Pre-Drafting Assignment One

Submit as Word doc to the Pre-Drafting Assignment One Assignment Folder.

## Complete the PWS

If you haven’t already done so as part of the Unit 1 Tasks, complete the Precourse Writing Sample **before moving on**, or email the instructor to check in about it.

## Introduce Yourself to your Instructor and Classmates

If you haven’t already done so as part of the Unit 1 Tasks, complete the self-introduction and post it to the Introductions Discussion Board.

## Complete the Course Commitments

**STATEMENT OF COMMITMENT TO ACADEMIC HONESTY**

I understand that I am responsible for adhering to Centennial College’s Academic Honesty Policy. I have reviewed Centennial College’s Academic Honesty Policy (posted on Centennial College’s website and our course site) for more information. If I have any further questions about academic honesty, I will consult with my instructor or a librarian at Centennial College.

TYPE YOUR NAME AS YOUR SIGNATURE: Lucas Vandermaarel

DATE: September 12, 2024

**STATEMENT OF COMMITMENT TO COURSE EXPECTATIONS AND CLASS CONFIDENTIALITY**

I understand that I am responsible for meeting the course expectations, behaving in a manner that supports Centennial’s commitment to respect and inclusion, and adhering to Centennial College’s Code of Student Conduct. I have reviewed the relevant information so that I understand what appropriate behaviour looks and feels like . If I have any further questions about the course expectations, I will contact my instructor.

Moreover, I understand that I may not share or reproduce writings or other works by any member of the class without their express (direct) written permission. This includes essay drafts, presentations, Discussion Board posts, and anything else created by my peers. The only exception is if I am citing a classmate's ideas or words in my own coursework, in which case I will acknowledge and document the source with the appropriate citation method.

TYPE YOUR NAME AS YOUR SIGNATURE: Lucas Vandermaarel

DATE: September 12, 2024

The following reverse outline, breakdown, and summary are required parts of the assignment. Only the summary is graded (on summary conventions and writing). The reverse outline and breakdown are ungraded process pieces, but are required for the assignment to be accepted at full evaluation.

## Reverse Outline (process piece)

Paragraph-by-paragraph: author’s central points in your own words

[5 Ways to Help You Brain Learn Better](https://www.psychologytoday.com/us/articles/202407/5-ways-to-help-your-brain-learn-better)

Para 1: Sweden found that using physical learning tools was more effective than digital ones.

Para 2: Other schools were adopting more technology, Sweden was not, neuroscientists explored human cognition  
  
**1. Learning Requires Empathy**

Para 3: Experts believe that digital chatbots will replace humans in therapeutic relationships

Para 4: Regardless of technological advances, mental health professionals are three to five times more effective

Para 5: Artificial intelligence has not been as effective as AI cannot have an empathetic relationship

Para 6: Student-teacher relationships need empathy and the stronger the relationship, the better the learning

Para 7: Bill Gates and Sal Khan believe that ChatGPT can help close educational gaps, but machines lack an empathetic relationship which is important for learning

Para 8: The development of empathy is a hormone, oxytocin. Oxytocin can be released by physical touch and psychological ways. To release oxytocin psychologically, it is necessary to feel safe, cared for, and hearing a human’s voice. Text does not work.

Para 9: Neuronal coupling is when two individuals release oxytocin at the same time. Allows those to learn from each other and think like each other.

Para 10: Teacher-student neural coupling promoted learning. The greater the neural coupling, the better the transfer of information. You cannot sync with an AI as they do not have oxytocin.

Para 11: 85 percent of tuition-free students and over 50 percent of fee-paying students do not complete online education. People need empathy to take information and learn well.  
  
**2. Creativity Demands Personally Encoded Knowledge**

Para 12: Critical thinking and creativity are important to exercise. There is hope that AI will allow people to stop memorizing and learning, to focus on deeper reasoning.

Para 13: Committing information to long-term memory is important for applying higher-order thinking skills. Long-term memory is critical to use information.

Para 14: author explains how they have not creativeness when it comes to car repair. Author is given an example of how they can read information, but not generate any creative processes from the information alone.

Para 15: Information must be committed to long-term memory to use it in a meaningful way. Learning is often split into surface, deep, and transformative steps.

Para 16: People can use instructions to play guitar chords but will need to learn the chords before composing. This requires a higher level of understanding. Critical thinking needs knowledge.  
  
**3. It Takes Undivided Attention**

Para 17: Human attention can be thought of as a filter. Attention blocks irrelevant information out.

Para 18: Humans have sets of rules for actions to be successful in them. Reading has a “reading rule set” to commit words to memory.

Para 19: Lateral Prefrontal Cortex needs to have the rule set ready when doing a task. The rule set that is being used is how we filter relevant information and irrelevant.

Para 20: Lateral Prefrontal Cortex can hold onto one rule set at a time. Impossible to multitask. Humans can only flip between tasks quickly.

Para 21: Switching tasks takes 0.15 seconds. During this time information is not being processed. Attention slows considerably. This is called attentional blink.

Para 22: Switching tasks can make two rule sets blend together for a moment which reduce accuracy of information received. “Psychological Refractory Period”.

Para 23: The hippocampus usually processes memories. When multitasking, memories are processed by the striatum. This is reflexive and forms subconscious memories which are not easy to access and use.

Para 24: Pre-Covid survey shows how U.S. students between 8-18 spend a lot of time on technology

Para 25: Students uses 200 hours annually for education and 2,000 hours for media. Computers are used for multitasking.

Para 26: Learners last less than 6 minutes before distracting themselves from homework. Learners using a laptop spend 38 minutes out of an hour on non-educational tasks.

Para 27: Since computers are not used for learning often, it acts as a barrier to learning. People need to battle impulses to effectively use a computer for learning.

**4. Location. Location. Location.**

Para 28: All information must pass through the hippocampus to become long-term memory.

Para 29: “Place cells” on the hippocampus process the spatial layout of interactive objects and our physical relationship with them.

Para 30: Spatial layout is crucial for all new memories. Hard copy reading is better than digital.

Para 31: Reading physical media allows you to recall certain text spatially relative to the book.

Para 32: The physicality of items can be used to bring up memorized information. Digital media is not physical, thus physical cues do not help in recalling information.

Para 33: e-Reader’s “flip” instead of scroll which is better, but it is not a replacement for physical items.

Para 34: If memory is not needed, such as the action of searching for key words, digital tools will be more useful. Physical or mental disabilities may need technology for reading or learning.

Para 35: If learning is the goal, physical over digital is the way to go.  
  
**5. Use Flashcards. Seriously.**

Para 36: Memorization is key for higher-order thinking skills. Memorization can occur during many different activities. Flash cards, questions on one side, answers on other, can be one of the best ways to memorize things.

Para 37: Flash cards stimulate recall. The more often we access a memory, the more accessible it becomes in the future. Repeatedly talking about Game of Thrones while only watching it once has strengthened author’s memory about GoT.

Para 38: question-on-front format of flashcards prompt people to internally recall.

Para 39: Flashcards prevent memories from changing over time. To fight against changing memories, immediate feedback can be used. Seeing relevant information after recalling keeps memories accurate.

Para 40: Facts become connected into a structure called schemata. This allows for the recalling of one fact to also allow access to other connected facts.

Para 41: Organizing similar flashcards helps people to create a relevant schemata. Do not get rid of the cards that are correct. Keep correct cards together to link relevant ideas.  
  
Para 42: There is no shortcut to learning. Brain processes are inevitable. Neuroscience done by the Swedes can help us efficiently use our brain processes.  
  
**Video Competition**

Para 43: Our brain uses one chain of neurons to process the meaning of auditory words. We can only comprehend one speaker at a time.

Para 44: When we read silently, it is the same. The brain’s silent reading voice is processed as a spoken voice. Humans cannot read and listen to some speak at the same time.

Para 45: The redundancy effect. Learning and memory decreases when text and speech is given at the same time. Captions during a video narration causes people to understand and remember less than watching the video without captions.

Para 46: A special circumstance is learning a new language. Captions and narration work well to decode narration. Captions can also help with specific processing disorders.

## Argument Break Down (process piece)

**Issue/ Question**

What is a better method of learning, utilizing digital teaching methods or traditional teaching methods?

**Thesis**

Traditional teaching methods are more effective than digital teaching methods.

**Key Reasons/ Evidence (approx 5-7 bullet points and/or nested bullet points outlining the main chain of reasoning, including key evidence as appropriate)**

* Empathy is important for learning to be effective
  + Specifically, teacher-student connection
  + Digital tools such as AI cannot create an empathetic bond
* A deep understanding of knowledge cannot be facilitated by regurgitation of information like AI and other digital tools provide.
  + Cannot be creative without a solid knowledge base
* Technology impairs learning by enabling multitasking behavior.
  + Multitasking effectively divides attention which hinders long-term memories from being formed
* Spatially fixed learning mediums such as books provide an important memory cue where digital alternatives do not.
* Handwriting and reading physical mediums are in line with how humans process and retain information.
* Flashcards have been found to be a strong method to reinforce the accuracy of prior memories and creating new ones.
* Traditional learning methods can help create environments that allow people to learn with undivided attention.
  + Divided attention reduces the effectiveness of learning

## Summary (graded)

One paragraph summary  
  
Jared Cooney Horvath Ph.D., M.Ed. [Psychology Today]. (2024, July 2). 5 Ways to Help Your Brain Learn Better.

In response to Sweden’s education system changes to prioritize traditional teaching methods, Jarden Cooney Horvath, in his article, “The Neuroscience of Learning: Why Traditional Methods Work Best”, published in 2024, argues that traditional teaching methods are more effective than digital teaching methods. Horvath connects Sweden’s neuroscientific research with five main reasons to argue his stance. These reasons include the necessity for empathy to be present for effective learning, the importance of a solid knowledge base to have a creative presence in any task, the consequence of multitasking and the importance of undivided attention, the significance of spatial memory cues triggered by physical books rather than digital mediums of text, and the effectiveness of flashcards to facilitate strong memorization. The article ends with an explanation that digital tools have a place in education, but that the brain has specific processes that only traditional learning methods can effectively work with.