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The Effects of Note-taking Strategies and Gender on Word Recognition



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Abstract

Technological advancements have changed the way notes are taken. This study will examine gender and note-taking style on the student's ability to recognize words. Participants were instructed to either write, type or read a set of randomly generated words. After a word search buffer, participants were instructed to complete a post-test. Lastly, participants completed a questionnaire. Past studies have supported that handwriting notes is the most effective way for students to retain information and score higher on tests.

Introduction

- For this study, there were two independent variables. One independent variable was note-taking strategy, participants were instructed to either write, type or read the set of random words. The other IV was gender, participants either identified as male, female, or other.
- The dependent variable was the score on the post-test with the operational definition being the number of correct words recognized. This was measured in the post-test; participants could score a maximum of 14 out of 14.
- Note-taking aids performance which results in deeper comprehension and a higher likelihood to elaborate on the material (Bohay, Blakely, Tamplin, Radvansky, 2011).
- Working memory is a cognitive workspace where information from the environment and long-term memory is held, manipulated, and interpreted to achieve goals; such as remembering and learning (Bohay, Blakely, Tamplin, Radvansky, 2011).
- Sensory-motor skills are heightened during handwriting, like with the development of hand-arm motor movement (Kiefer, Schuler, Mayer, Trumpp, Hille, & Sachse, 2015).
- Females tend elaborate and report more relevant information when taking notes during lectures than when males took notes. Females then scored higher than their male counterparts during testing (Reddington, Peverly, & Block, 2015).

Hypotheses

- Females will recognize more words than males
- Participants who write the words will recognize more words than participants who type or read the words.
- Females who write the list of words will recognize more words than males and females who type and read the words

Method

Participants

- Total sample size of 63 college aged (range 18 – 30) participants (males=9, females=54, SD= 2.195).
- Participants were recruited by convenience sampling through an electronic signup system called SONA system at a Longwood University.

Procedure

- Participants instructed to write, type, or read a list of randomly generated words that were projected on a screen in front of them.
- Participants attempted a word search for 5 minutes.
- Participants completed a post-test that had 14 of the original 15 given words.
- Participants filled out a demographic questionnaire.

Materials

Words displayed at beginning of study

| | |
|---------------|-------------|
| Medical | Recess |
| Blushing | Purple |
| Encourage | School |
| Disillusioned | Gullible |
| Clouds | One |
| Forgetful | Illustrious |
| Bleed | |
| Itchy | |
| Chin | |

Displayed above is the list of words that were presented to the three levels of note-taking

Post-test

Circle the words that you recognize from the list of words shown in the beginning of the study.

| | | |
|--------------|-------------|---------------|
| Dapper | Bleed | Price |
| Elegant | Lamentable | Disillusioned |
| Incandescent | Recess | Purple |
| Encourage | Glamorous | Fiction |
| Quiver | Education | Tiny |
| Ingest | Itchy | Grouchy |
| Purple | Shoes | Testy |
| Limping | Chin | Abashed |
| Clouds | Bewildered | Gullible |
| Absorbed | Screw | |
| Spade | Illustrious | |

Questionnaire

5. My confidence level with the majority of words I recognized.

| | | | | |
|------------|-----------|-----------|-----------|-----------|
| 1 | 2 | 3 | 4 | 5 |
| Not at all | Not | Somewhat | Confident | Very |
| Confident | Confident | Confident | | Confident |

6. Which method of notetaking am I generally faster at?

| | |
|-------------|--------|
| Handwriting | Typing |
|-------------|--------|

7. The reason I type my notes:

| | | | |
|----------------------------|----------------------|--------------------------------|------------------------|
| My handwriting is messy to | I am slow at writing | I do not want deal with papers | I always type my notes |
|----------------------------|----------------------|--------------------------------|------------------------|

8. The reason I write my notes:

| | | | |
|---------------------|-------------------------------------|---|-------------------------|
| I am slow at typing | My professor does not allow laptops | I do not want to carry my laptop to classes | I always write my notes |
|---------------------|-------------------------------------|---|-------------------------|

The questionnaire was administered to collect demographic information and assess the confidence of individuals after completing the post-test.

Results

2-Way Analysis of Variance test compared gender and note-taking strategies (See Figure 1)

- Females recognized more words than males
 - Note-taking strategies did not differ amongst each group
 - Gender did not have an effect on note-taking strategy
- An Independent-T test was used to measure perceived confidence and gender (See Figure 2)
- Males who typed the list of words perceived themselves to be more confident females who typed

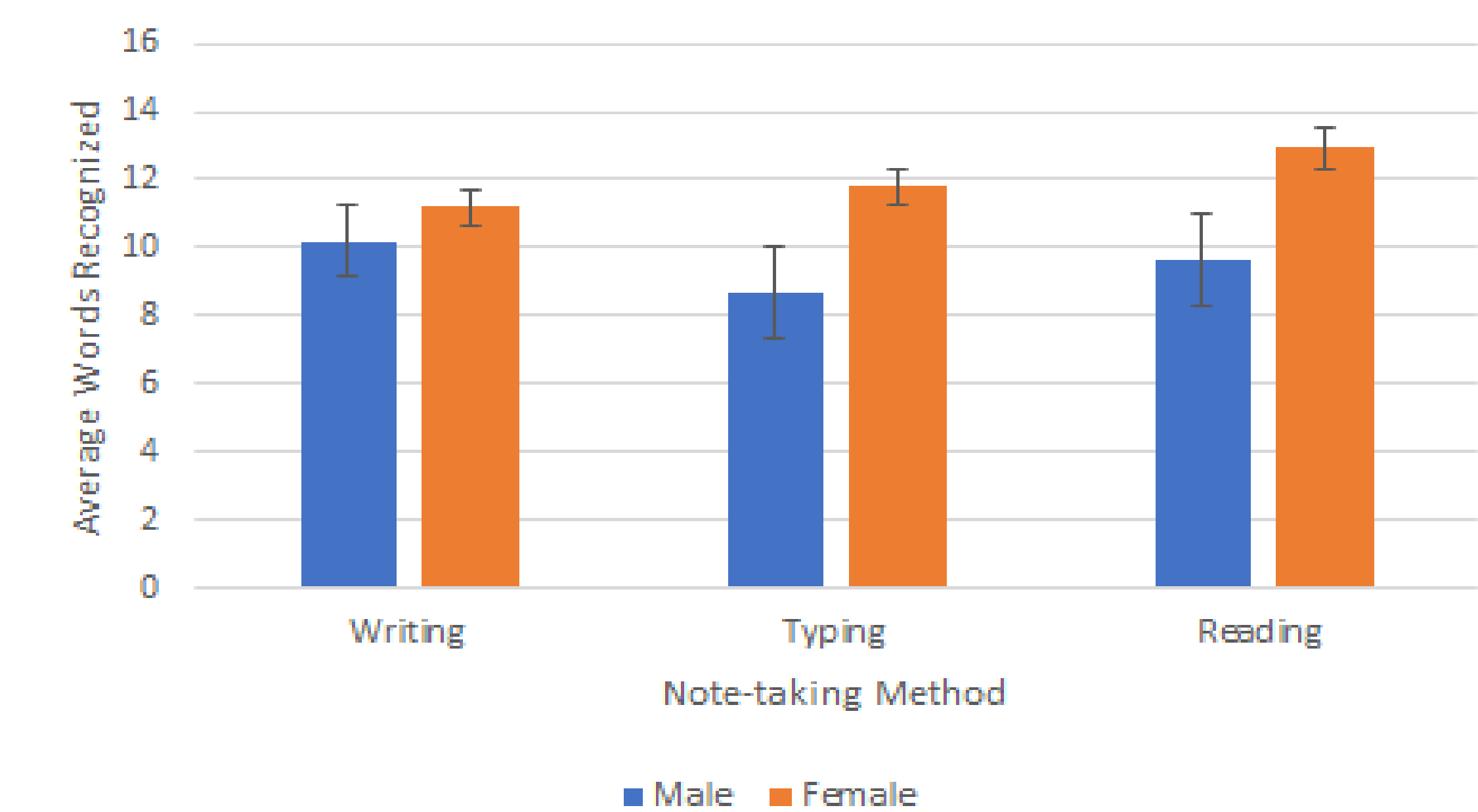


Figure 1. The bar graph displays that females recognized more words than males when using either the writing, typing or reading note-taking strategy.

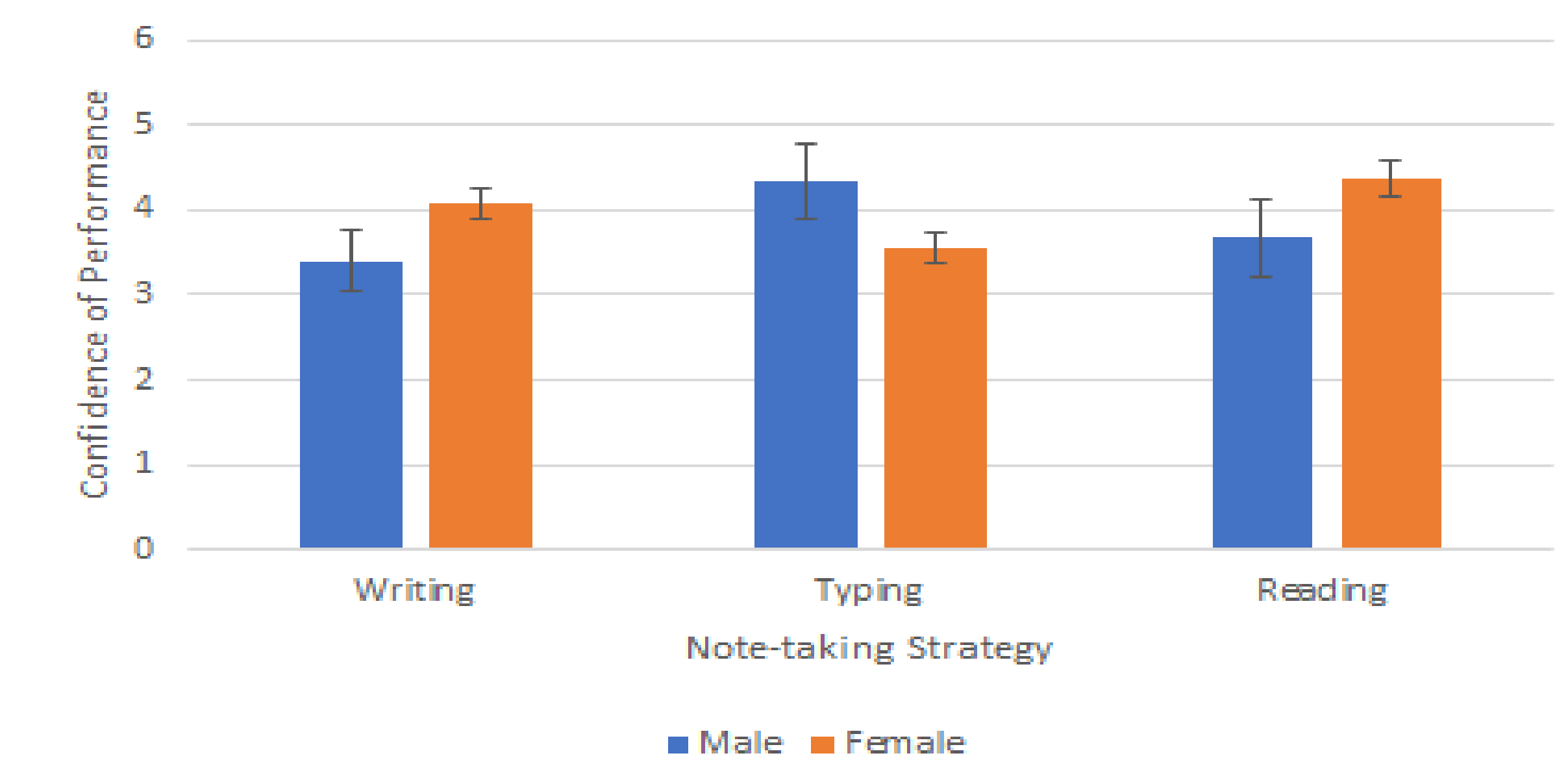


Figure 2. The bar graph displays that confidence level of males were higher than females who used the typing note-taking strategy. However, women were more confident when using writing or reading strategies of the independent variable.

Discussion

- Study found that there was no significant main effect for notetaking strategy
- There was no interaction between note-taking strategy and gender.
- Found that note-taking style does not matter
- Limitation: Words are too simple, time that each group got to spend writing, typing, or reading word

Future Research:

- Using a more complex list of words and having a more randomized word search would cut down on limitations
- More research on gender and different subjects and the ability to recognize information
- Study how confidence has an effect on how a person perceives that they recognized information

References

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