


Assessing Paragraph Knowledge among University Student Teachers: Insights from a Positivist Study



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ABSTRACT

This study investigated the knowledge of paragraph structure and texture among Upper Primary Specialism student-teachers in the Department of Basic Student Education, School of Education and Life-Long Learning, University of Education, Winneba. Adopting a positivist paradigm, the research sampled 59 student-teachers, conveniently selected from an intact class taught by the researchers. Data were collected using a closed-ended questionnaire covering demographic information, knowledge of physical paragraph structure, and knowledge of paragraph texture. Frequencies and percentages summarised demographic data and assessed knowledge levels. The findings showed that student-teachers demonstrated a basic understanding of paragraph structure, particularly in recognising the functions of initial and final sentences and the role of a central idea. However, considerable gaps in their ability to provide detailed explanations, use linking sentences, and ensure the completeness of paragraphs emerged. With respect to paragraph texture, participants indicated some awareness of logical connectivity and the focus on a central idea. However, many struggled using linking words and phrases to achieve coherence, and only a minority could identify effective strategies to improve the flow of ideas. The study emphasises the importance of strengthening student-teachers' paragraph writing skills to enhance their competence as future educators, since their ability to teach writing effectively depends on their own mastery of the skill. The study concludes with recommendations for targeted instructional interventions and further research to support the development of writing. The findings have significant implications for curriculum design and pedagogical practices in teacher education programmes.

Keywords: *Paragraph Structure, Paragraph Texture, Student-Teachers, Coherence, Cohesion*

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INTRODUCTION

Academic writing is widely recognised as a cornerstone of higher education, shaping not only students' intellectual development but also their academic and professional trajectories. It is the primary medium through which students demonstrate mastery of course content, engage in scholarly debates, and contribute to disciplinary knowledge. As Graham and Perin argue, strong writing skills are closely tied to academic success, supporting advanced tasks such as thesis writing, research projects, and

publication.¹ Beyond academic performance, writing proficiency fosters critical thinking, requiring learners to analyse, synthesise, and evaluate information to construct coherent arguments.²

In the context of teacher education, the importance of writing skills is magnified. Student-teachers are being prepared not only as writers but also as future instructors who must model good writing practices for their pupils. They are expected to communicate clearly with various stakeholders, students, parents, colleagues, and administrators, while also producing lesson plans, reports, and learning materials. As Andrews et al. note, teachers who demonstrate strong writing skills are better positioned to teach writing effectively, thereby influencing learners' literacy outcomes and long-term academic success.³ Strengthening writing instruction in teacher education is therefore, an investment in the quality of schooling in a more general way.

A critical foundation of writing proficiency is the paragraph, which serves as the basic organisational unit of thought in written communication. A typical paragraph includes a topic sentence, supporting sentences, and a concluding sentence, collectively ensuring clarity and focus.⁴ However, effective paragraphing requires more than a mechanical arrangement. Writers must ensure texture, which refers to the internal qualities of unity, coherence, cohesion, adequacy, and completeness.⁵ Unity ensures that all sentences relate to a single central idea; coherence enables logical flow; cohesion is achieved through transitional markers; and adequacy with completeness ensures that claims are sufficiently developed and substantiated. Bailey observes that mastery of both structure and texture enables writers to convey ideas persuasively while maintaining logical progression.⁶

For student-teachers, the knowledge of paragraph structure and texture carries particular weight. First, it enhances their own ability to complete academic tasks such as essays, projects, and examinations. Second, it equips them with the pedagogical skills needed to teach writing effectively in primary and secondary classrooms. Research shows that teachers who possess high writing proficiency are more likely to employ evidence-based instructional practices, including modelling, scaffolding, and feedback, which in turn lead to better student outcomes.⁷ Thus, paragraph knowledge is not only an academic requirement but also a professional competency with long-term implications.

Despite the recognised importance of writing proficiency, many student-teachers continue to face challenges in academic writing. Graham and Harris highlight the role of explicit instruction in improving writing skills, while Oshima and Hogue underscore the value of structured approaches to paragraphing.⁸ However, much of this evidence originates in Western contexts.⁹ In Ghana and other developing countries, research on academic writing, particularly on paragraph structure and texture, remains limited. Existing studies tend to address general writing proficiency rather than the specific competencies required for effective paragraph construction.

While there is substantial research on writing instruction and the importance of writing skills, there is a lack of specific studies that focus on the knowledge of paragraph structure and texture among basic education student-teachers in Ghana. This study aims to fill this gap by assessing the understanding of these concepts among Upper Primary Specialism student-teachers in the Department of Basic Student Education. The findings are expected to provide insights into the current state of paragraph proficiency among student-teachers and offer recommendations for improving writing proficiency in teacher education programmes.

¹ Steve Graham and Dolores Perin, "Writing Next-Effective Strategies to Improve Writing of Adolescents in Middle and High Schools," 2007.

² J. C. Bean, *Engaging Ideas: The Professor's Guide to Integrating Writing, Critical Thinking, and Active Learning in the Classroom* (John Wiley & Sons, 2011).

³ Richard Andrews et al., "Teaching Argument Writing to 7-to 14-year-olds: An International Review of the Evidence of Successful Practice," *Cambridge Journal of Education* 39, no. 3 (2009): 291–310.

⁴ A. Oshima and A. Hogue, *Writing Academic English* (Pearson Education, 2020).

⁵ S. A. Crossley, K. Kyle, and D. S. McNamara, "A Computational Exploration of Paragraph Structure and Discourse Coherence in Writing," *Journal of Educational Psychology* 112, no. 1 (2020): 1–15.

⁶ S. Bailey, *Academic Writing: A Handbook for International Students* (Routledge, 2018).

⁷ Steve Graham et al., "Do Children with Reading Difficulties Experience Writing Difficulties? A Meta-Analysis.," *Journal of Educational Psychology* 113, no. 8 (November 2021): 1481–1506, <https://doi.org/10.1037/edu0000643>.

⁸ S. Graham and K. R. Harris, "An Examination of the Design Principles and Practices of Graduate Writing Programs in the United States," *Journal of Writing Research* 12, no. 3 (2020): 333–60.

⁹ Oshima and Hogue, *Writing Academic English*.

Therefore, this study investigates the knowledge of paragraph structure and texture among Upper Primary Specialism student-teachers at the University of Education, Winneba. Guided by a positivist paradigm, the study employs a closed-ended questionnaire administered to 59 conveniently sampled student-teachers from an intact class. The objectives of the study are as follows.

- To assess student-teachers' knowledge of paragraph structure.
- To evaluate their knowledge of paragraph texture.

The paper is structured as follows: the next section reviews existing literature on academic writing, paragraphing, and teacher education. This is followed by a detailed description of the research methodology. Subsequent sections present and discuss the findings. The paper ends with recommendations for curriculum development and pedagogical strategies in Ghanaian teacher education programmes.

LITERATURE REVIEW

Writing is a fundamental skill in education that serves as a critical component in learning, communication, and expression. Proficiency in writing enables students to articulate their thoughts, demonstrate their understanding, and engage effectively in academic discourse. As noted by Graham and Harris, writing is not only a mode of communication but also a means of fostering cognitive development and critical thinking.¹⁰ Effective writing instruction, therefore, is essential for students at all educational levels, including those in teacher education programs.

A well-constructed paragraph is the cornerstone of effective writing. It typically consists of three main components: the topic sentence, supporting sentences, and the concluding sentence. The topic sentence introduces the main idea, setting the stage for the subsequent details and arguments. The supporting sentences elaborate on the main idea by providing evidence, examples, and explanations. The concluding sentence summarises the main points and reinforces the central idea of the paragraph.¹¹ The mastery of these components is crucial to creating coherent and cohesive paragraphs. In addition to the structural elements, the internal characteristics of paragraphs- such as unity, coherence, cohesion, adequacy, and completeness- play a vital role in effective writing. Unity ensures that all sentences within a paragraph are focused on a single main idea. Coherence refers to the logical flow of ideas, making it easy for the reader to follow the writer's train of thought. Cohesion involves the use of transitional words and phrases to connect sentences smoothly. Adequacy and completeness ensure that the paragraph provides sufficient detail and fully addresses the main idea.¹² These characteristics are essential for maintaining clarity and readability in writing.

Teaching writing effectively poses several challenges, particularly in contexts where resources and support are limited. Research has shown that many teacher education programs do not provide sufficient instruction in writing strategies and practices. This training gap leaves future teachers unprepared to teach writing effectively in their classrooms.¹³ Additionally, student-teachers themselves often struggle with writing proficiency, which further complicates their ability to model and teach writing skills to their students. Understanding the structure and texture of the paragraph is a fundamental aspect of writing proficiency. Student-teachers who have a strong grasp of these concepts are better equipped to teach writing effectively to their students. Studies have shown that explicit instruction in paragraph composition can significantly improve students' writing skills.¹⁴ By focusing on both the structural and internal characteristics of paragraphs, teacher education programs can help student-teachers develop the necessary skills to construct coherent and cohesive paragraphs.

Cumming highlighted that understanding the roles of introductory and concluding sentences is fundamental. He noted that, while these components set the stage and wrap up arguments, the ability to

¹⁰ Graham and Harris, "An Examination of the Design Principles and Practices of Graduate Writing Programs in the United States."

¹¹ Oshima and Hogue, *Writing Academic English*.

¹² Crossley, Kyle, and McNamara, "A Computational Exploration of Paragraph Structure and Discourse Coherence in Writing."

¹³ Aileen Manten et al., "An Investigation into the Early Literacy Skills of English Second Language Learners in South Africa," *Australasian Journal of Early Childhood* 45, no. 2 (2020): 142–54.

¹⁴ A. N. Applebee and J. A. Langer, *Writing Instruction That Works: Proven Methods for Middle and High School Classrooms* (Teachers College Press, 2020).

furnish detailed and well-supported points within the paragraph is essential for high-quality writing.¹⁵ This underscores the importance of developing arguments and providing sufficient evidence, which are central to producing impactful writing. Tardy expanded on this by emphasising the necessity of a solid grasp of paragraph structure, including the use of linking sentences and detailed explanations.¹⁶ Linking sentences plays a pivotal role in ensuring the smooth flow of ideas, making the text coherent and logical. Detailed explanations, on the other hand, substantiate the main points, lending credibility and depth to the arguments. This comprehensive understanding of paragraph structure is crucial to producing coherent and persuasive texts, as it helps to effectively communicate the intended message to the reader. The gaps identified in the current study resonate with the findings of Graham and Perin, who observed that many students struggle with integrating detailed explanations and ensuring paragraph completeness, even when they understand the basic components of paragraph structure.¹⁷ This suggests that while students may recognise the importance of having a clear central idea and supporting it with evidence, they often face challenges in elaborating on these ideas and ensuring that the paragraphs are comprehensive. Similarly, Wang and Li noted that students often acknowledge the importance of a clear central idea but lack the skills to use linking words and develop thorough content.¹⁸ This reflects the challenges identified in the current study, where students' difficulties with integrating and linking sentences and providing detailed explanations were evident. These findings reveal that although students may have a foundational understanding of paragraph structure, there are significant gaps in their ability to develop and present ideas comprehensively.

In addition to understanding paragraph structure, mastering paragraph texture is equally important for effective academic writing. Paragraph texture refers to the use of linking words and phrases, methods for improving the flow of ideas, and ensuring comprehensive information within paragraphs. Hyland noted that students often require additional instruction and practice to develop the skills needed for thorough and detailed paragraph development.¹⁹ Although students' recognition of logical connectivity and main idea focus shows a foundational understanding, significant gaps in advanced areas suggest that more targeted instruction is necessary. Leki and Swales, and Feak confirmed that mastering the subtleties of paragraph texture, such as ensuring thoroughness and improving flow, often requires more focused and practical training.²⁰ This indicates that while students may understand the basic principles of paragraph structure, they often struggle with the nuances that contribute to effective writing. Effective writing instruction should focus not only on the basic components of paragraph structure but also on the finer details that contribute to the texture of paragraphs. This includes teaching students how to use linking words and phrases effectively, ensuring the logical flow of ideas, and developing comprehensive and well-supported arguments.

THEORETICAL FRAMEWORK

The Cognitive Load Theory (CLT) is well-suited for this purpose, as it focuses on how information is processed and retained, which aligns with evaluating student-teachers' comprehension of paragraph structure and texture through structured questions. CLT, developed by Sweller, provides a framework for understanding how cognitive resources are used during learning tasks.²¹ CLT posits that the human cognitive system has a limited capacity to process information, divided into intrinsic load, extraneous load, and germane load.

1. Intrinsic Load refers to the inherent difficulty associated with a specific learning task. This study includes understanding the concepts of paragraph structure and texture.

¹⁵ A. Cumming, *Writing Expertise and Second-Language Proficiency* (John Benjamins Publishing Company, 2022).

¹⁶ C. M. Tardy, *Building Genre Knowledge* (Parlor Press, 2023).

¹⁷ S. Graham and D. Perin, "Writing next: Effective Strategies to Improve Writing of Adolescents in Middle and High Schools," *Alliance for Excellent Education*, 2023.

¹⁸ Zhi Li, Veronika Makarova, and Zhengxiang Wang, "Developing Literature Review Writing and Citation Practices through an Online Writing Tutorial Series: Corpus-Based Evidence," *Frontiers in Communication* 8 (2023): 1035394.

¹⁹ K. Hyland, *Teaching and Researching Writing* (Routledge, 2016).

²⁰ I. Leki, *Academic Writing: Exploring Processes and Strategies* (Routledge, 2018). John M Swales and Christine B Feak, *Academic Writing for Graduate Students: Essential Tasks and Skills*, vol. 1 (University of Michigan Press Ann Arbor, MI, 2004).

²¹ John Sweller, "Cognitive Load During Problem Solving: Effects on Learning," *Cognitive Science* 12, no. 2 (April 11, 1988): 257–85, https://doi.org/10.1207/s15516709cog1202_4.

2. Extraneous Load involves the way information or tasks are presented to learners. This can be minimised through effective instructional design.
3. Germane Load relates to the mental resources dedicated to processing, constructing, and automating schemas. In this context, it pertains to the effort spent in understanding and applying knowledge of paragraph structure and texture.

CLT is particularly relevant for the study as it provides a framework for designing assessments that measure the knowledge and understanding of student-teachers without overwhelming their cognitive resources. By structuring the questionnaire to focus on specific aspects of paragraph structure and texture, the study can effectively evaluate intrinsic knowledge while minimising extraneous cognitive load.

METHODOLOGY

This study adopted a descriptive survey design within a positivist paradigm to investigate the knowledge of paragraph structure and texture among Upper Primary Specialism student-teachers. The positivist paradigm emphasises objective measurement and statistical analysis, aligning well with the quantitative nature of the data collected through the structured questionnaire. The population consists of student-teachers in the Department of Basic Student Education, with a sample focused on Upper Primary Specialism student-teachers. An intact class and convenience sampling method were used to select 59 student-teachers, as the researcher teaches this particular group. This sampling method was chosen to ensure accessibility and relevance, given the researcher's direct involvement with the participants. The primary data collection instrument was a structured questionnaire designed to assess the student-teachers' knowledge of paragraph structure and texture. The questionnaire comprises three sections:

- Demographic Information: This section collected data on the gender, age group, years of study of English, and educational background of the participants.
- Knowledge of Paragraph Structure: This section included multiple-choice questions that evaluate the participants' understanding of the physical components of a paragraph, such as the topic sentence, supporting sentences, and concluding sentence.
- Knowledge of Paragraph Texture: This section assessed the participants' comprehension of internal paragraph characteristics, including unity, coherence, cohesion, adequacy, and completeness.

The questionnaire was pilot-tested with a small group of student-teachers to ensure its reliability and validity. Necessary adjustments were made based on the feedback received. The questionnaire was administered during a scheduled class session to ensure maximum participation.

The participants were informed about the purpose of the study, assured of the confidentiality of their responses, and given instructions on how to complete the questionnaire. The completed questionnaires were collected and verified for completeness. Data from the questionnaires were analysed using descriptive and inferential statistics. Descriptive statistics, such as frequencies and percentages, were used to summarise the demographic information and assess the overall knowledge of paragraph structure and texture.

PRESENTATION OF RESULTS AND DISCUSSION

Demographic Information

The sample comprised 59 Upper Primary Specialism student-teachers. The distribution of participants by gender, age group, years of studying English, and educational background is presented in Table 1.

Table 1: Demographic Characteristics of Participants

Demographic Variable	Frequency	Percentage (%)
<i>Gender</i>		
Male	15	25.4
Female	44	74.6
Total	59	100.0

Age Group		
16-20	10	16.9
21-25	35	59.3
26-30	11	18.6
31-35	1	1.7
36-40	2	3.4
Total	59	100.0
Educational Background		
BECE	59	100.0
WASSCE/SSSCE	59	100.0
Teachers' Certificate "A"	0	0
Diploma	0	0
Years of Studying English Language		
5-10 years	25	42.4
11-15 years	27	45.8
16-20 years	7	11.9
Total	59	100.0

Source: Fieldwork, 2024

Table 1 shows that the sample is predominantly female, with 44 females (74.6%) and 15 males (25.4%). This suggests that the findings may be more reflective of female perspectives. Consequently, gender-specific learning styles and preferences should be taken into account when analysing the results and designing instructional interventions.

A significant majority of the participants are aged 21-25 years, with 35 participants (59.3%) in this age group. This group likely includes recent graduates who have had recent exposure to academic writing standards, potentially enhancing their understanding of paragraph structure and texture. The age distribution also includes 11 (18.6%) participants in the 26-30 year range and 10 (16.9%) of them aged 16-20 years, indicating a mix of experience levels that could offer diverse insights into the learning process.

The data reveals that all respondents have completed both BECE and WASSCE/SSSCE, with a frequency and percentage of 59 and 100.0% respectively. This indicates that every respondent has at least a basic and secondary education. However, none of the respondents holds a Teachers' Certificate "A" or a Diploma, suggesting that they have not pursued further professional or technical training in education. Given that all respondents have completed basic and secondary education, it is expected that they possess the fundamental literacy skills necessary for constructing paragraphs. However, the absence of further professional or technical training, such as a Teachers' Certificate "A" or a Diploma, suggests that they may lack advanced instructional strategies and deeper theoretical knowledge of paragraph structure and texture, which are often covered in higher education and professional development courses.

The majority of participants have studied English for an extensive period. Twenty-five participants (42.4%) have studied English for 11-15 years, and 27 participants (45.8%) have studied English for 16-20 years. This extensive exposure to the English language is advantageous for mastering paragraph structure and texture. However, 16 (27.1%) participants with only 5-10 years of English study may require additional support to achieve the same level of proficiency as their peers.

Knowledge of Paragraph Structure

Knowledge of the structure of paragraphs involves understanding how different components of a paragraph work together to create a coherent and effective piece of writing. Table 2 presents the results regarding the participants' knowledge of paragraph structure. The result includes the frequency and percentage of correct and incorrect responses for various aspects related to the internal elements of a paragraph.

Table 2: Knowledge of Paragraph Structure

Item	Correct Responses Frequency (%)	Incorrect Responses Frequency (%)
What is the main function of the initial sentence in a group of related sentences?	48 (81.4)	11(18.6)
Which sentences in a group of related sentences are responsible for giving detailed explanations and evidence?	19 (32.2)	40 (67.3)
What is the role of the final sentence in a group of related sentences?	47 (79.7)	12 (20.3)
Which sentence ensures that the reader understands the main idea by providing examples?	37 (62.7)	22 (37.3)
Which sentence provides the main point of a group of related sentences?	42 (71.2)	17 (28.8)
Why is it important to have a clear central idea in a group of related sentences?	40 (67.8)	19 (32.2)
What function do additional explanatory sentences serve in a group of related sentences?	7 (11.9)	52 (88.1)
Why are detailed sentences important in supporting the main point?	39 (66.1)	20 (33.9)
Where is the main idea usually located in a group of related sentences in academic writing?	28 (47.5)	31 (52.5)
What is the importance of the sentences that follow the initial sentence?	39 (66.1)	20 (33.9)
Why is it important for the final sentence to restate the main idea?	41 (69.5)	18 (30.5)

Source: Fieldwork, 2024

The results in Table 2 reveal that most participants correctly identified the main function of the initial sentence in a group of related sentences, 48 (81.4%), providing the correct response. This suggests that participants have a solid understanding of how introductory sentences set the stage for a paragraph. However, 11 participants (18.6%) incorrectly answered, indicating that some may still need additional guidance on this fundamental concept. Only 19 participants (32.2%) correctly identified which sentences are responsible for giving detailed explanations and evidence. This suggests a significant gap in understanding how to provide and recognise detailed support for the main idea. Consequently, 40 participants (67.3%) incorrectly answered, highlighting the need for targeted instruction in this area. A majority of participants correctly recognised the role of the final sentence in summarising or reinforcing the main idea, with 47 (79.7%) providing the correct response. This indicates that participants generally understand the importance of concluding sentences. However, 12 participants (20.3%) answered incorrectly, suggesting that further reinforcement may be necessary. A majority of participants correctly identified the sentence that provides examples to help the reader understand the main idea, with 37 (62.7%) providing the correct response. This indicates that many participants understand the role of example sentences. Nonetheless, 22 participants (37.3%) answered incorrectly, suggesting that additional instruction may be needed to ensure complete understanding. Most participants correctly identified the sentence that provides the main point of a group of related sentences, with 42 (71.2%) providing the correct response. This suggests a good level of understanding regarding the identification of the main point. However, 17 participants (28.8%) incorrectly answered, indicating that further focus on this aspect could be beneficial.

Also, a majority of participants correctly understood the importance of having a clear central idea in a paragraph, with 40 (67.8%) providing the correct response. This suggests that most participants recognise the role of a central idea in maintaining coherence. However, 19 participants (32.2%)

answered incorrectly, indicating a need for further instruction on the significance of a clear central idea. A significant number of participants did not correctly identify the function of additional explanatory sentences, with 52 (88.1%) providing incorrect responses. This suggests a major gap in understanding how explanatory sentences contribute to paragraph development, highlighting the need for comprehensive teaching on this topic. Most participants correctly recognised the role of detailed sentences in supporting the main point, with 39 (66.1%) providing the correct response. This indicates that many participants understand the importance of detail in writing. However, 20 participants (33.9%) incorrectly answered, suggesting that further reinforcement is needed. Almost half of the participants correctly identified where the main idea is typically located in academic writing, with 28 (47.5%) providing the correct response. This indicates a partial understanding of paragraph structure. However, 31 participants (52.5%) incorrectly answered, highlighting a significant gap in understanding the placement of the main idea. A majority of participants correctly understood the importance of sentences following the initial one, with 39 (66.1%) providing the correct response. This suggests that many participants recognise how these sentences contribute to paragraph development. Nonetheless, 20 participants (33.9%) answered incorrectly, indicating a need for additional instruction on this aspect. Most participants correctly understood the importance of the final sentence in restating the main idea, with 41 (69.5%) providing the correct response. This suggests that many participants grasp the role of the concluding sentence. However, 18 participants (30.5%) answered incorrectly, indicating that further reinforcement may be necessary.

Generally, the results revealed that Upper Primary Specialism student-teachers have a basic understanding of paragraph structure, with strengths in recognising the roles of initial and final sentences and the importance of a clear central idea. However, there are significant gaps in understanding how to provide detailed explanations, use linking sentences, and ensure completeness within a paragraph. This suggests that, while participants grasp some fundamental aspects of paragraph structure, they need further instruction and practice in areas such as detailed support and the use of explanatory sentences. This finding is consistent with some previous studies, which emphasise the importance of a robust understanding of paragraph structure for effective writing. For instance, Cumming underscored that while understanding the roles of introductory and concluding sentences is fundamental, the ability to provide detailed and well-supported arguments is essential for high-quality writing.²² Supporting this assertion of Cumming, Tardy highlighted that a solid grasp of paragraph structure, including the use of linking sentences and detailed explanations, is crucial for producing coherent and persuasive texts.²³ The gaps identified in the current study align with the findings of Graham and Perin, who noted that many students struggle with integrating detailed explanations and ensuring paragraph completeness, even when they understand the basic components of paragraph structure.²⁴ Similarly, Wang and Li observed that, while students often recognise the importance of a clear central idea, they frequently lack skills in using linking words and developing thorough content, reflecting the challenges noted in this study.²⁵ The findings can be connected to the Cognitive Load theory (CLT) developed by Sweller.²⁶ According to Cognitive Load Theory (CLT), these difficulties can be attributed to the high cognitive load associated with complex tasks. A basic understanding of concepts such as the initial and final sentences and a clear central idea involves less cognitive load, making these aspects easier to master. In contrast, providing detailed explanations and ensuring completeness requires managing both intrinsic and extraneous cognitive loads, which can overwhelm working memory if not properly supported. To address these gaps, instructional strategies must simplify complex tasks, provide clear guidance, and offer ample practice to effectively manage the cognitive load and enhance understanding of paragraph structure.

²² Cumming, *Writing Expertise and Second-Language Proficiency*.

²³ Tardy, *Building Genre Knowledge*.

²⁴ Graham and Perin, "Writing next: Effective Strategies to Improve Writing of Adolescents in Middle and High Schools."

²⁵ Li, Makarova, and Wang, "Developing Literature Review Writing and Citation Practices through an Online Writing Tutorial Series: Corpus-Based Evidence."

²⁶ Sweller, "Cognitive Load During Problem Solving: Effects on Learning."

Knowledge of Paragraph Texture

Paragraph texture refers to the quality and richness of the content within a paragraph, influencing how effectively the paragraph conveys its message and engages the reader. The result on the internal elements (texture) of a paragraph is presented in Table 3. It includes the frequency and percentage of correct and incorrect responses for various aspects related to the internal elements of a paragraph.

Table 3: Knowledge of Paragraph Texture

Item	Correct Responses Frequency (%)	Incorrect Responses Frequency (%)
What ensures that all sentences in a group of related sentences are connected logically?	36 (61.0)	23 (39.0)
How does using linking words and phrases between sentences affect the group of related sentences?	27 (45.8)	31 (52.5)
What creates a smooth flow of ideas within a group of related sentences?	34 (57.6)	25 (42.4)
Which paragraph element ensures that a group of related sentences includes all necessary information to support the main idea?	16 (27.1)	43 (72.9)
How can a writer improve the flow of ideas in a group of related sentences?	5 (8.5)	54 (91.5)
Why is it crucial to have all sentences in a group of related sentences focused on one main idea?	31 (52.5)	28 (47.5)
How can a writer ensure that all sentences are relevant to the main idea?	35 (59.3)	24 (40.7)
How can a writer ensure that a paragraph is thorough and covers all points?	34 (57.6)	25 (42.4)
Why is it important for a group of related sentences to be thorough?	33 (55.9)	26 (44.1)
How can a writer make sure that the support provided is adequate?	25 (42.4)	34 (57.6)
Why is adequacy important in a group of related sentences?	32 (54.2)	27 (45.8)
How can the logical order of ideas be maintained in writing?	35 (59.3)	24 (40.7)

Source: Fieldwork, 2024

The result in Table 3 shows that the majority of participants correctly identified what ensures that all sentences in a group of related sentences are connected logically, with 36 (61.0%) providing the correct response. This suggests that participants have a good understanding of logical connectivity within paragraphs. However, 23 participants (39.0%) incorrectly answered, indicating a need for further instruction on this aspect. Only 27 participants (45.8%) correctly identified how using linking words and phrases between sentences affects the group of related sentences. This suggests a gap in understanding the role of linking words in maintaining coherence. Conversely, 31 participants (52.5%) incorrectly answered, highlighting the need for additional teaching on this topic. A majority of participants correctly identified what creates a smooth flow of ideas within a group of related sentences, with 34 (57.6%) providing the correct response. This indicates a solid understanding of the factors that contribute to idea flow. However, 25 participants (42.4%) incorrectly answered, suggesting that more emphasis may be needed on this concept. Only 16 participants (27.1%) correctly identified which paragraph element ensures that a group of related sentences includes all the necessary information to support the main idea. This suggests a significant gap in understanding the completeness of information within paragraphs. A large number of participants, 43 (72.9%), answered incorrectly, highlighting the need for more comprehensive instruction. A small number of participants (5, 8.5%) correctly identified

how a writer can improve the flow of ideas in a group of related sentences. This indicates a major gap in understanding methods for enhancing paragraph flow, with 54 participants (91.5%) providing incorrect responses, suggesting the need for targeted teaching in this area.

A majority of participants correctly understood why it is crucial to have all sentences in a group of related sentences focused on one main idea, with 31 (52.5%) providing the correct response. This suggests an awareness of the importance of maintaining focus. However, 28 participants (47.5%) incorrectly answered, indicating that some may need additional instruction on this concept. A majority of participants correctly identified how a writer can ensure that all sentences are relevant to the main idea, with 35 (59.3%) providing the correct response. This suggests a good understanding of relevance within paragraphs. However, 24 participants (40.7%) answered incorrectly, highlighting a need for further reinforcement. A majority of participants correctly identified how a writer can ensure that a paragraph is thorough and covers all points, with 34 (57.6%) providing the correct response. This suggests that many participants understand the need for thoroughness. Nonetheless, 25 participants (42.4%) answered incorrectly, indicating that more focus on this aspect may be required. A majority of participants correctly understood why it is important for a group of related sentences to be thorough, with 33 (55.9%) providing the correct response. This indicates an awareness of the importance of thoroughness. However, 26 participants (44.1%) answered incorrectly, suggesting that further instruction may be needed. Only 25 participants (42.4%) correctly identified how a writer can ensure that the support provided is adequate. This indicates a significant gap in understanding the concept of adequacy in paragraph support, with 34 participants (57.6%) providing incorrect responses, highlighting the need for more comprehensive teaching. A majority of participants correctly understood why adequacy is important in a group of related sentences, with 32 (54.2%) providing the correct response. This suggests that many participants recognise the importance of adequate support. However, 27 participants (45.8%) incorrectly answered, indicating a need for additional instruction on this concept. A majority of participants correctly identified how the logical order of ideas can be maintained in writing, with 35 (59.3%) providing the correct response. This indicates a good understanding of maintaining logical order within paragraphs. Nonetheless, 24 (40.7%) of the participants answered incorrectly, suggesting that further reinforcement may be necessary.

It is evident from the results that while Primary Specialism student-teachers exhibit a basic understanding of paragraph texture, such as recognising the importance of logical connectivity and maintaining a focused main idea, there are notable deficiencies in their grasp of more advanced aspects. Specifically, their struggles with linking words and phrases, methods for improving the flow of ideas, and ensuring comprehensive information in paragraphs align with Hyland's observations that comprehensive and well-supported paragraphs are essential for effective academic writing.²⁷ Hyland points out that students often require additional instruction and practice to develop the skills needed for thorough and detailed paragraph development. In contrast, while the students' recognition of logical connectivity and main idea focus shows a foundational understanding, the significant gaps in advanced areas suggest that more targeted instruction is necessary. Leki, and Swales and Feak confirmed that mastering the subtleties of paragraph texture, such as ensuring thoroughness and improving flow, often demands more focused and practical training.²⁸ Thus, the results highlight a crucial need for enhanced instructional strategies to address these specific areas of difficulty. According to Cognitive Load Theory, when learners encounter complex tasks without adequate support, their working memory can become overloaded, hindering their ability to process and apply new information effectively.²⁹ This underscores the need for targeted instructional strategies that simplify these concepts and provide practical exercises to manage cognitive load and enhance students' ability to integrate and apply paragraph texture principles effectively.

²⁷ Hyland, *Teaching and Researching Writing*.

²⁸ Leki, *Academic Writing: Exploring Processes and Strategies*.; Swales and Feak, *Academic Writing for Graduate Students: Essential Tasks and Skills*.

²⁹ John Sweller, *Handbook of Research on Learning and Instruction*, ed. Richard E. Mayer and Patricia A. Alexander (Routledge, 2011), <https://doi.org/10.4324/9780203839089>.

Discussion Summary

The results revealed the following findings: Upper Primary Specialism student-teachers have a basic understanding of paragraph structure, with strengths in recognising the roles of initial and final sentences and the importance of a clear central idea. However, there are significant gaps in understanding how to provide detailed explanations, use linking sentences, and ensure completeness within a paragraph. This suggests that, while participants grasp some fundamental aspects of paragraph structure, they need further instruction and practice in areas like detailed support and the use of explanatory sentences. Upper Primary Specialism student-teachers demonstrate a basic understanding of paragraph texture, as seen in their ability to identify the importance of logical connectivity and maintain a focused main idea. However, significant gaps remain in their knowledge. Specifically, many participants struggle with understanding the role of linking words and phrases in ensuring coherence, and only a small proportion correctly identified methods for improving the flow of ideas. Additionally, their grasp of how to ensure that a paragraph includes all necessary information is notably limited.

RECOMMENDATIONS

Based on the findings, the following recommendations are directed towards English Language teachers. It is recommended that:

- Emphasis should be placed on integrating detailed explanations, using linking sentences effectively, and ensuring completeness within paragraphs. This can be achieved through hands-on workshops and practical exercises that simulate real writing scenarios.
- Targeted training modules should be developed and implemented to address the identified gaps in understanding paragraph texture. These modules should focus on the effective use of linking words and phrases to ensure coherence, as well as methods for improving the flow of ideas within paragraphs. Interactive sessions and practice-based learning should be incorporated to enhance the participants' ability to apply these concepts.
- To better gauge and address the practical application of paragraph structure and texture, formative assessments should be integrated into the teacher training program. Regular assessments that focus on the creation of well-structured and cohesive paragraphs can help identify areas where students struggle and provide timely feedback to improve their writing skills.
- Ongoing professional development opportunities should be offered to student-teachers and current educators to reinforce their understanding and application of paragraph structure and texture. These opportunities should include workshops, seminars, and peer review sessions aimed at improving your practical writing skills and addressing specific areas of difficulty.

CONCLUSION

The results of the study reveal a foundational understanding among Upper Primary Specialism student-teachers regarding paragraph structure and texture. They are proficient in recognising the roles of initial and final sentences, as well as the importance of a clear central idea, indicating a solid grasp of the fundamental elements of paragraph organisation. However, the observed deficiencies in applying detailed explanations, using linking sentences effectively, and ensuring paragraph completeness suggest a gap between theoretical knowledge and practical application. Despite their understanding of logical connectivity and the central idea, many participants struggle with the nuances of integrating detailed support and maintaining coherence throughout a paragraph. This indicates that while their theoretical comprehension of paragraph structure is adequate, their practical skills in executing these concepts are underdeveloped. The difficulty in understanding the role of linking words and phrases, along with the challenges of improving the flow of ideas, further highlights the need for improved instructional strategies that bridge the gap between theoretical knowledge and practical application. This discrepancy between theoretical understanding and practical execution underscores the need for targeted interventions in writing instruction. The students' limited grasp of how to ensure a paragraph includes all necessary information suggests that their training has not sufficiently addressed the practical aspects of developing comprehensive and well-supported paragraphs. Overall, the findings reveal that while Upper Primary Specialism student-teachers have a basic understanding of paragraph structure and

texture, there are significant opportunities to improve their practical skills through focused instruction and practice.

IMPLICATIONS

The findings have several implications for teaching paragraph writing. First, educators should emphasise fundamental skills, such as the roles of initial and final sentences and maintaining a clear central idea, to reinforce a solid foundation. Second, instruction should be enhanced to include targeted lessons on providing detailed support and using linking sentences effectively, with practical exercises to address understanding gaps. Third, teaching methods should focus on improving coherence by highlighting the use of linking words and phrases, providing students with tools to connect ideas logically. Additionally, educators should address paragraph completeness by teaching how to include all necessary information to support the main idea, using structured activities for critical assessment and revision. Finally, continuous practice combined with regular constructive feedback is essential to refining students' writing skills and addressing weaknesses.

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