

## Draft Requisite Assignment

You're ready to plan a draft when you know the following:

**1. You know who your readers are, what they know, and why they should care about your problem.**

My readers will be undergraduate cognitive scientists who are interested in embodied cognition applications in mental imagery. They know that mental imagery vividness exists on a spectrum, they know something about imagination (or, phantasia), and they know that there are a wide variety of ways that theories of embodied cognition can be implemented. They should care about my problem because (1) Embodied cognition aims to answer some questions about mental processes (such as those involving mental imagery), (2) the relationship between (a)phantasia and embodied cognition has not been often studied, thus we can potentially find incredible new ways of thinking about and studying phantasia, and (3) this could provide good evidence towards the theory of EC.

**2. You know the kind of ethos or character you want to project.**

I want to project the ethos of someone who is sympathetic towards the condition of aphantasia and the theory of embodied cognition, who understands greatly the intricacies of the spectrum of mental imagery vividness, who values the differing contributions of theories of cognition to cognitive science, and who wants to propose a new way of thinking about aphantasia using embodied cognition to better understand the two.

**3. You can sketch your question and its answer in two or three sentences.**

How can we use the principles of embodied cognition to learn more about aphantasia? Firstly, we can build upon already existing avenues of literature on embodied cognition and mental imagery by incorporating other literature on theories of mental imagery and aphantasia. Then, we can synthesize new literature and make new connections between aphantasia and embodied cognition based on the things that the literature had in common, all the while addressing potential issues based within the pre-existing literature on EC and aphantasia.

**4. You can sketch the reasons and evidence supporting your claim.**

- **Claim:** We can use pre-existing theories of embodied cognition to better understand the mental processes of imagery in those with aphantasia.
  - **Reason:** Mental imagery stems from perception of the senses stored in memory, which in embodied cognition is grounded in brain/body/environment interaction.
    - **Evidence:** Iachini (2011) argues: Stored perceptual information can be used both to assist in recognition of stimuli being perceived (e.g., when stimuli are degraded) and to generate mental images in the absence of external stimulation. (p. 9)



abstraction bearing no connection to perceptual processing (Pylyshyn, 1973; Tyler and Moss, 2001). It is no less reasonable to suppose that a modality-specific representational system encodes information in sensory association areas, but not necessarily in primary sensorimotor areas. (p. 11)

- **Evidence:** Iachini (2011) depicts: Depictive models not only are limited to visual images, but often they do not consider the situated character of represented objects or scenes. If cognition is based on the re-enactment of sensorimotor experiences, the question arises as to whether mental simulations incorporate the spatial structure of perceived events. Whatever we perceive and whatever we act upon occurs in space. Increasing evidence suggests that the situated character of experience in the environment is reflected in the situated character of the representations that underlie simulation (Barsalou, 2009). (p. 19-20)
- **Evidence:** Palermo, et al. (2019) state: What is being activated during imagery is ultimately the knowledge of the potential applicability of the law that describes the event corresponding to the content of imagery (Foglia and O'Regan 2016). In general, this approach entails two basic factors: (1) the possession and exercise of sensorimotor know-how; and (2) no reenactment of perceptual experience is required, but rather the expectation as to how the sensory input changes as a function of movements. (p. 4)

**5. You know the questions, alternatives, and objections that your readers are likely to raise, and you can respond to them.**

- **Issue** - There is not sufficient empirical evidence from an embodied cognition perspective on aphantasic individuals to be able to make claims about their relationship.  
**Response** - By synthesizing the literature and drawing conclusions from the similarities between empirical evidence available for embodied cognition and aphantasia, we can sufficiently conclude that there is some semblance of a relationship (it may not be causal) between the two.
- **Issue** - Why aphantasia, and not some other part of mental imagery that has been better documented and studied?  
**Response** - Although aphantasia is a relatively newly named and studied cognition (Zeman, et al., 2015), there needs to be further studies and questions asked about the condition in order to understand it better. This is what is trying to be done here, because if we use something like embodied cognition, a well-versed theory in cognitive science, we can draw some new conclusions about aphantasia that are meaningful and help more people understand what it is.