



Graduate Student's Critical Thinking on their Paper

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Abstract

The research aimed to find out the ability of the graduate student in writing analytical papers and to find out critical thinking which expressed graduate student on their analytical paper. The ability of graduate student has in writing analytical papers refer to Whitakers' pattern (2009). The critical thinking is express by graduate students on their analytical paper refers to Factions' The Holistic Critical Thinking Scoring Rubric. This research used a Descriptive Quantitative Method. The sample of this research was graduate students' thesis from the Graduate Program of English Language Education at Muhammadiyah University of Makassar at second semester of 2022 – 2023 academic years. The total was 14 master's theses. The total sample was fourteen graduate students' papers. The procedure of this research was collected by analyzing the graduate students' papers by using a rubric. The results of research found that 1) the ability graduate student have in writing analytical papers was good which the students wrote hook, bridge and thesis in introduction. Topic sentences are clear and some connection to the thesis, the supporting consistently develops the main idea, and transitions show connection between ideas. There are restate thesis and summarized in conclusion. 2) The critical thinking is express by graduate student in their analytical which identified based on the Facione' The Holistic Critical Thinking Scoring Rubric which focuses on six cognitive abilities (interpretation, analysis, inference, evaluation, explanation and self-regulation).

Keywords: *Analytical paper, Critical thinking; Facione' critical thinking skill; Whitakers' pattern*

Introduction

Thinking is an indispensable requirement in writing. Any idea expressed in writing comes from a thinking process. The writer divides the sub title into topic sentences which support the idea in the subtitle is a result of thinking. Likewise supporting sentences which inform, elaborate, exemplify, compare, similarize the topic sentence is a result thinking. Not only that, all the things explained should attract the readers' attention, should connect each other are the results of thinking.

The article discussed about the ability do the graduate student have in writing analytical paper and the critical thinking express by graduate students on their analytical paper. In the previous ten years, there have been researches on critical thinking abilities. Paul & Elder (2020) stated that critical thinking is the practice of critically assessing and evaluating ideas with the goal of strengthening them. Self-directed, self-disciplined, self-monitored and self-corrective thinking are all characteristics of critical thinking. Further Gerald (2021) stated critical thinking is the disciplined mental activity of analyzing claims or arguments that might inform the formation of opinions and decision-making.

Furthermore Alsaleh (2020) stated that Critical thinking is a human cognitive process that permits the use of a particular set of cognitive abilities; there is considerable debate about which abilities should be taught to foster such thinking. While 'Reilly et all (2022), critical thinking as a mental process used to make decisions and solve problems that include analysis, evaluation, inference, and reasoning to make informed and rational judgments. From some expert opinions about critical thinking, some important things are related, namely critical thinking is one of the thinking skills needed to think logically and systematically that is able to solve problems effectively so as to produce interpretations, analyses, evaluations, and conclusions based on tangible evidence.

Related to the meaning of critical thinking above, critical thinking is able to evaluate students' analytical paper. It is one type of academic text that is used to practice by graduate students. Lundberg (2020), stated analytical paper contains an introduction, a body and a conclusion. Similarly ,Sarikas (2019) stated that an analytic paper is a paper that presents an analyses towards a problem by using evidence to support an argument.

Some researchers have investigated this topic in relation to the involvement of thinking in the students' analytical paper. Marni et all (2019) investigated 3 critical thinking patterns of students, which were oriented towards analytical thinking. The students investigated in this research analyze various phenomena by revealing evidence and reasons to draw logical conclusions. These three patterns contain elements of inference, interpretation, analysis, and evaluation as elements of critical thinking. The first pattern is Inference – Evaluation. In this first pattern, students built their critical thinking by investigating the problem by providing valid evidence (inference element), then

they described the relationship between the available evidence and describing certain effects or consequences of the existing problem (interpretation element) and the last they generalized and drawled conclusions of (evaluation element). The second pattern is Analysis- Evaluation.

In this pattern, the students started their writing by doing an analysis towards the problem and ended with a generalization, while the closing section contained an evaluation by analyzing errors and drawing conclusions. In this second pattern, there are 2 elements of critical thinking; they are analysis and evaluation element. The third pattern is Interpretation –Evaluation. This pattern shows that the elements of interpretation and evaluation are dominant. The power of critical thinking can be seen from the way student's rank critical elements in their writing according to the development of ideas through sharp analysis, reason and strong evidence to draw conclusions.

Marni et al. (2019) identified three critical thinking patterns in students' writing: Inference–Evaluation, Analysis–Evaluation, and Interpretation–Evaluation, which encompass inference, interpretation, analysis, and evaluation elements. The study highlights that the strength of critical thinking lies in students' ability to develop ideas through sharp analysis and strong evidence. Abror (2021) examined the application of critical thinking in writing papers, reflected in topic selection, use of data, synthesis, paraphrasing, and problem-solving during writing. Similarly, Aulia (2021) found that students' writing demonstrated focus, supporting reasons, reasoning, and organization, which are essential components of critical thinking. Sharadgah and Ahmad (2019) reported a strong correlation between critical thinking and essay writing skills.

Their study observed improvements in students' critical thinking abilities, particularly in interpretation, analysis, evaluation, inference, and explanation, as reflected in their essays. While many studies have explored critical thinking in various aspects of writing, there is limited research specifically analyzing critical thinking in students' analytical papers. This study aims to address this gap by examining how students express critical thinking in their analytical writing.

Method

This study used quantitative descriptive research. Sugyono (2005: 21) states that a descriptive quantitative method is used to describe a research result based on quantitative data. The variable of this research was graduate students' ability in writing analytical paper and the critical thinking on their analytical papers.

The samples are similar with the number of population or in other word it was used a total sampling technique in defining the samples. The samples would be the graduate students of English Education Department, at second semester of 2022 – 2023 academic year. The total was 14 master's theses.

The data were taken from the Graduate students' analytical paper produced in Topics of Research Interest Course at second semester of academic

year 2022 – 2023. The data were analyzed by using the Holistic Critical Thinking Scoring Rubric - HCTSR as a tool for developing and evaluating critical thinking (Facione' et al., 2011) and Analytical Paper Rubric (Adaptive from Facione et al. (2011) and (Reynders et al., 2020)

The Holistic Critical Thinking Scoring Rubric - HCTSR

A Tool for Developing and Evaluating Critical Thinking (Facione et al., 2011)

	Levels of performance			
	Strong (4)	Acceptable (3)	Unacceptable (2)	Weak (1)
Interpretation	Accurately interprets evidence, statements, graphics, questions, etc.	Accurately interprets evidence, statements, graphics, questions, etc.	Misinterprets evidence, statements, graphics, questions, etc.	Offers biased interpretations of evidence, statements, graphics, questions, Information or the points of view of others.
Evaluation	Identifies the most important arguments (reasons and claims) pro and con.	Identifies relevant arguments (reasons and claims) pro and con.	Fails to identify strong, relevant counter-arguments.	Fails to identify or hastily dismisses strong, relevant counter-arguments.
Analysis	Thoughtfully analyses and evaluates major alternative points of view.	Offers analyses and evaluations of obvious alternative points of view	Ignores or superficially evaluates obvious alternative points of view	Ignores or superficially evaluates obvious alternative points of view.
Inference	Draws warranted judicious, non-fallacious conclusions.	Draws warranted non-fallacious conclusions.	Draws unwarranted or fallacious conclusions	Argues using fallacious or irrelevant reasons, and unwarranted claims.
Explanation	Justifies key results and procedures, explains assumptions and reasons.	Justifies some results or procedures, explains reasons.	Justifies few results or procedures, seldom explains reasons.	Regardless of the evidence or reasons, maintains or defends views Based on self-interest or preconceptions.
Disposition	Fair-mindedly follows where evidence and reasons lead.	Fair-mindedly follows where evidence and reasons lead	Regardless of the evidence or reasons, maintains or defends views Based on self-interest or preconceptions.	Regardless of the evidence or reasons, maintains or defends views Based on self-interest or preconceptions.

Analytical Paper Rubric (Adaptive from Facione et al.(2011) and
 (Reynders et al., 2020))

Analytical Paper Introduction Rubric

	Levels of performance			
	Excellent (4)	Good (3)	Fair (2)	Poor (1)
Hook	a creative, appropriate hook that clearly relates to the topic and appropriate, creative tag	a hook that relates to the topic; uses a standard tag	a hook it's not clear how it is related to the topic; has some mistakes in the tag	No, a hook OR an incomplete quotation and tag
Bridge/ Transition	Sentences make a smooth, thoughtful transition from the hook to the thesis	Sentences make a transition from the hook to the thesis with a few mistakes	Sentences attempt but do not succeed in a clear connection of hook and thesis	No transition sentences
Thesis	Thesis is very clear and well developed. main points are introduced clearly. Theme is supported throughout with concrete details and appropriate commentary	Thesis is very clear and well developed. main points are introduced clearly. Theme is supported throughout the essay	Thesis is somewhat clear and somewhat supported with concrete details and commentary	Thesis unclear and unsupported

Analytical Paper Body Rubric

	Levels of performance			
	Excellent (4)	Good (3)	Fair (2)	Poor (1)
Topic sentence	Topic sentences are clear, succinct and connected to the thesis with key words	Topic sentences are clear and some connection to the thesis	Topic sentences are fairly clear; connection to the thesis is not as obvious as it should be.	The topic sentence is unclear and merely begins to give details instead of providing a topic.
Supporting details	Three or more supporting detail consistently develop the main idea	Two or more supporting development of main idea	One or more supporting development of main idea	No supporting Detailed included
Organization/ Transitions	The supporting sentences are in a clear, organized order; purposeful of transitions develop, relate, and connect ideas	Most of the details are in a clear, organized order; transitions show connection between ideas.	Some transitions are including, but effect is not clear.	There is no clear order, transitions are missing or misused.

Analytical Paper Conclusion Rubric

	Levels of performance			
	Excellent (4)	Good (3)	Fair (2)	Poor (1)
Restate Thesis	Restate thesis and main point, Does not introduce any new ideas, and reads like the ending of an essay with a unique or creative comment / ending	Restate thesis and main point, Does not introduce any new ideas, and reads like the ending of an essay	Restate thesis and main point, Does not introduce any new ideas.	Does not Restate thesis and main point,
Summaries Argument	Excellent summary of thesis argument with concluding ideas that impact reader information	good summary of topic argument with clear concluding ideas introduces no new information	basic summary of topic with some final concluding ideas introduces no new information	lack summary of topic
Significance	- Topic of major importance and specifically related to the field of study. Topic has significant theoretical and practical importance to the field of study. Topic demonstrates a high level of innovative thinking.	- Topic is important and add to the body of literature in the field of study. Topic has moderate theoretical and practical importance to the field of study. Topic demonstrates a moderate level on innovative thinking.	- Topic is of some importance. Topic will somewhat add to the body of literature in the field of study. Topic demonstrates some innovative thinking.	- Topic is of little importance. Topic has little theoretical or practical importance to the field of study. Topic demonstrates no innovative thinking. Topic does not directly relate to planning, implementing, and evaluating a program.

Results**A. The Ability of Graduate Students Writing Analytical Papers****Introduction**

Graduate students' ability in terms of introductions refers to how they write the introduction to their thesis, following Whitaker's pattern. Whitaker' introduction pattern contains a hook, following by background information, ended by a thesis statement.

Hook

The mean scores of graduate students' ability got by students in writing hook were excellent. From the five students who got excellent, one of the students is represented by S-03. She wrote a thesis entitled "Application of brain-based learning in improving students' vocabulary achievement in speaking". She wrote a hook "the human brain as an amazing matching machine" (Levy, 2011) forget the

audience's attention right away. S-03 introduced the issue with a quotation from a well-known figure or authority.

The other student who got excellent was represented by S-02. She was written a thesis entitled "CTL (Contextual teaching and learning) approach in increasing student motivation ". She wrote succinct and interesting historical overview of the subject for get the audience's attention. The CTL (Contextual teaching and learning) learning approach is a fairly old concept (John Dewey).

The other student who got excellent was represented by S-14. She wrote a thesis entitled "Teacher Strategies in Improving English Achievement ". Her She wrote short anecdote to introduce the subject to get the audience's attention hook is "I am so excited to learn English".

Some students got good in writing hook. From the five students who got good, one of the students is represented by S-07. She wrote a thesis entitled "Assessing Students' Vocabulary and Grammar". She gets the audience's attention with the topic out with a startling fact or remark. She wrote a hook that relates to the topic "Assessing learning is teachers' daily activity. As a result of this approach, teachers can utilize the assessment to develop the learning process in the future. She supported her explanation on the importance of ways that teachers can effectively assess their students in the EFL by referring to Therova, 2021.

The other student who got good was represented by S-13. She was writing a thesis entitled "Rhetorical pattern in Abstract Section ". She starts the topic out with a startling fact or remark forgets the audience's attention. She wrote rhetoric is an activity to attract people's attention through the ability to speak, especially speaking in public.

The students got score 1 which is categorized as bad in hook 1 student. The students which represented by S-12 got score 1 which is categorized as bad. She didn't write a hook in introduction. The first paragraph of his paper is part of the body of the analytical paper.

The other students got score 2 in hooks which are categorized as excellent 3 students. The students which represented by S-08 got score 2 which is categorized as low. She wrote a hook in introduction but it is not clear. In the hook "Education is an important thing for a nation to develop a better human resource ", it is not related to the topic.

Most of students wrote hook introduction in first paragraph forget the audience's attention. This is same with Lingard, (2015) stated introduction must do hook element and ideally if the element appear in the first paragraph or second. The same thing by Foss (2018) stated that interesting hook can captures the reader's attention and indicates why a paper is interesting, relevant and important. A good introduction hooks the reader by elucidating the topic's impact (Grant & Pollock, 2011).

Bridge

There are two graduate students who got excellent in bridge. The student is represented by S-03 who wrote a thesis entitled "Application of brain-based learning in improving students' vocabulary achievement in speaking ". She wrote bridge with sentences make a smooth, thoughtful transition from the hook to the paper. From the hook "The human brain as an amazing matching machine". Then she explained some of the advantages of the brain, she supported her paper by referring to article of Yagcioglu, (2014) in his journal on "The advantage of brain-based learning in ELT classes and then relates the present state, with the sentence " Currently, there is a learning model that uses the concept of the brain". She used the "currently" transition.

The one student who got excellent was represented by S-14. She was writing a thesis entitled "Teacher Strategies in Improving English Achievement ". Like S-03, she wrote bridge with sentences make a smooth, thoughtful transition from the hook to the paper too. From the hook "I am so excited to learn English ", then she explained some reasons, why she interests in English, undoubtedly all because the teacher delivered each material in an interesting method. She used the "Undoubtedly " transition.

There are nine graduate students who got good in bridge. From the nine students who got good, one of the students is represented by S-05. She wrote a thesis entitled "**An Analysis of English Course Syllabus Based on Learning Need and Learning Material at Vocational School**". She wrote bridge in introduction use some transitions such as currently, meanwhile, in fact, accordingly, for instance. After hook, she wrote sentences "Meanwhile the fresh graduate students of Vocational High School are expected to master the skills of their expertise".

A different study was conducted by another researcher, Dewi Kartika (2018), titled *The Use of Transition Signals in Writing Essays by Fifth-Semester Students of the English Department at Muhammadiyah University of Makassar*. The study's findings indicate that students utilize transitions to add emphasis, contrast and compare ideas, give examples of causes and effects, introduce temporal order and sequence, and summarize. To put it another way, transitions for introducing temporal order and sequence were most frequently employed, whereas those for proving cause and effect were less frequently used.

The student represented by S-12 received a score of 1 in the bridge, which is categorized as bad. The student S-12 didn't write bridge in introduction. Some paragraph in the first of her paper was part of the body of the paper, this proves that the first, second and third paragraphs only discuss expert opinions of the topic in the paper.

The students represented by S-04 and S-07 received a score of 2 in bridges, which is categorized as low Both of them wrote bridge; no succeed in a clear connection of hook and thesis.

Thesis

There are two graduate students who got excellent in thesis. The student is represented by S-14 wrote a thesis entitled "Teacher Strategies in Improving English Achievement ". Her paper is very clear and well developed main points are introduced clearly with referring to Fayambo (2015). Her thesis stated joyful learning strategy is kind of way to create an affective environment to learn, deliver learning material, and make learning process easier.

There are eleven graduate students who got good in thesis. From the eleven students who got good, one of the students is represented by S-07 wrote a thesis entitled "Assessing Students' Vocabulary and Grammar ". She wrote thesis that teacher needs modifications to measure students' knowledge in the classroom. She developed main points are introduced clearly with referring to Theroava (2021) . Some of sentences which he wrote in the thesis introduction supported each other's themes so that they were supported with concrete details and commentary.

The students which represented by S-12 got score 2 which is categorized as fair in thesis. The student wrote a paper entitled "Diagnostic Assessment in English Language Teaching". In her paper, some sentences in first paragraph somewhat clear and somewhat supported with concrete details and commentary.

1.2 The Ability of Graduate students writing Body

Topic Sentences

From the three students who got excellent, one of the students is represented by S-02. She wrote a thesis entitled "CTL (Contextual teaching and learning) approach in increasing student motivation ". She wrote topic sentences in first paragraph in body was "The CTL approach is a learning concept that helps teachers relate the material taught to students' real-world situations. This is clearly a topic sentence introducing the main idea of the paragraph.

The other students who got excellent is represented by S-14. She wrote a thesis in body paragraph "English is an important instrument for communication, education and the search for information technology in the modernization era. The student S-14 wrote a topic sentence that was point of view, it is not a statement of fact but point of view of her.

The mean scores of graduate students' critical thinking got by students in writing topic sentences were *good*. Among the eleven students who performed well, one of them was represented by S-08. She wrote a thesis entitled "The Implementation of Project Based Learning to Increase Students' Skill in Writing Poetry ". The student S-08 wrote a topic sentence "Writing is a language skill that is used to communicate indirectly", and it is a concept rather than a quote from a source. She wrote it with referring to Ak Gift (1997).

Supporting Details

There are three students who got excellent. From the three students who got excellent, one of them student represented by S-02. She wrote topic sentences "The CTL approach is a learning concept that helps teachers relate the material

taught to students' real-world situations. Then she wrote Supporting detail was "Contextual teaching and learning approach is a learning strategy that emphasizes the process of full student involvement to be able to find the material learned and connect with real life situations so as to encourage students to apply it in their lives. The supporting detail was supporting the main point of the paragraph. Se wrote three or more supporting detail consistently develop the main idea too.

The mean scores of graduate students' critical thinking got by students in writing supporting details was *good*. From the eleven students who got good, one of the students represented by S-07, she wrote topic sentences was "The vocabulary is useful to identify and understand the whole sentence "; then she wrote two or more supporting development of main idea. One of them is " To understand the content of reading and writing in English because they lack vocabulary or even do not know what vocabulary they should say and use. she referring to Therova, (2022) that states Considering that academic vocabulary is regarded as a key element of academic writing style and that written assignment is one of the main forms of assessment.

Transition

The student who got excellent in transition was represented by S-14. She was written a thesis entitled "Teacher Strategies in Improving English Achievement ". She referring to Zaim et al., (2019) for strong of her paper body. She wrote transition and key words are effectively used in transition part. At the end of the paragraph S-14 briefly mentions the learning strategy used by the teacher and in the next paragraph give explanation in detail for it, so that the paragraphs flow logically.

There are eight students who got good. From the eight students who got good, one of them student represented by S-06. She wrote a thesis entitled "Teachers' Literacy in Assessing Students' Writing in Pesantren Mizanul 'Ulum Sanrobone Takalar Regency ". In the first paragraph she wrote about teachers' assessment literacy, and in the next paragraph was writing and reading were the two most important skills assessed, and the next paragraphst about assessment techniques. It show paragraphs have a few awkward areas but Ideas are well connected with transition and key words.

In general, in writing body papers, most of students got good score in topic, supporting and transition. This is different from the research conducted by Aulia & Kuzairi (2021) which examines critical thinking skills in essays on the components of focus, supporting reasons, reasoning, and the organization in the body essay. Students' critical thinking skills in essay writing are still very lacking. She said that students need to learn and practice more to become actived and critical learners and be able to present good arguments.

There are four students who got score 2 which is categorized as fair in transition, one of the students is represented by S-05. She wrote a thesis entitled **"An Analysis of English Course Syllabus Based on Learning Need and Learning Material at Vocational School "**. The student S-05 wrote the body paragraphs have some awkward word spots that affect the flow. Transitions between paragraphs and key words are few and far between and do little to connect ideas. There are 3 paragraphs in her paper, the first and second paragraphs are introductions, while the third paragraph which is the body paragraph has no use of transition words such as - Currently, Meanwhile, In fact, accordingly, For instance, Finally, Thus, On the contrary, in conclusion, not only. So, make essay logically flow.

1.3 The Ability of Graduate students writing Conclusion

Restate Thesis

From the six students who got excellent in restate thesis, one of the students is represented by S-10. She wrote a thesis entitled "Pronunciation Exercises In Teaching English ". She wrote restate thesis and main point not introduce any new ideas but she gives comment in a unique. In restate she stated the reasons that we mispronounce words are that we replace certain sounds with other sounds that are easier to say.

There are two students who got score 1 which is categorized as bad in transition, one of the students is represented by S-05. She wrote a thesis entitled **"An Analysis of English Course Syllabus Based on Learning Need and Learning Material at Vocational School "**. She wrote 4 paragraphs in his paper, but from of them there is no restate in the conclusion. In the last paragraph she still displays expert opinion on the topics discussed in his paper, it contains in the body of paper.

Similarly, the students are represented by S-05 who wrote thesis entitled "Rhetorical pattern in Abstract Section ". She wrote several paragraphs in her thesis there is no restate. This is evidenced by the discussion in the last paragraph still discussing the classification of rhetoric from the point of view of experts. This is still part of the content of the thesis, not the conclusion.

Summaries argument

There are six students who got excellent in summarized argument; one of the students is represented by S-03. She wrote a thesis entitled "Application of brain-based learning in improving students' vocabulary achievement in speaking ". She summarized that Brain Based Learning helps students in memorizing and understanding vocabulary. When using the brain optimally, the brain will work effectively as well as basic brain functions such as understanding and remembering new information. It contains excellent summary of thesis argument with concluding ideas that impact reader information.

There are 5 student was good. One of them was student represented by S-12, she wrote paper entitle "Diagnostic Assessment in English Language Teaching ". She wrote summarized argument in good summary of topic argument

“advantages and disadvantages in using Diagnostic Assessment”. The summarized argument impacts the reader's understanding

In this case, the writer of some students had stated the importance of critical thinking analytical paper. They also supported the claim by stating evidence and reasoning. The other researcher concluded that a highly significant correlation existed between CT and essay-writing skills. It appears that the more proficient the students are in CT, the better they are at writing skills and vice versa. (A. Sharadgah et al., 2019). In this study, the researcher focuses on critical thinking in analytical paper.

Based on the explanation of the discussion above, applying critical thinking skills to analytical papers requires skill. Some students who researched papers in this study have not been able to achieve score of 4 which indicating that critical thinking is visible in their paper. Among the factors that make students have difficulty in applying critical thinking skills in writing analytical papers is that students tend to have insufficient knowledge of introduction writing, especially hook, bridge and thesis. Likewise, in writing body papers, including writing topic sentences, supporting and transition.

Besides, some students are not optimal in compiling conclusions, especially in writing restate and summarize arguments. Similarly, research conducted by Aulia & Kuzairi, (2021) said that among the factors that make students experience difficulties in writing factors that make students have difficulty in applying critical thinking skills in writing essays is that students tend to lack have insufficient background information and knowledge background information and knowledge on the topic they choose. Besides In addition, students are not maximized in compiling exposure, explanation, opinion, or reasoning the details needed in the essay.

Overall, students' critical thinking in writing analytical papers, both in introduction, body and conclusion is good. the same thing was revealed by research conducted by Syazali (2020) which said that the average ability of S-1 PGSD FKIP students at Mataram University in compiling papers was in the sufficient category, but their competence in assessing was still low when viewed from the results of comparative analysis, and the effect size test which had a strong effect category.

There are two students who got score 1 which is categorized as bad in summarized argument, one of the students is represented by S-05. She didn't write summary of topic. In last paragraph, she still discussed about choosing appropriate material in teaching English language in vocational school in detail. This still includes part of the content of the paper, not the conclusion. The one student who got score 1 which is categorized as bad in summarized argument is S-13. She did not write restate nor did summarize argument in her paper. This is evidenced by the discussion in the last paragraph still discussing the classification of rhetoric in detail. This is still part of the content of the thesis, not the

conclusion.

The students who got score 2 which is categorized as fair in summarized argument. The students are represented by S-11. She wrote a thesis entitled "Teacher's Competence in Developing Classroom English Materials Using Information Communication Technology at SMPN 49 Makassar ". She wrote basic summary of topic with some final concluding ideas in her paper.

B. The Critical Thinking expressed by Graduate Students in their Analytical Papers.

Introduction

The critical thinking expressed by graduate students in their introduction refers to how they write it, following Facione's pattern. Facione' critical thinking pattern focused on six cognitive skills (interpretation, analysis, inference evaluation, inference, explanation and disposition

Hook

The student who expressed critical thinking in their hook was represented by S-03. She was writing an analytical paper entitled "Application of brain-based learning in improving students' vocabulary achievement in speaking". The hook written by S-03 is "the human brain as an amazing matching machine as a hook function that is to attract the reader's attention, similarize students' brain with machine. She identified the salient arguments (reasons and claims)" *The human brain* "from Brain Based Learning perspectives with a clear explanation of each perspective (evaluation skill). She thoughtfully analyzed all points of view of Yagcioglu and Rulam. Yagcioglu (2014), in his journal *The Advantages of Brain-Based Learning in ELT Classes*, discusses that Brain Based Learning is an effective and useful learning model for students in language learning.

Other hand, she states and to justify conceptual of the human brain as an amazing matching machine as considerations to present form of cogent arguments (explanation skill). Rulam (2018) who states that foreign language teachers who want to update, refresh, and mature their teaching should apply learning principles of Brain Based Learning. They are present a thorough evaluation of similarities and differences (Analysis skill).

Bridge

The student who expressed critical thinking in their bridge was represented by S-07. She was written a thesis entitled "Assessing Students' Vocabulary and Grammar ". She wrote bridge /Sentences make a smooth, thoughtful transition from the hook "Assessing learning is teachers' daily activity ", to the thesis "modifications teaching to measure students' knowledge in the classroom ". With perspective by Hindeme et.al (2021) that state Importance of assessment in learning and identifies ways that teachers can effectively assess their students. She accurately identified important arguments and assumptions in the evidence (Analysis skill). She also assessed the credibility of statements from other representations (Theroava Dana 2022) that are accounts or descriptions of

a person's perception to assessed the logical strength of the actual or intended inferential (Evaluation skill)

Thesis

The student who expressed critical thinking in their hook was represented by S-02. She was writing a thesis entitled "Contextual teaching and learning (CTL) approach in increase students 'motivation ". She wrote thesis "CTL is a learning concept that helps teachers connect the subject matter they teach to students' real situations and encourages students to make connections between the knowledge that students have and apply it to their daily live. Before wrote the thesis she identified the salient arguments (reasons and claims) from Sanjaya (2006:255) says that contextual teaching and learning approach is a learning strategy multiple perspectives with a clear explanation of each perspective.

The second from Trianto (2007: 105), Contextual Teaching and Learning approach has seven main components, namely constructivism, inquiry, questioning, learning community, modeling, reflection and authentic with a clear explanation of each perspective. (evaluation skill). She identified elements needed from Trianto (2007) explained that Contextual Teaching and Learning approach has seven main components, namely constructivism, inquiry, questioning, learning community, modeling, reflection and authentic to draw reasonable conclusions (Inference skill)

Body

The critical thinking expressed by graduate students in their papers is reflected in how they write the introduction, following Facione's pattern. Facione' critical thinking pattern focused on six cognitive skills (interpretation, analysis, inference evaluation, inference, explanation and disposition).

Topic Sentences

The student who expressed critical thinking in their topic sentences was represented by S-14. She wrote a thesis entitled "Teacher Strategies in Improving English Achievement ". In first paragraph of body, she wrote topic sentences "Teaching strategy is necessary for the teaching and learning process " She analyzed the argument that learning strategies is need for teacher as point of view which was reinforced by Darmansyah's article (2010), and the second paragraph she wrote topic sentences " teaching strategies as a foreign language " was reinforced by Takac, 2008; Mehrgan, 2013; Daddi & Haq 2014; Lubis, 2017.

In the third paragraph she analyzed the teaching strategy is the chosen way to deliver the subject matter in a particular learning environment was reinforced by Dick & Carey (1996), Garlach & Ely (1980), (O'Malley and Chamot, 1990; Cohen, 1990; Oxford, 1990). She identified the intended and actual inferential relationships among statements or opinion to express belief, judgment, information or opinions and thoughtfully analyzed all points of view to present a thorough evaluation of similarities and differences (Analysis skill).

Supporting Sentences

The student who expressed critical thinking in their supporting detail was represented by S-04. She wrote a thesis entitled "Teaching Speaking Based on Students' Learning Style ". She wrote topic sentences "learning styles from different perspectives ", She wrote first supporting details was Bichler' perspektif (Shahtalebi & Javadi, 2014: 246) state learning styles as individualistic approaches. The second supporting details was perspective of Keefein Tuan (2011:286) portrays learning styles as both a learner characteristic and an instructional strategy. The third supporting details was perspective learning style from Reid (1995: 5-6) state learning styles as how learner perceive, interact with, and respond to the learning environment". All supporting details supported topic sentences. The S-04 Thoughtfully analyzed all points of view to present a thorough evaluation of similarities and differences (Analysis skill).

Conclusion

The critical thinking expressed by graduate students in their body paragraphs refers to how they write the introduction, following Facione's patter. Facione' critical thinking pattern focused on six cognitive skills (interpretation, analysis, inference evaluation, inference, explanation and disposition).

Summarized Argument

The student who expressed critical thinking in their summarized argument was represented by S-14. She wrote a thesis entitled "Teacher Strategies in Improving English Achievement ". She identified and analyzed point of view of learning strategy from Gerlach & ely (1980) that stated that the learning strategy is the chosen way to deliver the subject matter in a particular learning environment, and point of view of learning strategy from Dick & Carey (1996) argues that learning strategies are not only limited to activity procedures, but also include learning materials or packages.

Based on explanation, she demonstrates clear ability to make predictions and drawing inferences that the learning strategy consists of all components of the subject matter and procedures that will be used to help students achieve certain learning objectives. She identified and secure elements "English learning process is needed certain strategies in delivering the goal of learning "to draw reasonable conclusions (Inference Skill). She maked stronger her conclusion by referring Burdo & Byrd (1999) that suggest several strategies that teachers can choose in learning

Significance

The student who expressed critical thinking in their supporting detail was represented by S-12. She wrote a thesis entitled "Diagnostic Assessment in English Language Teaching ". She identified "the advantages and disadvantages of Using Diagnostic Assessment" as secure elements needed to draw reasonable conclusions. She considered relevant information deep about the advantages and disadvantages of Using Diagnostic Assessment. Next, she demonstrates a clear ability to make predictions, drawing inferences, and analyzing implications

(Inference skill) with drawing inferences that one of the main advantages of a diagnostic assessment is it allows the teacher and student to highlight and address knowledge gaps. She also stated "One of the main advantages of a diagnostic assessment is it allows the teacher and student to highlight and address knowledge gaps " in terms of the contextual considerations upon to present one's reasoning in the form of cogent argument (explanation skill).

Conclusion

Overall, graduate students demonstrated strong critical thinking in their analytical papers, including the introduction, body, and conclusion. This is evident from their use of engaging hooks, such as quoting a renowned figure or authority to capture the audience's attention. For example, one student started with "I am so excited to learn English," then reinforced this with supporting facts. Another student provided a concise and engaging historical overview of Contextual Teaching and Learning (CTL) and used a brief anecdote to draw in the audience. In the body of their papers, students effectively analyzed arguments, such as the need for learning strategies for teachers, supported by Darmansyah's (2010) article. They identified and evaluated the relationships between statements or opinions, offering a thorough analysis of similarities and differences. In their conclusions, students generally performed well by restating the thesis and main points without introducing new ideas, effectively providing a clear summary of the arguments.

Graduate students demonstrated their critical thinking skills through various elements of their analytical papers. There are six key skills in critical thinking that were applied. For instance, in the hook section, one student used evaluation, explanation, and analysis by describing the human brain as an "amazing matching machine" to grab attention. In the bridge section, students employed analysis and evaluation skills. One student discussed how brain-based learning enhances vocabulary achievement in speaking, incorporating both analysis and evaluation. In the thesis section, students applied evaluation and inference skills, with one paper focusing on "Teacher Strategies in Improving English Achievement." In the body of the paper, students utilized analysis to argue the necessity of learning strategies for improving educational outcomes. Finally, in summarizing the arguments, students applied inference skills to highlight essential elements of the English learning process and the strategies needed to achieve learning goals.

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