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Abstracts of the 11th Annual Meeting of the Cognitive Science Society

Hongmei Chen, Department of Psychology, Peking University

Max Planck Institute for Psycholinguistics
Leiden University Centre for Linguistics & Leiden Institute for Brain and Cognition
Department of Psychology, Peking University

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Abstract

The present study investigated the effects of the number of items on the recall of Chinese characters. Two experiments were conducted. In Experiment 1, participants were asked to recall a list of Chinese characters after a 20-second delay. The results showed that the recall accuracy decreased as the number of items increased. In Experiment 2, participants were asked to recall a list of Chinese characters after a 40-second delay. The results showed that the recall accuracy decreased as the number of items increased. The results of the two experiments suggest that the number of items has a significant effect on the recall of Chinese characters. The results also suggest that the delay time has a significant effect on the recall of Chinese characters. The results of the two experiments suggest that the number of items and the delay time have a significant effect on the recall of Chinese characters.

Keywords: Chinese characters; List length; Memory; Recall; Delay time

1. Introduction

The present study investigated the effects of the number of items on the recall of Chinese characters. Two experiments were conducted. In Experiment 1, participants were asked to recall a list of Chinese characters after a 20-second delay. The results showed that the recall accuracy decreased as the number of items increased. In Experiment 2, participants were asked to recall a list of Chinese characters after a 40-second delay. The results showed that the recall accuracy decreased as the number of items increased. The results of the two experiments suggest that the number of items has a significant effect on the recall of Chinese characters. The results also suggest that the delay time has a significant effect on the recall of Chinese characters. The results of the two experiments suggest that the number of items and the delay time have a significant effect on the recall of Chinese characters.

Correspondence: Hongmei Chen, Department of Psychology, Peking University, Beijing 100871, China. E-mail: chenhm@pku.edu.cn

... A ...
...
... G ... E ...
... F ... G ... (1998). ... C ...
... (2008) ...
... camera []

2. Method

2.1. Participants

Experiment 1 was conducted with 66 participants (33 males, 33 females) aged 18–27. Participants were divided into three groups: Group A (n = 22), Group B (n = 22), and Group C (n = 22). Each group received a different set of stimuli. The stimuli were presented in a random order. The experiment was controlled using a computer program. The dependent variable was the number of correct responses. The results showed that Group A performed significantly better than Group B and Group C. The overall performance was high, with a mean accuracy of 90%. The error rate was 10%. The results are summarized in Table 1.

2.2. Stimuli

The stimuli were presented in three conditions: A, B, and C. Condition A consisted of the sentence "ci2 ... bo1 ... bo2" (ci2, bo1, bo2). Condition B consisted of the sentence "ci2 ... duan3 bo1 ... bo2" (ci2, duan3, bo1, bo2). Condition C consisted of the sentence "ta1 xie3 ... zhe4 ge4" (ta1, xie3, zhe4, ge4). The stimuli were presented in a random order. The experiment was controlled using a computer program. The dependent variable was the number of correct responses. The results showed that Group A performed significantly better than Group B and Group C. The overall performance was high, with a mean accuracy of 90%. The error rate was 10%. The results are summarized in Table 1.

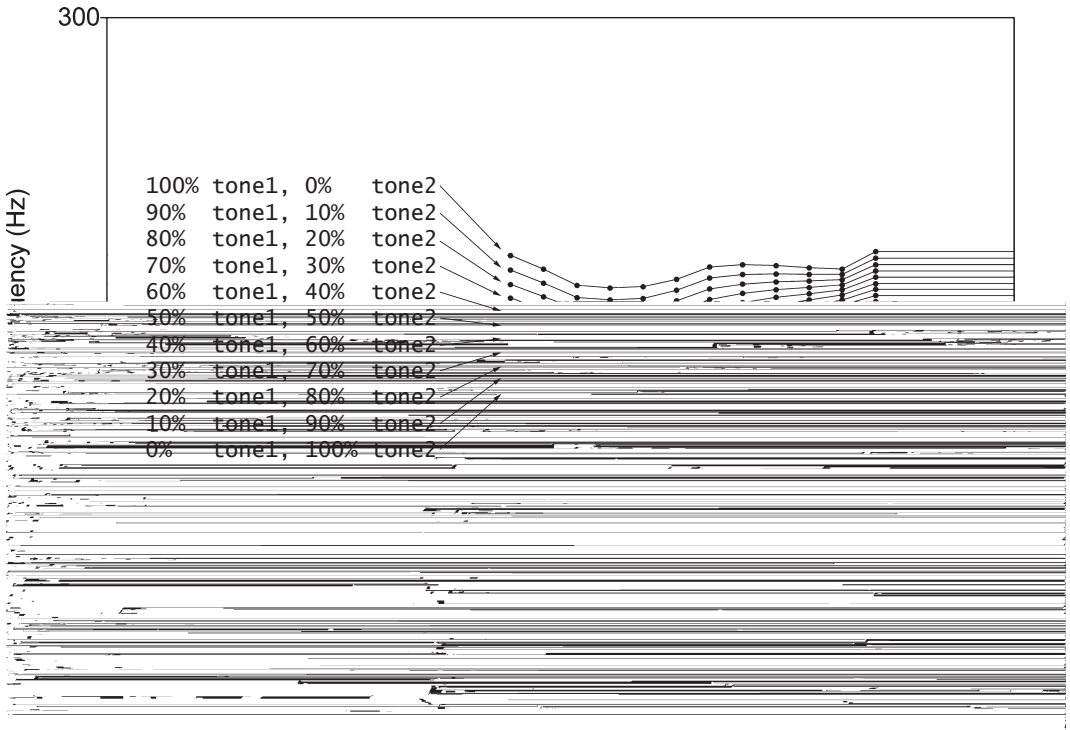


FIG. 1. Frequency contours for tone1 (dotted line) and tone2 (solid line) and their mixtures (10% tone1, 90% tone2 to 90% tone1, 10% tone2).

Figure 1 shows the frequency contours for tone1 (dotted line) and tone2 (solid line) and their mixtures (10% tone1, 90% tone2 to 90% tone1, 10% tone2). The contours show a dip in frequency in the middle of the utterance, with the depth of the dip increasing as the percentage of tone2 increases. The contours are labeled with their respective tone1 and tone2 percentages: (ta1 shuo1 ... zhe4ge4ci2' ...').

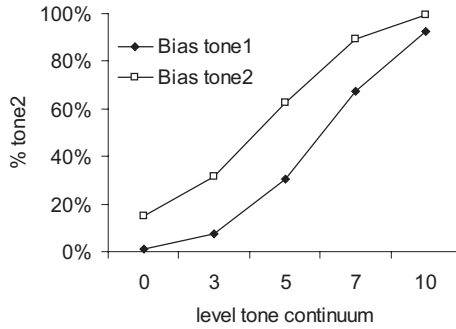


Figure 2. M...

... 1 2
 ... 11-
 ... 80% 1 20% 2,
 60% 1 40% 2, 50% 1 50% 2, 40% 1 60% 2, 20% 1 80%
 ... 2
 ... A
 ... (...)
 ... N ... , 2003,
 ... F ... 2AFC
 ... C,
 50 × 50 ... 189 × 113

2.3. Apparatus and procedure

MA LAB ... C. (... 2.54) (B ... , 1997).
 ... 200
 ... 600 ... A ... 400- ... 1.5
 ... 1 ... 45 ... 1 ... 2 ... 55 ... 3 ... 4
 ... F ... 90 ... 1 ... 2 ... 40
 ... H ... 1

C	G ¹ (1 B)		G ² (2 B)		
	N	A	N	A	
1	25	20	20	25	
2	20	25		25	20
3	30	25	30	25	
4	30	25	30	25	
	80	100	80	100	20

Note.

1 2
 I 110 3- 4- 2
 60
 200
 10
 I (ta1 xie3/shuo1 ... zhe4ge4ci2” /
),
 1 2 bo1 bo2
 bo 0.2
 5 D 40 C (20
 20)
 (3, 5, 6, 7, 9 1 2 ;)
 A

2.4. Design and analysis

E
 1 2 E
 1 2
 F 2) C (:E (1
 () () ()
 1 2 1

1.

), E G : E G /N × C E (E N
 (B , D , & B , 2008). F (J , 2008).

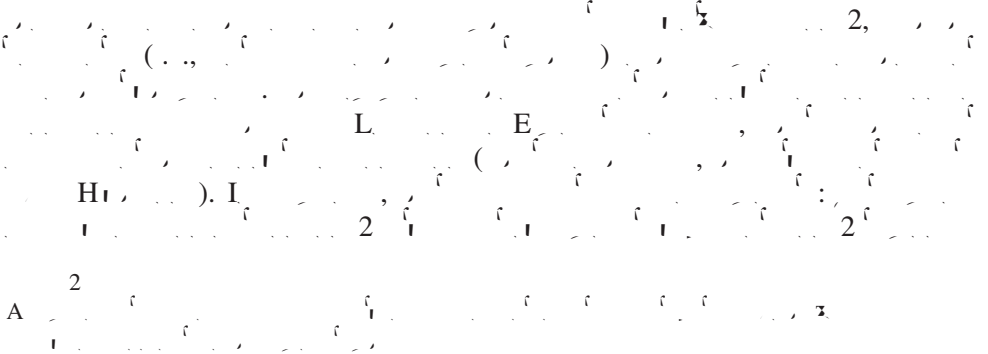
3. Results

3.1. Exposure

I 99% (2)
 2 78 2
 A = -39, p < .05, E
 C (b = -0.66, p < .001). N

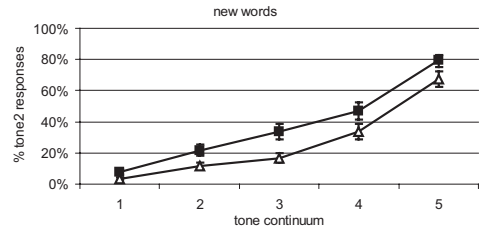
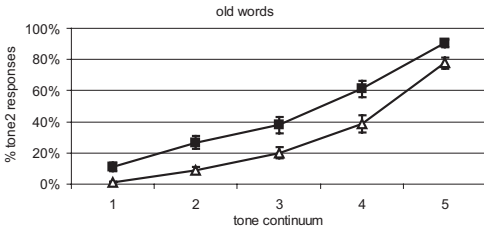
3.2. Test

Fig. 3



%	E C	
	1C 2	2C 1
1	97.5% 389	95.1% 405
2	98.4% 427	97.5% 404

Same tone context in Exposure and Test



Different tone context in Exposure and Test

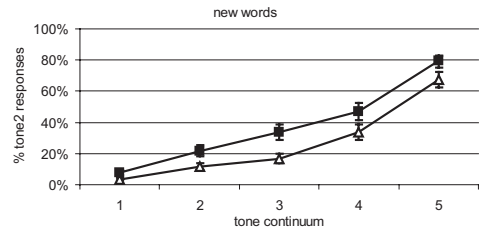
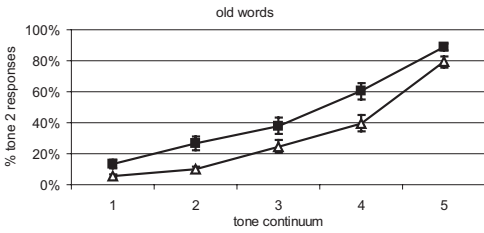
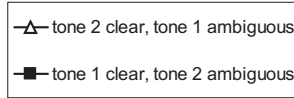


FIG. 3. M

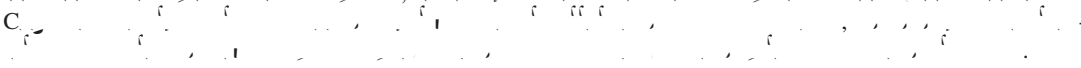
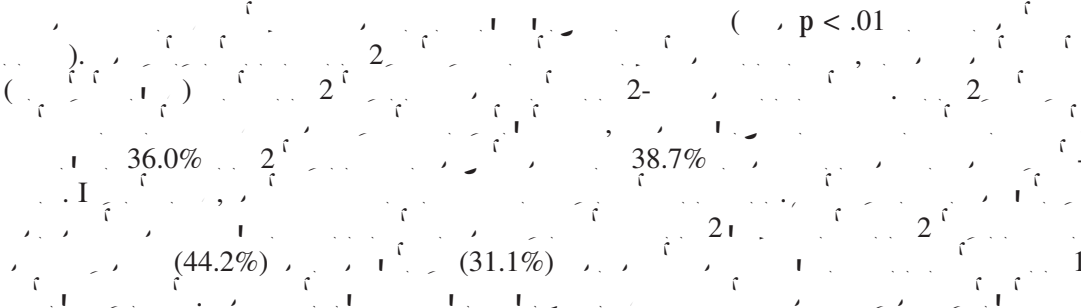


FIG. 4. I



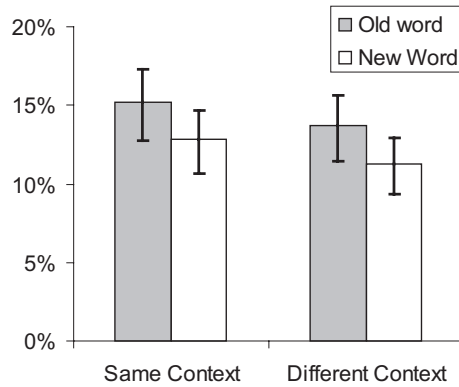


Figure 4. Learning curves for the two conditions. The y-axis represents the percentage of correct responses. The x-axis represents the number of trials. Error bars represent standard error. A significant difference between the two conditions was found for the 'Same Context' condition ($p < .05$), but not for the 'Different Context' condition ($p > .2$).

4. Discussion

The present study investigated the effects of context on word learning. Results showed that learning was faster for words presented in the same context compared to words presented in different contexts. This effect was significant for the 'Same Context' condition ($p < .05$), but not for the 'Different Context' condition ($p > .2$). These findings are consistent with previous research showing that context facilitates word learning (e.g., Anderson & Madsen, 2005, 2006; Kuhl & Andruski, 2005, 2006; Lashley & Saffran, 2007; Madsen & Saffran, 2006; Namy & Saffran, 2003). The present study extends this research by showing that context also facilitates learning of new words. This suggests that context is not only important for learning of old words, but also for learning of new words. The present study also shows that the effect of context is not limited to words presented in the same context, but also extends to words presented in different contexts. This suggests that context is important for learning of words in general, not just for words presented in the same context. The present study also shows that the effect of context is not limited to words presented in the same context, but also extends to words presented in different contexts. This suggests that context is important for learning of words in general, not just for words presented in the same context. The present study also shows that the effect of context is not limited to words presented in the same context, but also extends to words presented in different contexts. This suggests that context is important for learning of words in general, not just for words presented in the same context.

H
1998), (N. " , 1994), F " ? B M. (G. " ,

A
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Acknowledgments

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 G 206198)

References

- B
 , H
 , D
 , D. J., & B
 , D. M. (2008). M
 . *Journal of Memory and Language*, 59, 390–412.
- B
 (2001). *Glott International*, 5, 341–345.
- B
 , D. H. (1997). *Spatial Vision*, 10, 433–436.
- C
 , & G
 , C. (2008). E
 M
 C
 . *Journal of Phonetics*, 36, 724–746.
- C
 , C. M., L
 , J., & D
 , J. (2008). *Perception & Psychophysics*, 70, 403–411.
- C
 , A., & A. (2007). L
 L2. I. J. & J. B
 (E
), *Proceedings of the 16th International Congress of Phonetic Sciences* (43–48).
- D
 , M. H., J
 , I
 , H
 -A
 , A., K., & M
 , C. (2005). L
 E
 . *Journal of Experimental Psychology: General*, 134, 222–241.
- E
 , F., & M
 , J. M. (2005). *Perception & Psychophysics*, 67, 224–238.
- E
 , F., & M
 , J. M. (2006). *Journal of the Acoustical Society of America*, 119, 1950–1953.
- F
 , A. L., C
 , N. K., L
 , H
 , & C
 , C. (2006). E
 . *Journal of the Acoustical Society of America*, 119, 1712–1726.

- Garnica, R. F. (1980). The effects of word length on word recognition. *Journal of Experimental Psychology: Human Perception and Performance*, 6, 110–125.
- Garnica, R. F., & D. (1996). The effects of word length on word recognition. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 22, 1166–1183.
- Garnica, R. F., & D. (1998). Effects of word length on word recognition. *Psychological Review*, 105, 251–279.
- Garnica, R. F., & D. (2007). A word length effect in word recognition. In J. B. B. & J. B. (Eds.), *Proceedings of the 16th International Congress of Phonetic Sciences* (pp. 49–54). Dordrecht, The Netherlands: John Benjamins.
- Jain, S. F. (2008). Categorical perception of word length. *Journal of Memory and Language*, 59, 434–446.
- Jain, S. F., & K. (1997). The effects of word length on word recognition. In K. J. & J. M. (Eds.), *Talker variability in speech processing* (pp. 145–165). Dordrecht, CA: Academic Press.
- Kahn, D. (1989). The effects of word length on word recognition. In D. M. (Ed.), *Lexical representation and process* (pp. 169–226). Cambridge, MA: MIT Press.
- Kahn, D., & A. G. (2005). The effects of word length on word recognition. *Cognitive Psychology*, 51, 141–178.
- Kahn, D., & A. G. (2006). The effects of word length on word recognition. *Psychonomic Bulletin and Review*, 13, 262–268.
- Kahn, D., A. G., & B. (2008). The effects of word length on word recognition. *Psychological Science*, 19, 332–338.
- Kahn, D., E. M., & M. H. (2010). The effects of word length on word recognition. In C. F. & M. D. (Eds.), *Laboratory phonology 10* (pp. 731–758). Berlin: Mouton de Gruyter.
- Lieberman, P., & B. D. E. (1957). The effects of word length on word recognition. *Journal of the Acoustical Society of America*, 27, 98–104.
- Lieberman, P. (1983). The effects of word length on word recognition. *Journal of Phonetics*, 11, 373–382.
- Lieberman, P., & J. (2007). The effects of word length on word recognition. *Journal of Experimental Psychology: Human Perception and Performance*, 33, 1483–1494.
- Marslen-Wilson, A. (1980). The effects of word length on word recognition. *Perception & Psychophysics*, 28, 407–412.
- Marslen-Wilson, J., A. N., & M. K. (2008). The effects of word length on word recognition. *Cognitive Science*, 32, 543–562.
- Marslen-Wilson, J. M., C. A., & N. D. (2006). The effects of word length on word recognition. *Cognitive Science*, 30, 1113–1126.
- Marslen-Wilson, H. (2006). The effects of word length on word recognition. *Phonetica*, 63, 209–229.
- Marslen-Wilson, C. B., & J. A. (1997). The effects of word length on word recognition. *Journal of the Acoustical Society of America*, 102 (3), 1864–1877.
- Nelson, D. (1994). The effects of word length on word recognition. *Cognition*, 52, 189–234.
- Nelson, D., M. J. M., & C. A. (2003). The effects of word length on word recognition. *Cognitive Psychology*, 47, 204–238.
- Nelson, D., J. (2002). The effects of word length on word recognition. In C. G. & N. (Eds.), *Laboratory phonology VII* (pp. 101–139). Berlin: Mouton de Gruyter.
- Nelson, M. A. (2009). The effects of word length on word recognition. In A. G. & K. (Eds.), *Journal of Memory and Language*, 61, 19–36.
- Nelson, M. A., & K. (2009). The effects of word length on word recognition. *Attention, Perception, & Psychophysics*, 71, 1207–1218.
- Nelson, C. M., & D. L. (2003). The effects of word length on word recognition. *Journal of Speech, Language, and Hearing Research*, 46, 413–421.

, . (1994). Journal of the Acoustical Society of America, 95, 2240-2253.
, A. C. L. (2007). Phonology, 24, 187-214.

Supporting Information

A

Appendix S1: E

Appendix S2: -B

A