



Engaging Content  
Engaging People

# Accessibility of online financial texts for ageing communities: An exploratory study

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- Number of older adults growing faster than any other age group, and expected to more than double by 2050 (UN Department of Economic and Social Affairs 2017)
- Ageing often characterised by:
  - reduced abilities for comprehension of texts (Johnson 2003; De Beni et al. 2007)
  - decline in financial literacy (Finke et al. 2017)
  - vision and hearing loss (Abou-Zahra et al. 2008; Brown and Barrett 2011)
  - general lack of familiarity with computers (Chang et al. 2015)
  - changes in manual dexterity (Jastrzembski et al. 2005)
- Financial institutions gradually transferring their products and services online



- Interaction with the web:
  - WAI-AGE project (Abou-Zahra et al. 2008)
  - Guidelines and success criteria for age-friendly websites (Lara et al. 2010)
  - Accessibility barriers for older people (Rodrigues et al. 2016; Sayago and Blat 2009)
  - Acceptance of web interaction aids by older adults using e-banking websites (Lara et al. 2016)
  - Older people's attitudes towards the Internet (Nayak et al. 2010)
  - Impact of voice augmentation on the behaviour of older adults interacting with online banking applications (Sato et al. 2011)
- Readability and understandability as web accessibility principles
  - Readability factors for different age groups (colour contrast, spacing, font, headings, etc.) (Hussain et al. 2011)



- Lack of empirical evidence on:
  - Opinions of older people on the language of online financial texts
  - Impact of plain language on older people's comprehension, satisfaction, and reading behaviour
- Research questions:
  1. How accessible are online financial texts according to older people?
  2. Does plain language increase the accessibility of online financial texts for older people?

# Methodology and findings (focus group)

Focus group with a small group of 4 older adults

Data analysed through six rounds of thematic analysis (Braun and Clarke 2012)

6 themes identified:

- Communications from financial institutions
- Personal experiences with financial institutions
- Reading behaviour with financial information
- Trust in financial institutions
- Response to change
- Terms and Conditions

Tendency to:

- Skip reading altogether
- Skimming through a text
- Reading only parts of it

- Difficult to comprehend and to interpret
- Containing irrelevant information
- Rarely read in their entirety

# Methodology and findings (experiment)

## ***Participants***

- 25 older adults (55+ years old)
- Randomly assigned to treatment or control group

## ***Design***

- Within-subjects
- Treatment group: different text difficulty (13 vs. 5.4), as per Flesch Kincaid Grade Level
- Control group: similar text difficulty (8.7 vs. 7.7), as per Flesch Kincaid Grade Level
- Text simplification followed guidelines from the Web Accessibility Initiative
- Order of simple text vs difficult text counterbalanced (avoidance of fatigue effect)

## ***Texts***

- Terms and Conditions from a bank and an insurance company
- Topic: direct debit (avoidance of topic knowledge as confounding variable)
- Different content of Terms and Conditions (avoidance of learning effect)
- Similar length (ca. 90-word variation)
- Original text formatting maintained
- Language: English



## ***Procedure (on a computer) followed by each participant***

- i. Background questionnaire
- ii. Warm-up reading task
- iii. Text 1 (reading)
- iv. Text 1 (questions on comprehension, satisfaction, and reading behaviour)
- v. Text 2 (reading)
- vi. Text 2 (questions on comprehension, satisfaction, and reading behaviour)
- vii. Follow-up questions on perceived comprehensibility

## ***Questions to test comprehension***

- 4 multiple-choice questions per text:
  - 3 text-based questions (i.e. correct answer can be located in one or two adjacent sentences)
  - 1 bridging question (i.e. correct answer requires inferences)
- 4 candidate answers per question



# Methodology and findings (experiment)

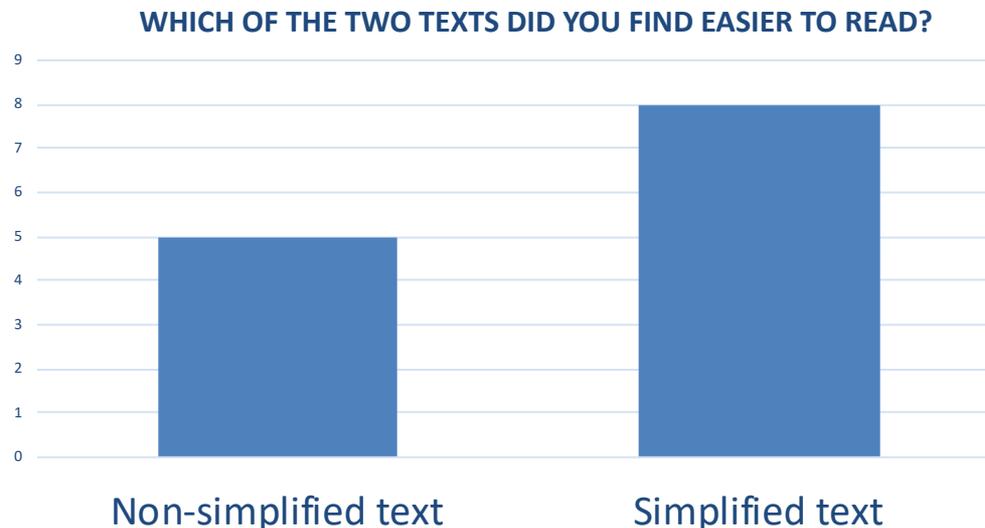
Background characteristics	Treatment group (n=13)	Control group (n=12)
Age	67 (mean)	69 (mean)
Gender	Female (11), male (2)	Female (5), male (7)
Native language	English (all)	English (all)
Education level	Third level (46%); secondary (31%)	Third level (34%); secondary (33%)
Bank account	Yes (all)	Yes (all)
Reading format	Online (92%)	Online (92%)
Reading frequency (bank info)	Often (7); rarely (5); always (1)	Often (7); rarely (4); always (1)
Reading frequency (insurance info)	Rarely (6); always (4); often (3)	Always (5); rarely (5); often (2)
Financial knowledge, 1-5 scale	3 (mode)	3 (mode)
Familiarity (computers), 1-5 scale	4 and 5 (modes)	5 (mode)
Familiarity (direct debits), 1-4 scale	3 (mode)	4 (mode)

# Methodology and findings (experiment)

- **Comprehension:** the adoption of plain language in the treatment group did not result in improved comprehension of Terms and Conditions among our older participants

Text	Comprehension scores
Simplified	Mean=3.08, SD=0.76
Non-simplified	Mean=3.08, SD=0.64

- **Perceived comprehensibility:** a slightly higher number of older people selected the simplified text as easier to read (but similar difference observed in control group)



# Methodology and findings (experiment)

**Perceived comprehensibility:** different reasons (in addition to plain language) for selecting simplified text as more comprehensible:

*“I understood it better, think it was the shorter sentences” (P27) (language)*

*“I prefer the manner on which it was set out, the text was better divided up and the matter more accessible than a large block of words” (P05) (layout)*

*“Bullet points made it easier to read” (P20) (layout)*

*“The text in the first document [simplified] was easier to read than the grey in the second document [non-simplified]” (P11) (colour)*



# Methodology and findings (experiment)

**Satisfaction:** slight differences between simplified and non-simplified Terms and Conditions in terms of: informativeness/helpfulness; understandability of the language; and understandability of content

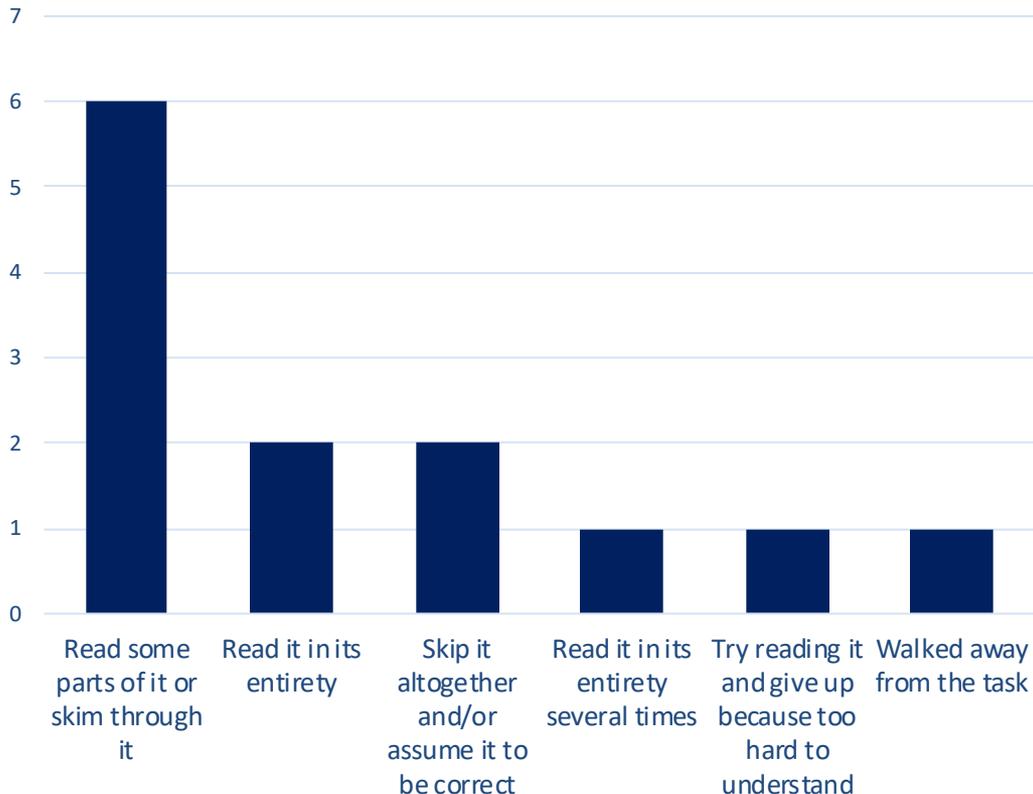
Measure (on a scale from 1 to 4)	Simplified text	Non-simplified text
Informativeness and helpfulness of the text	<b>Mode=2</b> Min=1 Max=4	<b>Mode=3</b> Min=1 Max=3
Perceived understandability of the language	<b>Mode=2</b> Min=2 Max=4	<b>Modes=2 and 3</b> Min=1 Max=4
Perceived understandability of the content	<b>Mode=2</b> Min=2 Max=4	<b>Mode=2</b> Min=1 Max=3

# Methodology and findings (experiment)

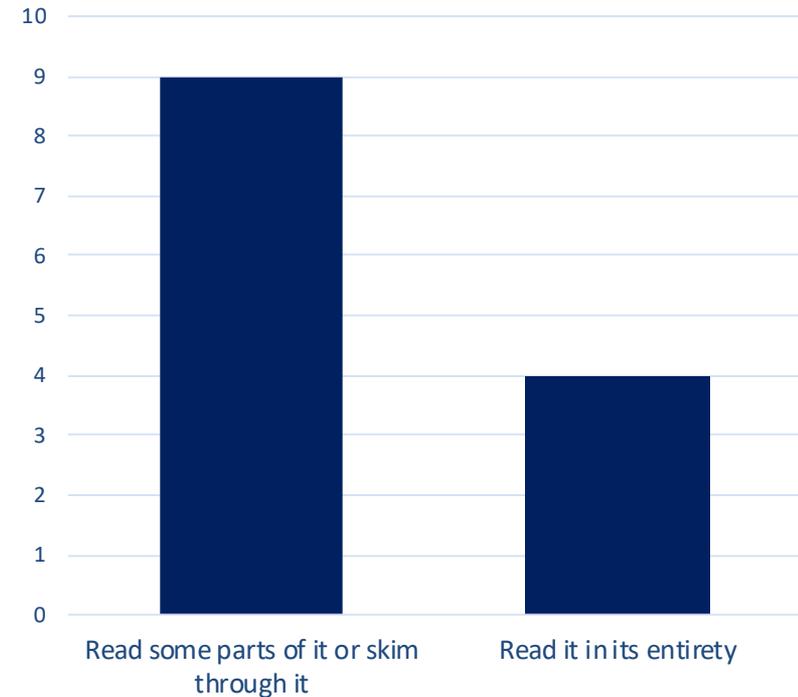
## Reading behaviour:

- General tendency to read some parts of a text, or skim through it
- Non-simplified Terms and Conditions leading to higher variability in terms of reading behaviour:

READING BEHAVIOUR WITH NON-SIMPLIFIED TEXT



READING BEHAVIOUR WITH SIMPLIFIED TEXT



# Supporting focus group data

P05: So maybe I would be guilty of not going into all the terms and conditions as much, you know? Even the [health insurance company]... I wouldn't know exactly what I am entitled to, because you really have to ring up about everything you get done now and see how are you covered?

P01: I don't read them. I scroll down through them, and I tick the box 'I have read the terms and conditions' and I feel... Great...

P03: If it's something to do with terms and conditions, like that, particularly to do with insurance... Or to do with terms and conditions affecting your, your accounts either with a bank or a credit union, I sometimes ask for those on hard copies because sometimes you need to read them, and then you need to re-read them, and then you need to re-read them...

- **Terms and Conditions** identified as non-accessible financial texts (Luger et al. 2013)
- **Plain language** for older people reading online Terms and Conditions:
  - Does not lead to better reading comprehension
  - Does not lead to much higher satisfaction or perceived comprehensibility
  - Not the only reason mentioned for perceived comprehensibility (importance of visual components, e.g. layout)
  - Tendency to read some parts of a text, or at least skim through it
- **Non-simplified Terms and Conditions** leading to more varied reading behaviour, from not reading at all to reading multiple times:
  - Need to address the effort required to comprehend Terms and Conditions
  - Need to ensure older people are less exposed to un-informed consent



- Need for more empirical evidence on potential benefits of plain language for older people's reading comprehension (if any)
  - Different methods (e.g. recall)
  - More difficult/unfamiliar texts or topics (≠ direct debit)
- Additional future work:
  - Objective methods to assess financial literacy (e.g. Atkinson and Messy 2012)
  - Larger and/or different sample (e.g. less digitally literate)

# Thank you!

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