

*APA citation of journal article:* **Selectively Distracted: Divided Attention and Memory for Important Information**

**The Basics:**

1. What was the broad question being asked by this research project? What was the specific question being asked by this research project?
  - a. Summarize the background information on the research topic in three sentences. Selectively learning has long been an important task, however distractions plague us in even the quietest libraries. However, our ability to learn deemed important information even under distraction, remains unknown. And under divided attention, much of this can seem unattainable.
  - b. What is the gap in the literature identified by the researchers? What question(s) are they trying to answer? What is their hypothesis and what should happen if the author's hypothesis is true? They identified a gap in the effect of divided attention when encoding for valuable information, and how it differs depending on if they are actively or passively distracted. They wanted to know how well participants would do in recalling things of differing importance, while being distracted in a number of ways. They hypothesize that less involving distractions will be less harmful to recall than more demanding active distractions, signifying a new approach to how much we should let our distractions take hold of us while we study.
  - c. What are alternative hypotheses? That there is no difference in performance depending on the type of distraction, that as long as the mind is not fully dedicated to the task at hand, performance will suffer.
  
2. What experiments were done to test the hypothesis or investigate the research question?
  - a. Explain the task design – what are participants instructed to do and what is being measured? Think about the independent and dependent variables. Participants were made to study a list of words to be recalled later, under either complete attention, divided attention through a digit identifying task, and background music of which the participant was either familiar or unfamiliar. They were later tested on these words to see how well they recalled them.
  
3. What evidence supports each of the conclusions?

- a. Before you read the discussion, summarize the main findings and link each one back to the research question(s). How does each result inform the hypothesis? The divided attention condition lead to significantly less recall, suggesting that actively divided attention will worsen someone's ability to recall information. The music conditions did not significantly differ from the control and suggest that music, as a more passive distraction, does not impact performance significantly. However, the most valuable words, where attention was most called for, showed no significant differences among groups, showing a potential for persevering selective attention under higher stake situations.
- 
4. What are the major conclusions?
    - a. What do the results add to the field? How do the researchers interpret their findings? Summarize any limitations identified by the researchers. Our performance in recalling information is limited not only by distractions, but also by the extent to which we are actively engaged in that distraction. However, selectivity to more important items, seems to trump distractors, and lead to similar recall across all conditions. The digit detection task however may have been too difficult a task to measure for divided attention, leading to an over dramatization of the effect of divided attention on memory recall..

### **The Critique:**

1. Is the paper well written? How do you know? For week 2 & later, use this space to practice headlines & summaries of the articles via tweets. The paper is pretty well written. Sentences can often become long and jumbled and present information in a hard to decipher way, but the information is presented enough times that it can be clearly understood one way or another.
  
2. Do the conclusions seem logical given the data processed? Why or why not? Another way of thinking about this: do the results adequately support the conclusions that are drawn? Are there alternative explanations for the findings? What inferences about the hypotheses and questions can be made based on these results? The conclusions seem logical when looking at the processed data. It seems clear that a distracted mind will

perform worse than an active mind on a task of encoding and recall. The distracted condition however, seemed never ending and too demanding, compared to more common, active, yet temporary distractions in real life such as scrolling through social media, or talking to a friend, which are usually spaced intermittently throughout studying. We can thus conclude that being actively distracted while studying, will lead to decreased performance, but the effect of a more common active distraction, popping in and out of our time, remains relatively unknown.

3. Are the conclusions important? How do you think this relates to everyday behavior? The conclusions are important. Understanding the importance of dedicated attention during tasks is a useful method and aid to improve our overall recollection and should be utilized.
  
4. What were the best aspects of the research presented, and how could the research be improved? Name at least one way to improve the experiment. The best aspect was the use of familiar versus unfamiliar music. This has long been a question of mine and I find it very interesting that not only did familiar and unfamiliar music fail to distinguish themselves from each other in a test of recall, they seemed to have minimal impact when compared to full attention as well. The divided attention task, as noted by the researches though, seemed too demanding, overpowering and tedious, and most likely lead to a good amount of stress in the participants which could have confounded the results.
  
5. How would you follow-up this experiment or study? I would do an observational study on students in the same classes, analyzing their study techniques, frequency of distraction, and to what extent, and analyze that with their performance on a given test or exam.

**Additional Resources:** What are the basic concepts that you need to know to understand the science presented in your paper? What other information or resources would help you better understand the paper? This is helpful to consider for your science communication pieces. Ideas of mindfulness, attention, and the nature of distraction. Encoding processes used would have also been beneficial to the understanding of this experiment.

**Further Questions:**

Write at least five comments or questions about the article to discuss with the class.

1. What traits among participants could lead to more success in the divided attention approach?
2. How could we apply the knowledge from this resource to our study spaces?
3. What new knowledge has this added to the field, if any?
4. What does the similar recollection of important items across groups suggest about human behavior?
5. How might an intermittent, pleasurable distraction impact recall?