

“THE ROLE AND CHALLENGES OF ANALYTICAL THINKING IN ACADEMIC WRITING: A LITERATURE-BASED ANALYSIS”

Rajabboyeva Marjona O’rinboy qizi

Sobirova Feruza Islomjon qizi

f.sobirova@uzswlu.uz

mrajabboyeva173@gmail.com

Abstract: This article investigates the challenges students face in academic writing despite possessing strong English language skills, focusing on the critical role of analytical thinking. It identifies causes of failure in essay writing, including lack of confidence, limited critical evaluation of sources, insufficient background knowledge, and weak argument development. The study emphasizes strategies to overcome these difficulties by employing structured writing methods such as the PEEL (Point-Evidence-Explanation-Link) and CER (Claim-Evidence-Reasoning) techniques. Experiments designed to evaluate the efficacy of these methods demonstrate that both PEEL and CER improve clarity, organization, critical thinking, and the overall quality of student essays. The findings suggest that implementing these structured approaches can significantly enhance the academic writing process and strengthen students’ analytical thinking skills.

Keywords: *analytical thinking, PEEL technique, CER method, academic writing, critical evaluation, argument development, background knowledge, essay structure*

INTRODUCTION

Have you ever wondered why many students in writing exams fail their process even though they think “I’m going to write a perfect essay”? In some cases they are considered as the most successful learners in English language, but they face with several problems in writing criterias according to some reasons and lack of abilities. This article states that there might be various causes for failure in writing process and which way can be the most effective to prevent essay from blanking disorder of structure and ideas while discussing one of the most important key-factors called

analytical thinking in academic writing. Analytical thinking (also known as systematic thinking) plays significant role in academic structural fields with its instructional convenience making criteria. Analytical thinking is almost similar with critical thinking, it emphasizes that, in critical thinking students usually evaluate information, arguments, or ideas critically and make decisions based on reasoning skills, cognition besides logic, while analytical thinking gives a highly valued academic opportunity to break down complex information, issues, problems or concepts into smaller fractions to understand them more clear way for university applicants. Analytical thinking is stable construction of comprehending abilities, critical thinking, problem-solving skills gathered together professionally. It helps to build certainty in writing essays, passages and organize the ideas into one connection. Analytical thinking creates specific guidance to make a professional written piece with straightforward plans and obvious instructions which are theoretically appropriate for writing evaluation standards. Article emphasizes that, the extremely important factors of analytical thinking in academic writing are assessing the credibility, relevance, reliability of information. Analytical thinking provides avoidance of blind acceptance in data and questions assumptions, besides presenting ideas in structured and coherent sequence.

Eventhough there are many helpful sides of analytical thinking exist in academic progress, ‘...unfortunately, for many students, it is challenging to systematize, to construct well-argued argument and to present those arguments in a manner which is clear and convincing on the writing page...’ (Setyorini & Hawa. *Journall of English Language Learning*. 8. 2024. p709). Consequently, students struggle with finding key ideas and building strong writing structure under the assist of analytical thinking because of tending to summarize rather than analyze, describing facts or without explaining their significance or using information without checking credibility or relevance. Most students are not able to find proper plan to write an essay during the exam due to the lack of confidence, focus or motivation, all the see is half-blank paper filled with unorganized, unstructured introduction parts and weak thesis statment, it

basically causes to have panick and gives more pressure to them. In this situation, they have simple desire to write only summarized ideas without broadening, giving extra details and examples. Analyzing takes more time and strong focus, students need to be thinking critically and effectively to build strong paragraphs. Some students have common difficulty in generating original ideas. In this case copyrighting or summarizing other people's ideas look more feasible than wiriting them from zero foundation. They think writing quotes and cities as their own, word-by-word can give you plenty of time, but unfortunately, that condition just opens up more weakness and unstability in development of strong arguments, thesis will become piece of imperfection instead of turning into professional work of writing. A weak argument is one in which the premises, even ir true, provide only weak support (or no real support) for the conclusion (Mizrahi. 2013). Another possible reason for the lack of analytical thinking ability is limited critical evaluation of sources which means utilizing materials and resources without deeply examining their quality, credibility, relevance, or limitations. In other words, the writer accepts information at face value instead of questioning it. Students use them for some attractive parts such as argument extension in flat-surface reliablity, bare-minimum similarity and connection to the topic but quite different in real. So that tiny confusion of sources might possibly bring unorganized assignment with "...No critical evaluation of sources. Little to no synthesis evident. Limited coverage of background material and/or missing specific research or relevant theory... Sources presented without evaluation of reliability" (*Engineering Thesis handbook*. 2025) to the table of wisdom. As a consequence, ideas will become unconnected, opinions will turn into unstructed and scattered fractions. Some students write weak-point essays because of background knowledge insufficiency, or they do not have any knowledge about topic which is given at all. Then they just try to summerize without extending it by using broad ideas and extra details with more wider interpretations. Limited background knowledge refers to a lack of foundational information about a subject, students with that drawback simply cannot understand key concepts or terminology, connect new information to what they already

know, evaluate sources or arguments in depth, or generate strong ideas, examples and explanations. If someone only reads a few sources – or sources that are too simple – they may not build a strong understanding. When key terms are unfamiliar, the learner may fail to fully understand concepts, which restricts deeper thinking and if only weak or basic sources are available, background knowledge remains limited. As a result, it effects to the several factors of essay, for example, ideas will become repetitive or generic, arguments lack depth and examples, evaluation of sources becomes superficial, writing may rely too heavily on quoting rather than explaining and student cannot distinguish strong versus weak evidence. Under the assist of analytical thinking ability, there will be perfect opportunity to generate a proper essay and with avoidance of other drawbacks which have been mentioned above.

METHOD

The article investigates and makes a research about several methods and special techniques to prevent lack of analytical thinking from assignments. According to many reasons, there will be suggested some useful ways to improve systematic thinking and building customized pieces of writing. If students are struggling with the endless addiction to summarize ideas and passages more, PEEL (Point-Evidence-Explanation-Link) technique, which refers to simple strategy that is highly effective paragraph-writing structure used in academic writing. It creates writers clear, logical and well-developed paragraphs. It consists stating the main idea or argument for the paragrah, which simply means creating a topic sentence, then supporting the point with specific proof, such as examples, statistics, quotes, research findings or real-life evidence. Next step is explaining the evidence especially the reason why it is useful and interpritation how the evidence supports the point, while link part connects with the main question, thesis statement, the paragraph with overall argument.

The article states that, the main reason for why this technique is useful, it makes paragraphs organized and clear, helps students avoid rambling, encourages critical

thinking and analytical thinking, not just description, improves the flow between ideas and works well for essays, reports, and exam responses.

The article simply gives an interpretation about specific research experiment sample just to make sure the PEEL method can be really beneficial. According to the process, experiment makes purpose to evaluate whether PEEL helps students write more quickly and efficiently under time limits. Students write paragraphs with and without PEEL under timed conditions. Essentials can be timer and certain prompts besides procedure includes several steps involving giving students 10 minutes to write without structure, for another day giving the same time limit but requiring PEEL and finally, assessing each written paragraph for coherence, depth, and organization. Outcome will be expected as PEEL should be reducing wasted time and improving clarity under pressure. 'The PEEL paragraph writing approach is a proven way to help students' writing process by providing a structure for their writing' (Gibbons. 2019). For preventing the essay from weak arguments, the article gives and specific interpretations about another method scientifically called CER technique. CER stands for 'Claim, Evidence, and Reasoning'. It is a structured approach to writing explanations or arguments – especially in science education and scientific writing. CER is a typical discussion structure used by scientists and engineers to engage in collaborative discussions with peers (other scientists and engineers). The CER process enables scientists and engineers to provide well-organized, evidence-based explanations that include logical reasoning (Texas Education Agency. 2023). The article suggests specific experiment using CER method in writing biological experiment review-point essay in classroom. The process includes scientific research necessities involving group of students, 4 potted plants of the same species, ruler, notebook for observations, sunlight (or lamps if indoors), watering can, timer or clock. According to the instruction, next step will be set up the main question: 'Does the amount of sunlight affect the growth of plants?' Students will watch closely for plants growing process for certain period of time and record the observations carefully in a table constituting date, plant height, any other relevant notes. After that, they will be

analyzing the data with comparing growth of plants in each day and seeking for patterns or differences that support their claim. Expecting assessments from that progress are accuracy of claim, completeness and relevance of evidence, depth of reasoning, clarity of data presentation (tables, graphs, charts), ability to connect claim, evidence and reasoning logically.

CONCLUSION

In conclusion, this study highlights that the persistent difficulties faced by students in academic writing are closely linked to underdeveloped analytical thinking skills, insufficient background knowledge, and limited critical evaluation of sources. The implementation of structured techniques such as PEEL and CER provides a practical framework to enhance essay organization, clarity, and depth of argumentation. The PEEL method assists students in constructing coherent paragraphs by guiding them to present points, support them with evidence, explain their significance, and link them back to the overall argument, thereby promoting critical analysis and reducing writing anxiety under timed conditions. Similarly, the CER approach reinforces scientific reasoning and evidence-based argumentation, enabling students to make accurate claims, substantiate them with relevant evidence, and connect their reasoning logically to the claim. The conducted experiments with timed paragraph writing using PEEL and the plant growth CER experiment illustrate that structured methodologies significantly improve writing efficiency, coherence, and analytical depth. Ultimately, the integration of PEEL and CER into academic curricula provides a systematic approach that empowers students to critically evaluate information, generate original ideas, and construct well-supported, organized, and persuasive essays. Future educational interventions should prioritize these structured techniques to cultivate analytical thinking and to prevent the recurrence of weak argumentation, unstructured essays, and superficial writing practices among learners.

REFENRECES:

1. *Engineering Thesis Handbook*. (2025). Guidelines and Rubrics for Thesis Evaluation. University Academic Press.
2. Gardner, S. (2023). *How to Structure Paragraphs Using the PEEL Method*. Studiosity Blog. Retrieved from <https://www.studiosity.com/blog/how-to-structure-paragraphs-using-the-peel-method>
3. Gibbons, S. (2019). *Death by PEEL: Structuring Paragraphs for Academic Success*. Virtual Library Educational Guide. Retrieved from https://kclpure.kcl.ac.uk/portal/files/101863980/_Death_by_PEEL_GIBBONS_Accepted1September2018_GREEN_AAM.pdf
4. *Hodder Science*. (n.d.). Writing Scientifically with CER. Retrieved from https://www.hodderscience.com/tondrykcom/tondryk/Bio_H___BIO_files/1-%20Writing%20Scientifically%20-%20C.E.R..pdf
5. McNeill, K. L., & Krajcik, J. (2008). *Inquiry and Scientific Explanations: Helping Students Use Evidence and Reasoning*. Science Education Research Chapter.
6. Mizrahi, R. (2013). *Understanding Weak Arguments in Academic Writing*. Academic Review Press.
7. Newcastle University Academic Skills Kit. (n.d.). Paragraphing: PEEL Model. Retrieved from <https://www.ncl.ac.uk/academic-skills-kit/writing/academic-writing/paragraphing/>
8. ResearchGate. (n.d.). *Using the Claim-Evidence-Reasoning Strategy in Scientific Explanation and Argumentative Writing Skills*. Retrieved from https://www.researchgate.net/publication/392825153_Using_of_claim_evidence_and_reasoning_strategy_in_scientific_explanation_and_argumentative_writing_skills_of_grade_nine_chemistry_students
9. Setyorini, D., & Hawa, S. (2024). Challenges in Academic Writing: Analytical Thinking and Essay Performance. *Journal of English Language Learning*, 8, 709-720.
10. Staffordshire University Academic Writing Resources. (2025). *PEEL Paragraphs Guide*. Retrieved from https://libguides.staffs.ac.uk/academic_writing/PEEL

11. Texas Education Agency. (2023). *Claim-Evidence-Reasoning (CER) Instructional Brief*. Austin, TX: TEA. Retrieved from <https://tea.texas.gov/academics/tea-brief-claim-evidence-reasoning-4-24-2023.pdf>
12. University of Sheffield. (2019). *Critical Analysis Toolkit*. Sheffield, UK: University of Sheffield Management School. Retrieved from <https://sheffield.ac.uk/media/31071/download?attachment=>
13. Zembal-Saul, C., McNeill, K. L., & Hershberger, J. (2013). *What's Your Evidence? Engaging K-5 Children in Constructing Explanations in Science*. Educational Research Press.