

Free visual search article review example

[Psychology](#)



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Citation 10 -- “ Visual Search”

2. Goal of article: State the research questions and/or hypotheses being investigated (What are they trying to do?) (Four sentences to one paragraph)

The researchers in this study wanted to determine the factors that determine an individual's visual search. The researchers were specifically interested in determining whether individuals register the things they see as a whole and then separate each feature into its component parts or whether visual search is perceptual hence everything that comes into the view is registered in the mind before we become aware of them. Several paradigms were tested in the study, including texture segregation, localization and identification.

3. List three (3) cognitive psychology terms important for the topic of the article, find their definitions or descriptions in any CogPsy textbook (give reference) and provide them here:

1. Attention: “ A state of focused awareness on a subset of the available perceptual information” .

2. Sensation: “ The process by which stimulation of a sensory receptor gives rise to neural impulses that result in an experience, or awareness of, conditions inside or outside the body” .

3. Independent Variable: A stimulus condition whose value does not vary as a function of another.

4. Describe ALL the dependent variables for the designated experiment:
- Provide an operational definition

Reaction time: Time taken by the subjects to provide an answer for the

stimulus tested (whether positive or negative).

msec

5. Describe ALL the independent variables for the designated experiment:

Display size

- List its levels

Display size: Level one consisting of size 1, 4, 16 and 36

Liner regression

- If there are more than one independent variable, state the factorial design

One by one factorial design: One independent variable with each having its own level.

6. Describe how the experiment was conducted, i. e., what was the procedure: (4-6 sentences)

In experiment one, subjects were presented with a white card bearing a central fixation spot. The card remained in view for one second and then replaced with another card bearing a search array. Subjects were then expected to make a key press with the right hand if they detected a target. They were also expected to make a press with the other hand if otherwise. The reaction time for each subject was then recorded.

In experiment two, six different cards having eight different targets were presented to the subjects. However, the display size in this case was varied. Like in experiment one, the mean reaction was also recorded.

7. Identify all the main effects and interactions (if the design is factorial).

Make sure you state the main effect for EACH independent variable you named in (5):

- Provide the statistical statement (t- or F-statement)

Experiment 1: A slope of 3. 1, the reaction time was 448 msec with a

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percentage variance of 67.9

Experiment 2: A slope of 20.5, with a reaction time of 437 msec with a percentage variance of 99.8

- Explain each statement in plain English

The results of experiment 1 indicate that the size of display has no significance on how speed of visual search. Results of experiment 2 indicate that the number of items presented to a subject has significance on the time taken to process that information.

8. Steps or conclusions suggested by the article (One paragraph):

a. How is each research question listed in (4) answered?

In experiment one, the mean reaction time for shape was 426 msec while the mean reaction time for color was 446 msec. In the second experiment, the mean reaction time increased as the display size was reduced.

b. What do the data mean?

The first result shows that shape is registered faster than the color during visual search. However, the difference is not significant, which suggests that visual search is conducted through an integrated process where attention registers the dimensional features first before focusing on other features.

The results of the second study indicate that it is easy to register an object through visual search if its display is wide enough.

9. What processes might be at work to make feature searches fast (and not requiring attention) and conjunctive search slow (and requiring attention)? (One-two paragraphs).

There are several things that make feature searches fast without necessarily concentrating on the item presented. This is because feature searches are assisted by things like institutional memory, which makes it easy to

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recognize a feature item fast without having to concentrate on it. Another thing which aids in the faster recognition of feature searches is the perceptual ability to differentiate features in an item. This ability eliminates the need to concentrate on a feature item before recognizing it. On the other hand, there are some things which slow down conjecture search. For example, a distracter which is similar to the target in terms of shape, color, size and orientation is likely to confuse the subject. This makes the subject use top-down search procedure, which is relatively slow.

- Is there any disorder or situation in which you could imagine someone being particularly good or bad at this sort of task? (One-two paragraphs).

There are several scenarios which can impair an individual's ability to recognize and distinguish item features. For example, color blindness would make it impossible to know the exact color feature. People who have vision impairment would also not do well in this kind of study. On the other hand, people with clairvoyance would do extremely well in this exercise. This is because their perceptual ability is great, and they can even see feature items even when their eyes are closed. This is a very rare ability and to date no peer-reviewed journal has supported its existence. It is only explained in parapsychology, which is not fully accepted as a science.

Reference

American Psychological Association . (2013). Glossary of Psychological Terms . Retrieved

November 8, 2013, from apa. org: <http://www.apa.org/research/action/glossary.aspx>

Treisman, A., & Gelade, G. (1980). A Feature Intergration Theory of

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Attention. Cognitive

Psychology , 12 (1), 97-136 .