Imagine that you have been hired by a school district to hold a workshop on improving student writing. Identify 3 main tips/pieces of advice you would focus on in your workshop. These tips should be based on our general understanding of discourse processing. Explain why you have chosen these tips and refer to empirical research to justify your position that these suggestions will be successful in improving student writing.

Writing is a nonverbal means of communication. The primary motive of writing is not getting a good grade, but communicating a message. When writing a paper, the most important thing to keep in mind is that the reader is able to follow your train of thought and comprehend your argument easily without any misunderstanding. Therefore, writing should be focused on ease of understanding for the reader. The three things that contribute to this goal are using appropriate sentence and paragraph structure, providing sufficient and appropriate context, and putting the entire written text in an appropriate topic or schema by providing strategic and descriptive titles.

Structure of sentences and paragraphs are extremely important as they determine the cognitive maps in which readers interpret and process your argument. Rayner et al. (1983) conducted two experiments to investigate the relative importance of syntactic and pragmatic processors in discourse comprehension. They found that syntactic structure is processed first, followed by semantic and pragmatic information. They also found that plausibility does not affect the structural analysis preference. This shows that establishing syntactic

context and structure is crucial in sentence and discourse comprehension. Within the sentence, it is important to reduce, or avoid, ambiguity. Two theories of how sentences are processed are minimal attachment and late closure. Minimal attachment refers to the idea that sentences are processed to have the simplest structure and the fewest nodes. Late closure refers to the idea that each clause is kept open for as long as possible. Keeping these in mind, you should structure your sentences to have the fewest relative clauses and fewer nodes within the sentences. It has also been shown that the activation of recent verbs will decay less than earlier ones merely because decay is temporal. Therefore, when using verb phrases, the associated adverbs and nouns should be immediately preceding or following the verb rather than later in the sentence as this facilitates connecting the phrases. In sentences with words that had multiple meanings, the frequency of the word and biasing contexts affect Therefore when using choosing synonyms, using the more frequently used word is better for reader comprehension, even though using the less frequent word might sound smarter. Crain and Steedman also presented pilot data from adult studies to show that referential contexts help to resolve ambiguities caused by relative clauses. For example, in the sentence "He read the newspaper that he received yesterday", ambiguity about whether yesterday describes reading or receiving arises. This can be resolved by providing a context such as "He read the newspaper that he received from the journal yesterday". When using ambiguities, one should also focus on providing a context in which the appropriate meaning is activated and the other meanings are inhibited. These strategies are useful in establishing consistency and flow in your argument.

Studies have shown that establishing coherence is crucial in discourse processing. This refers to the ability to recognize continuity in discourse. This is mostly used in sentence integration in which one sentence refers to a noun or verb in a previous sentence and the reader has to identify what the reference is being made to. This is done by a given/new strategy in which readers analyze the new information and try to integrate it with previously given information in the discourse. This is done by three processes: direct matching, bridging, and reinstating. Direct matching is when the new information matches, in wording, to the antecedent it refers to. An example of this is "Anne is a fifth-grader. Anne does not like school." In this example, the new information, the second sentence, directly matches the antecedent by common use of the name "Anne". Bridging refers to the process by which two sentences are not linked by a matching word but can still be related to the antecedent by a common reference between the two sentences. For example, in the sentences "Last week I did not get much sleep. I did not get much of it this week either." In the second sentence the "it" can be related to the "sleep" in the first sentence as they share the common verb "get". In this way, the two sentences are bridged. Lastly, reinstatements refer to situations in which multiple, unrelated sentences are present between two related sentences. In such a passage, readers have to go further back to look at antecedents that may relate to the ambiguity in the current sentence. Multiple studies have shown that direct matching is comprehended faster than bridging, which is comprehended faster than reinstatements (Haviland and Clark, 1974; Clark and Sengul, 1979; Lesgold, Roth and Curtis, 1979). When referring to previously stated concepts, as is often done in papers to connect arguments, writers should use more direct matching and bridging and avoid much distance between targets and antecedents, thus avoiding reinstatements. This will make it faster and easier to comprehend the flow of an argument.

While it is crucial to establish clear links between sentences, it is also important that sentences and paragraphs be presented in appropriate contexts that facilitate comprehension. Tannenhaus et al. (1995) looked at the effect of visual stimuli on the processing of verbal information by presenting ambiguous sentences and either resolving this ambiguity with visual information or not resolving it at all. In their experiment, they presented participants with visual stimuli and verbal information that was either ambiguous or unambiguous. Ambiguous instruction was "Put the apple on the towel in the box" and unambiguous information was "Put the apple that's on the towel in the box." In unambiguous condition, participants immediately looked at the right apple. In ambiguous condition, participants first looked at the wrong apple. This study brings up the topic of referential ambiguity or ambiguity in the topic that a sentence is referring to. Their results show that people try to establish references as early in linguistic processing as possible. When writing, this needs to be addressed by resolving ambiguity as early as possible. This can be seen in the unambiguous sentence in the study, where the use of "that's" makes the object of the action evident. This should be translated into written discourse by ensuring that you do not start sentences with ambiguity. Also, if it is necessary for ambiguity to arise in your sentences, it must be resolved immediately to ensure that readers are not garden-pathed. While providing context is important, it is also

beneficial to keep extraneous information to a minimum. Reder and Anderson (1980) conducted a study in which they presented details without details and found that recall was improved. Giora (1993) also found that analogies did not assist understanding. Therefore, while providing context is important, this context should be condensed and relevant.

While providing a context is important, it is also essential to provide schemas to incorporate the discourse in. Students often have trouble writing a topic for their papers and disregard this as a result. However, providing a topic to papers and essays are beneficial to the reader as they provide a schema from which to read the arguments. Bradsford and Johnson (1973) showed that understanding of a passage and recall of the details of the passage was poor when the passage was written incomprehensibly and without a clear schema. However, providing a title of "Christopher Columbus Discovers America" significantly improved participants' recall of the details of the passage. Kozminsky (1977) found that providing a passage with different titles affected the details of the passage that were later remembered. Thus we see that providing a succinct, descriptive, and well-formulated title is beneficial to the reader as it provides a schema from which to process the paper. The title is also beneficial to the writer as it can bias the reader to view the arguments in the paper from one perspective rather than another, thus making it easier to gain the agreement of the reader.

Following research in the field of psycholinguistics, I have proposed that sentence and paragraph structure, context, and appropriate titles as schemas are three strategies that can easily improve writing. These three strategies are effective

at not only making it easier and faster for the reader to follow the argument but also at biasing the reader to look at the themes from the writers perspective. As reader's understanding is the primary goal of writing, these are the three strategies I would suggest at a writing workshop.