When U Txt: The "Vocabulary" of Text Messaging

Pamela A. Smith, Ph.D., CCC-SLP
Associate Professor
Bloomsburg University
Bloomsburg, PA
Email: psmith@bloomu.edu;
lobsterpam@aol.com

Text Messaging: Background

- Type of Computer Mediated Communication (CMC)
- Short Messaging Service (SMS)
  - *Used in text messages*
  - *Used in instant messages*
  - *Infiltrating popular culture*
- CMC has been researched in terms of its syntactic and pragmatic characteristics.
- Little controlled study on SMS. [1-4]

Purpose

- To determine how individuals store SMS items (text messages) in the lexicon.
  - *Are there differences based upon age?*
  - *Are there differences based upon experience?*
  - *Are there differences depending upon the type of text message?*

Method

- Subjects
  - Younger (20-24) n = 30
  - Older (50-75) n = 15
- All passed reading screening and reported normal hearing.
- All reported their text messaging use levels
  - Low: fewer than 10 messages per day
  - High: 10 or more per day

Stimuli

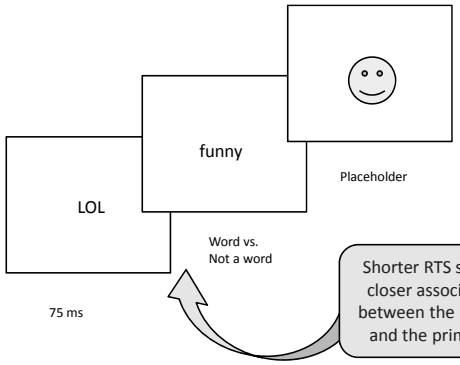
- List of text messages brainstormed
- Distributed to group of 100 undergraduates who rated them on a frequency scale
  - 1 = rarely used
  - 5 = often
- Top 20 were used in the study
- Single number(4, 2), number + letter (2day, 4get), single letter (c, u), and letter combinations (LOL)

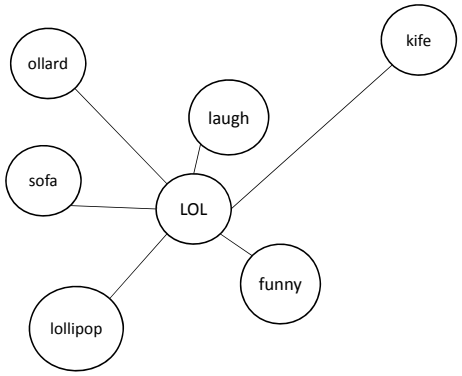
Stimuli

- Text messages were used as primes
- Presented for 75 ms
- Lexical decision task followed in two conditions (immediate and delayed 250 ms)
- LD items varied as follows:
  - For letter primes: semantic, component, phonologically related, unrelated foil
  - For number primes: semantic, homophone, written, unrelated foil

Apparatus

- Stimuli presented via SuperLab[5] on either a Dell or Lenovo laptop running Windows XPexperimental software and an RB 530 response pad.
- SuperLab measures reaction time in ms.

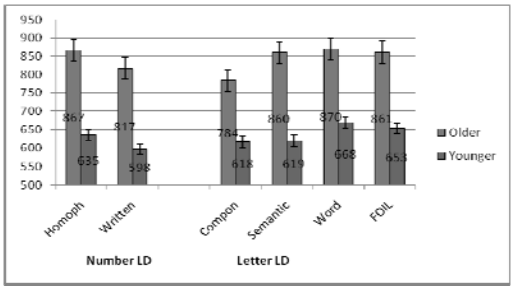




Analysis

- Outliers were managed via replacement of items more than 2 SD from the mean with the value of 2 SD from the mean.[8]
- Data analyzed using analysis of variance[9]
  - *Two time levels (immediate, delayed)*
  - *Two age levels (older, younger)*
  - *Two experience levels (high, low)*
  - *Text message types - Letters: 4 associations*
  - *Text message types - Numbers: 4 associations*

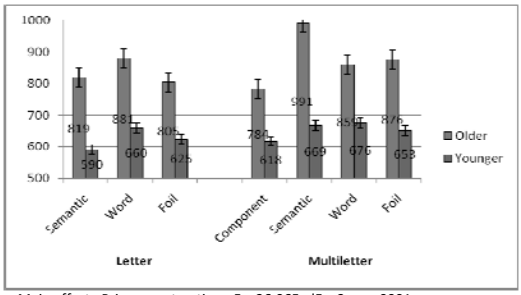
RTs for Number and Letter LD by age



Main effect: Age F = 599.865, dF = 1, p < .0001

Single Letter vs. Multiletter

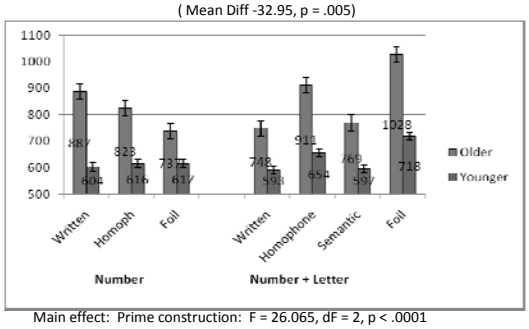
(Mean Diff -32.83, p , > 0001)



Main effect: Prime construction: F = 26.065, dF = 2, p < .0001
No significant interaction of age x prime construction

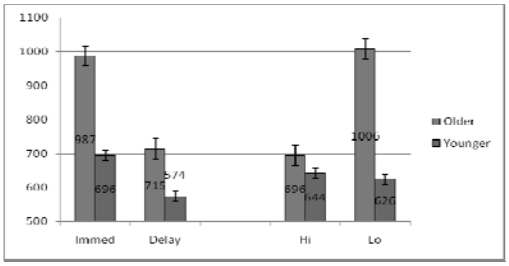
Number vs. Number + Letter

(Mean Diff -32.95, p = .005)



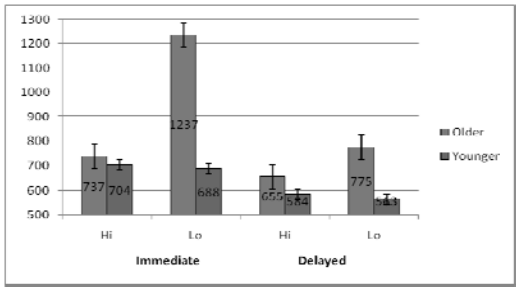
Main effect: Prime construction: F = 26.065, dF = 2, p < .0001
No significant interaction of age x prime construction

Age x Time Age x Experience



Age x Time: F = 69.292, dF = 1, p < .0001
Age x Experience: F = 345.442, dF = 1, p < .0001

Age x Time x Experience



Age x Time x Experience: F = 117.957, dF = 1, p < .0001

Limitations

- Length of time prime was presented
  - *problem solving*
  - *helps to explain experience x age effects*
- Prime foils
- Additive/associative/backward priming
  - *Intervening tasks*

Conclusions

Are there differences based upon age?

- *RTs slow with age*

Are there differences based upon experience?

- Experience differentially affects RTs with age
  - *Impact of problem solving + processing time*

Conclusions

Are there differences depending upon the type of text message?

- Text messages with numbers stored differently than those with only letters.
  - *Numbers activate more representations*
  - *No differences with singleton text messages (the combinations appear to activate multiple representations)*

Time 4 UR ??s

http://www.flubu.com/comics/Non_Sequitur_pan.291.g.gif

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