading
  - Quick review of current literature
  - Highlights of my studies with colleagues
- Reading mindset
  - Role of medium vs. mindset
- Rethinking what it means to read
  - Social milieu
  - Educational milieu
  - Technological milieu

# Print vs. Digital Reading: Quick Review of Current Literature

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- Comprehension studies
  - Overall statistical findings
    - Meta-analyses (Delgado et al. 2018; Clinton 2019)
    - Current vs. earlier findings
  - Length
  - Genre
  - Kind of questions asked
    - Concrete vs. abstract (Kaufman & Flanagan 2016)
    - Main point vs. more detailed key points (Singer & Alexander 2017)
    - When in the story, where in the book (Mangen et al. 2019)

# Quick Review (2)

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## ■ Calibration

- Prediction of comprehension vs. actual success
  - Earlier vs. current findings
- Print vs. digital (university: Singer & Alexander 2017; 5<sup>th</sup> and 6<sup>th</sup> grade: Golan et al. 2018)
  - Believe will do better digitally, but do better with print

## ■ Amount of Invested Mental Effort (Salomon 1984)

- Time spent reading a passage
- Amount of focus when reading
- Time spent vs. comprehension (Ackerman & Goldsmith 2011)

# Print vs. Digital Reading: Highlights of Studies with Colleagues

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- Baron, Calixte, & Havewala (2017)
  - Ages 18-26
  - 429 participants
  - Data collected Spring 2013-Spring 2015
  - Five countries (US, Japan, Germany, Slovakia, India)
  
- Baron, Mangen, Tyo-Dickerson, & Hakemulder (2019-2022)
  - Spring 2019: International School of Stavanger (ISS)
    - Ages 11-19; 212 participants
  - Spring 2021: International School of Amsterdam (ISA)
    - Grades 6<sup>th</sup>–12<sup>th</sup>; 118 participants
  - Fall 2021: International School of Amsterdam (ISA)
    - Grades 6<sup>th</sup>-11<sup>th</sup>; 532 participants

# Concentration: Easiest Medium

University (Baron et al. 2017) and ISS (2019) Results

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- On which medium is it easiest for you to concentrate or focus?

- Print

University

Secondary

92%

85%

# Concentration: “Easy”

## Fall 2021 Results

	<u>Print</u>	<u>Computer</u>
■ ISA (6 <sup>th</sup> -11 <sup>th</sup> )	67.5%	28.2%
■ American U. Students	74.3%	34.3%
■ American U. Faculty	74.3%	37.1%

“Like least” about reading on computer:

“It’s harder to see what’s happening in my mind because there’s light shining at my face through the screen” (ISA student)

“It isn’t as immersive.” (ISA student)



# Understanding: “Easy”

## Fall 2021 Results

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	<u>Print</u>	<u>Computer</u>
■ ISA (6 <sup>th</sup> -11 <sup>th</sup> )	64.1%	48.4%
■ American U. Students	62.9%	51.4%

# Multitasking: Very Often/Pretty Often

## Fall 2021 Results

	<u>Print</u>	<u>Digital Screen</u>
■ ISA (6 <sup>th</sup> -11 <sup>th</sup> )	9.6%	39.3%
■ American U. Students	5.7%*	40.0%
■ American U. Faculty	2.9%*	25.7%

\*Maybe ... (wishful thinking?)

NOTE: Approximate comparison with previous student data (earlier surveys used different scales)

University (2017)	41%	67%
ISS (2019)	23%	46%

# Reading Mindset

- Shallowing hypothesis (Annisette and Lafreniere 2017)
  - Read digital assignments as if are social media
- Amount of Invested Mental Effort
  - Perception print takes more time, mental focus:  
“Like least” about reading in print:
    - “I have to put 110% of my concentration into reading the words”
    - “It takes me longer because I read more carefully.”
    - “[Digital] looks shorter to read on.”

# Reading Mindset (2)

- Snapchat (app on mobile phones)
  - Recipient only sees message for short time, then message is wiped out
  - Launched 2011
  - As of 2022:
    - c. 319 million users
    - >5 billion snaps sent daily (heavily teenagers)  
(<https://www.omnicoreagency.com/snapchat-statistics/> )
- Snapchat frame of mind when reading
  - Read for immediate viewing, but then content is wiped from retrievable memory

# Reading Mindset (3)

- Medium vs. Mindset
  - Intrinsic print benefits
    - Senses (touch, smell)
      - “the feeling of holding something in your hand”
      - “The smell of the book stimulates something in my brain to concentrate”
    - Sense of place on the page, in the book
    - Potential for mental focus (more concentration, less multitasking)
    - Physically in your sight (stumble upon)
  - BUT: role of mindset
    - Associations with print (“physical and cozy”)
    - Associations with digital (quick, multitask)

# Reading Mindset (4): Boring?

- “Like least” about reading in print
  - “Just boring material and hard to read.” (university)
  - “It takes time to sit down and focus on the material.” (university)
  - “Print can tire you out really fast and get boring no matter how interesting the book is.” (ISS)  
(by contrast: digital sometimes described as entertaining, fun)

## ■ ISA results: Reading with ... is boring

	<u>Print</u>	<u>Digital Screen</u>
ISA Spring 2021	10.1%	28.0%
ISA Fall 2021	19.6%	31.4%
BUT: American U. Students	65.7%	45.7%

# Reading Mindset (5): Intimidating?

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- Is the length of print intimidating to some students?
  - “Like most” about reading digitally
    - “I love that you don’t see how many pages the book has”
    - “you don’t think you’re really reading but you are”
  - “Like least” about reading in print
    - “It can get exhausting”
    - “I feel it takes forever to read a novel”

# Rethinking What It Means to Read

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- How much do people read?
  - Social milieu: Reading for pleasure
  - Educational milieu: Reading for academic assignments
- Effects of technology on how we read
  - Reading vs. using: library case
  - Rereading, reflecting
  - Perceptions of digital affordances
    - Search
    - Entertainment



# Social Milieu: Leisure Reading

- **Adults** (American Time Use Survey 2019)
  - Minutes per day: 16 minutes (overall average)
  - Older readers:
    - Age 65-74: 37 minutes
    - Age 75+: 48 minutes
  - Younger readers:
    - Age 15-19: 7.2 minutes
    - Age 20-24: 6.6 minutes

# Leisure Reading (2)

- PISA (15-year-olds) (OECD 2021)

- Only read when have to

- 2000: 36%

- 2018: 49%

- American tweens and teens (Rideout et al. 2021)

- Average daily use of entertainment media:

- Tweens (8-12): 5 hours 33 minutes

- Teens (13-18): 8 hours 39 minutes

- Average daily reading of books (print or eBook)

- Tweens (8-12): 29 minutes

- Teens (13-18): 24 minutes

# Educational Milieu: Academic Reading

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- Limited completion of university reading assignments in US (Baron & Mangen 2021)
  - Estimates of how much assigned reading is completed: c. 20%-30%
  - One study: 31.6% percent of students surveyed believed they could earn an A in the class without doing the reading
- US college seniors (NSSE 2019)
  - Average academic reading per week: 7.1 hours

# Technological Milieu

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- Reading vs. using: The library case
  - Accessing a physical book to check a specific article or reference
    - Serendipity: Discovering other material of interest
  - Accessing the same book online for the same purpose
    - Labor involved in accessing multiple chapters
    - Find what initially looking for and leave

# Technological Milieu (2)

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## ■ Rereading

- “one cannot read a book: one can only reread it”  
-- Vladimir Nabokov
- Less rereading with digital than with print

## ■ Reflecting

- Reflection as an affordance of writing
  - *Preface to Plato* (Havelock 1963)
    - Rethinking, comparing ideas, logical analysis
  - Literacy alters the brain (Dehaene 2010)
- How much “deep reading” do we undertake with digital reading? (Wolf 2019)

# Technological Milieu (3)

- Online search as a model for “reading”
  - Average “dwell time” on web pages: 15-45 sec (<https://thinkdesignsllc.com/what-is-the-average-time-spent-on-a-website/>)
    - 55% spent fewer than 15 seconds actively on a page (<https://time.com/12933/what-you-think-you-know-about-the-web-is-wrong/>)
- Hyperlinks: break concentration
- Social media as a model for reading
  - Shallowing hypothesis
  - Snapchat (or delete messages yourself, literally or figuratively)

# Technological Milieu (4)

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- The challenge for “real reading” on an entertainment platform
  - Same physical platform for using social media, watching YouTubes, doing Zoom calls, checking restaurant reviews, listening to music
  - Similar challenge for educational materials accessed as
    - Audio (audiobooks, podcasts)
    - Video (e.g., TED Talks)

# Closing Thoughts: Importance of ...

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- Thinking through what we mean by “reading”
- Acknowledging that students are aware of how reading medium affects both reading mindset and outcomes
- Recognizing low amounts of reading, both for leisure and academically
- Understanding the larger role of technology in reshaping what it means to read



# Giving Students the Last Word

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- “reading is something kind of magical that kind of stops going on [with] devices since we do a lot of them in school”

Student at the International School  
of Amsterdam

- “If I read on a digital screen I tend to not accidentally pull all nighters, with paper books I do.”

Student at the International School  
of Amsterdam

# Thank you

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*How We Read Now: Strategic Choices for Print, Digital, and Audio*  
(Oxford University Press, 2021)

*Words Onscreen: The Fate of Reading in a Digital World*  
(Oxford University Press, 2015)

*Who Wrote This? How AI and the Lure of Efficiency Threaten Human Writing*  
(in preparation)