

THE IMPORTANCE OF CRITICAL THINKING COMPETENCE: AN INVESTIGATION OF STUDENTS' WRITING EXPERIENCES

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Abstract:

Cognitive skills covering both intellectual and practical skills including critical and creative thinking as foundations of the essential learning outcomes which students should achieve across their college experience. For that reason, the objective of undergraduate education is to improve students who are able to involve in critical thinking and clear writing. The purpose of this study is: (1) to know both high and low-level students' difficulties in writing argumentative essay; (2) to compare the students' critical thinking competence both from high and low-level students by locating students' writing argumentative scores into Critical Thinking Analytical Rubric (CTAR); (3) to compare between both high and low-level students' difficulties in writing argumentative essays scored by SRAE and both high and low-level students' critical thinking competence in writing argumentative essays scored by CTAR. This research investigated 35 students of the English Department of University of Islam Malang. Based on the nature of the investigation, a descriptive qualitative design was applied to obtain the data. The data were collected through the participants' argumentative essays assessed by using SRAE which are to know the students' difficulties in writing argumentative essay and to categorize the students into high and low-level. Then, the students' argumentative essays were assessed by using CTAR to investigate students' critical thinking competence. The result shows that there are several differences of difficulties faced by high and low-level students in writing argumentative essay, and these difficulties affected to their critical thinking competencies.

Keywords: critical thinking competence, argumentative essay

INTRODUCTION

Indonesian government has agreed to upgrade some education strategies, National Medium Range Educational Plan 2015-2019, in order to compete with the massive globalisation challenges. Those challenges are, first, technology and science support for the national economic is low. Next, national resources are decreasing significantly. The last is, globalisation domination to the social-cultural life is stronger. Thus, government issued National Higher Educational Law Number 12, 2012. In which, the orientations of national higher education are; scientific truth and logical thinking ability to developing civitas academican to be more independent, innovative, responsive, skilful, cooperative, and creative. This Educational Law has suggested both lecturers and college students to improve the learning outcome through more creative, independent, scientific approach based during the teaching and learning process (Undang-Undang Republik Indonesia Pendidikan Tinggi, 2012).

Consequently, a well-designed educational program to meet professional requirements should be a part of educators' commitment to enhance students' cognitive skills. Bouanani (2015) identified cognitive skills covering both intellectual and practical skills including critical and creative thinking, inquiry and analysis, written and spoken communications as foundations of the essential learning outcomes which students should achieve across their college experience. For that reason, the objective of undergraduate education is to improve students who are able to involve in critical thinking and clear writing as above mentioned.

Therefore, it is clear that critical thinking should be possessed by the students in order to write effectively. Whenever the students are able to think critically, they will easily gather and construct ideas to support their opinion and arguments by selecting proper strong and convincing reasons. At this level, students will frequently apply a problem-solving step using a set of cognitive and linguistic skills (Indah & Kusuma, 2016). Without critical thinking assisting during the process of learning, the process of learning itself will merely be rote learning. As the result, the students rarely have powerful ideas. For the example, students never take their own genuine ideas of a certain selected topic.

One of ways to investigate college students' critical thinking competence is on their composition in the form of argumentative essay. Since, according to Kuek (2010), in argumentative writing, a writer

analyzes, evaluates and counters arguments and presents a logical opinion or fact to convince the readers in which those activities categorized as critical thinking skills. Moreover, analyzing arguments, making inferences using inductive or deductive reasoning, judging or evaluating, and making decision or solving problems are the components skills covered in critical thinking (Lai, 2011).

Therefore, this study aims at identifying the English department students' difficulties in writing argumentative essay as long as their critical thinking competence. Specifically, there are three objectives of the research. First, this research is to know both high and low-level students' difficulties in writing argumentative essay scored by using Scoring Rubric of Argumentative Essay (SRAE). It describes the students' difficulties in stating a thesis statement in the introduction, writing development paragraphs supported with reasons, stating refutations, conclusion, organization, grammar, vocabulary, and mechanics. Second, this research is to compare the students' critical thinking competence both from high and low-level students by locating students' writing argumentative scores into Critical Thinking Analytical Rubric (CTAR). The last, this current research is to compare between both high and low-level students' difficulties in writing argumentative essays scored by SRAE and both high and low-level students' critical thinking competence in writing argumentative essays scored by CTAR.

THEORETICAL FRAMEWORK

This section discusses several related literatures of critical thinking and previous studies in accordance with students' critical thinking.

Definitions of Critical Thinking

The term 'Critical Thinking' first started emerging in academic circles and literature in the mid-twentieth century. In 1941, the academic Edward M. Glaser stressed that critical thinking referred to the search for evidence to support (or discredit) a belief or argument. According to McPeck (1981:7) critical thinking is "the appropriate use of reflective scepticism within the problem under the investigation". He added that the proper application of critical thinking might vary with specific areas of expertise and knowledge. According to Simon and Kaplan (1989) the formation of logical inference is the characteristic of critical thinking. And Ennis (1991), asserts critical thinking as 'reasonable reflective thinking that is focused on deciding what to believe or do'. He adds that critical thinking includes; formulating hypotheses, alternative ways of viewing a problem, questions, possible solutions, and plans for investigating something. Ennis distinguishes between *skills* (analysing arguments, judging credibility of sources, identifying the focus of the issue, and answering and asking clarifying and or challenging questions) and attitudes or *dispositions* (be prepared to determine and maintain focus on the conclusion or questions, willing to take the whole situation into account, prepared to seek and offer reasons, amenable to being well informed, willing to look for alternatives, and withholding judgement when evidence and reasons are insufficient). Paul (1992) echoes that without having disposition, or without being open-minded, the critical thinking is weak.

In accordance with the Bloom's taxonomy (1956), several authors (Kennedy et al., 1991; Halpern, 1998, Beyer, 1987 in Garside, 1996) agreed that critical thinking refers to high order thinking skills covering: verbal-reasoning skills; argument-analysis skills; thinking skills such as hypothesis testing; thinking in terms of likelihood and uncertainty; decision-making and problem-solving skills. In a conclusion, critical thinking can be defined as a process that challenges an individual to use reflective, reasonable, rational thinking to gather, interpret and evaluate information in order to derive a judgement.

In addition, Facione (1990) asserted the five cognitive skills as they are: interpretation; analysis; evaluation; inference; and explanation and the disposition in critical thinking. He described interpretation relates to the understanding meaning from several sources accurately. Analysis is explained as the ability to identify statements, concepts, questions, information, and opinions through comparing and contrasting. The three analysis sub skills are: examining ideas, detecting arguments, and analysing arguments. The cognitive skill evaluation is defined as assessing the sources credibility as they may come from opinion or perception, as well as to assess the logical statements. The sub skills associated with evaluation include assessing claims and assessing arguments. While inference is the cognitive skills involving identifying elements in order to draw a reasonable conclusion; to form a hypothesis; to draw consequences from data, statements, and evidence. The sub skills associated with inference are querying evidence, conjecturing alternatives, and drawing conclusion. Explanation is the cognitive skill whereby reasoning and evidence are used to support an argument or particular claim. The sub skills involved in explanation are: stating results, justifying procedures, and presenting arguments. While disposition is the

positive mental constructions (being motivated and positively disposed) used to solve problems or making decisions. From those above-mentioned definitions, it can be concluded that critical thinking includes cognitive skills and disposition leading to draw reasonable conclusion.

Critical Thinking Competence

Elder and Paul (2005) proposed several competencies to assess critical thinking, namely general and specific competencies. General competency applicable to all thinking within all domains, subjects, disciplines, and professions. General competency focusing on the elements of reasoning; universal intellectual standards; intellectual traits, virtues or dispositions; and barriers to the development of reasoning. Whereas specific competency focusing on critical thinking skills essential to learning, specific domain of thought. In details, they set several indicators of critical thinking competencies, they are: purpose; information; assumptions; implications; questions; inferences; concepts; point of view; clarity; accuracy; depth; significance; fairness; precision; relevance; breadth; logic; fairmindedness; intellectual humility; intellectual courage; intellectual autonomy; intellectual empathy; intellectual perseverance; intellectual integrity; confidence in reason. Those general and specific competencies seem to be complex to use at investigating the students' critical thinking competence. Nevertheless, Facione (1990) set the simpler critical thinking competence categorized in five cognitive skills and a mental skill, namely: interpretation; analysis; evaluation; inference; explanation; and the disposition towards thinking critically.

Critical Thinking in Indonesian University

As a higher education institution, a university is a place where the higher order thinking skills are taken place. Thus, every college student is expected to have higher order thinking skills. According to Bloom (1956), having higher order thinking ability means having the mental ability to be critical in analysing, applying, synthesizing, and evaluating facts or materials. Hence the critical thinking competence is very essential to master. Masduqi (2006) claims that college students who have critical thinking competence can optimize the intellectual tools in which the critical thinking offers that enables them to analyse, assess, and even improve thinking. Moreover, he asserts critical thinking skills plays important roles not only when the students are in academic life, but it also benefits when they are in work force. Hirose (1992) claims that university or college students are lack basic thinking skills performed in their companies. He also adds that many youths entering workforce are lack the basic skills to function effectively and they, commonly, lack the reasoning and critical thinking abilities needed to process the information.

In the context of Indonesian higher education, students' critical thinking is low. They tend to have almost no critical thinking skills and lack of meaningful activities, and those factors affecting the ineffectiveness in defining the logical reason on certain topic and also, they often find difficulties writing in English. This phenomenon is simply due to they accept the information, opinions, arguments directly without evaluating and assessing properly. This is due to, they experienced and were exposed in teacher-centred approach. Thus, they are unable to express their ideas in English both communicatively and critically. As the result, practically, the English students fail to express certain idea towards an issue critically (Masduqi, 2006).

Critical Thinking and Argumentative Essay

Today's English teaching and learning focuses is in the students centred activity, where students more engage in learning, explore the knowledge, develop communication, perform collaboration and critical thinking skills in order to survive in competitive era (Jumiarti, 2017). In writing, however, English students tend to have little attention to write critically based on certain issue. As a matter of fact, having the critical thinking skill is a must for the students' academic life. Moreover, the ability to frame and defend and argument is essential for their careers. Since, the goal of making an argument is to convince the readers of the rightness of the claim being made using logical reasoning and relevant evidence (National Governor's Association Centre for Best Practices and The Council of Chief State School Officers, 2009).

The best way to investigate the students' critical thinking ability is through their argumentative essays. As clearly stated, there are five elements of argumentative essay, which are: explanation of the issue; a clear thesis statement, a summary of the opposing arguments, rebuttal to the opposing arguments; and writer own arguments (Oshima and Hogue, 2006). In argumentative essay, the students have to think critically towards the topic and write logical reasons about the arguments they write. Then, the reasons should be supported by several evidences in order to strengthen their ideas. At the end, the

conclusion should be written according to the arguments presented in the paragraphs before. Indeed, each part of argumentative elements should be connected.

Generally, in writing, not excluding argumentative writing, there are three important parts: introduction, body, and conclusion. The introduction in argumentative writing covers the thesis statement or claim in which the writer opts to choose his or her standpoint toward the topic being argued, whether s/he agrees or disagrees. While the body of argumentative writing covers supports to maintain the argument of the writer and warrants to show how the evidences logically connected to the data. The writer can also put backing and rebuttal inside the body of an argumentative essay. Finally, the last part of the argumentative essay is called conclusion, in which the writer puts his/her summation of points or final evocative thought to ensure the readers remember the argument.

Criteria of a Good Argumentative Essay

The criteria of good argumentative writing are based on validated scoring rubric for the argumentative writing developed from five elements of argumentative essay of Oshima and Hogue (2006). There are eight aspects of scoring rubric for the argumentative writing, namely: Introduction and thesis statement; Development; Refutation; Conclusion; Organization; Grammar; Vocabulary; Mechanics.

Criteria of an Effective Critical Thinker

The students need deep learning characteristic in order to be an effective critical thinker, especially in writing skill. Based on Ramsden (n.d), there are five characteristics, namely: understand the ideas; reduce assessment anxiety; re-asking/monitoring the progress; readiness to explore range of sources and follow new leads/alternatives, and five is greater personal interest/high curiosity.

Correlation of Critical Thinker and Argumentative Essay

Students who have critical thinking competence are those who are able to demonstrate the ideas not based on their emotion or prejudice, but those who use more on logical reasons to analyse and argue the points to support their claim on the thesis statement. The basis and foundations in an argumentative essay are using logic and reasons. Moreover, logic and reasons are the main elements of critical thinking. However, a good critical thinker is able to avoid making fallacious prejudices without considering related evidences and logical reasons.

In order to have a good argument in the essay, a good critical thinker needs to gather the evidences carefully. It means that the evidences are not merely put before the arguments, yet the evidences should be synthesized and categorize related to the consideration. And also, they must be able to differentiate between evidence and truth. As a good critical thinker when writing an argumentative essay, student need to acknowledge the sources carefully (Plaut, n.d).

Previous Studies

A lot of research on critical thinking focusing on argumentative writing in Indonesia have been conducted for the three past years. First, Suhartoyo (2015) investigated the effectiveness of Toulmin's model argumentation within TWPS strategy on undergraduate students' critical thinking ability on argumentative writing. The author applied quasi-experimental design with a pre-test-post-test and nonrandomized control group design. The research finding showed there was not significant difference on the students' critical thinking ability as shown on the students' argumentative writing between students who were taught by using Toulmin's model of argumentation within TWPS strategy and the students who were taught by using Toulmin's model of argumentation without TWPS strategy. However, Toulmin's model of argumentation within TWPS strategy proved to improve the students' critical thinking ability as shown by the improvement of the experimental group' mean score.

Second, Febriana (2016) identified the students' strategies in implementing critical thinking when writing an argumentative essay. The methods used is qualitative approach which involved the case study method, the researcher collected the data using retrospect, interview, and questionnaire. The result of this study shows that, first, in implementing critical thinking when writing an argumentative essay, the students used Meta-cognitive, Cognitive, Social/Effective, Communicative and Rhetorical strategies. Second, the study also showed that in implementing critical thinking when writing an argumentative essay, the researcher found that the students mostly used cognitive strategies in writing their argumentative essay. It means that critical thinking benefit students in stimulating cognitive strategies when writing argumentative essays.

The most recent, Sulisty (2017) investigated the effectiveness of Problem-Based writing instruction on students' argumentative writing skills with regard to content, organization, vocabulary, grammar, and mechanics. His research employs a quasi-experimental study by involving the intermediate level students of Lambung Mangkurat University. The findings show that Problem-Based writing instruction can be recommended as an alternative teaching strategy particularly in teaching argumentative essay writing. The study also suggests that further research involves larger samples and the skills in listening, speaking, and reading to establish more conclusive findings on the roles of PBL in English Language Teaching contexts.

From those previous studies, it can be asserted that several recommended strategies succeed at boosting students' critical thinking, especially in argumentative essay.

METHOD

This recent research uses case study design targeting at answering the research problems reflecting the real situation. The researcher investigated through teaching and learning process at two classes of Writing 4 course in the fourth semester to gain the data.

This present research is directed towards determining the nature of situation as it exists at the time of the research. Therefore, this research only describes what exists with respect to variables or conditions in a situation, no control of treatment. To collect the data, there are two scoring rubrics used in this research, the first scoring rubric is Scoring Rubric for the Argumentative Essay (SRAE), developed by Suhartoyo (2015). The SRAE consists of eight respective aspects, namely: introduction and thesis statement; development; opposition/refutation; conclusion; organization; grammar; vocabulary; and mechanics. The second scoring rubric is Critical Thinking Analytical Rubric (CTAR), developed by Facione (1990). The CTAR consists of six respective aspects, namely: interpretation; analysis; evaluation; inference; explanation; and disposition.

The procedures carried out in this research are:

1. The 35 students from two classes were asked to select one out of three topics given by the lecturer, then they were asked to compose argumentative essays based on the selected topic.
2. The 35 argumentative essays were scored by using SRAE to locate the students' difficulties in writing argumentative essays.
3. The argumentative essays were graded into two groups, low and high scores.
4. The researcher selected the top ten and the bottom 10 of the students' argumentative essays scores.
5. The 20 argumentative essays were graded by using CTAR in order to examine the students' critical thinking competencies.
6. The major differences of students' difficulties and students' critical thinking competence between low and high scores students tabulated, compared, and interpreted.

FINDINGS AND DISCUSSION

To locate the students' difficulties on argumentative essays and students' critical thinking competence, the researcher scored the students' argumentative essays by using SRAE and CTAR respectively. The 20 argumentative essays were analysed aspect by aspect and tabulated in table numerically completed with its percentage. The findings are as follows: 1) the students' difficulties in argumentative essay and 2) the students' critical thinking competence.

Students' Difficulties in Argumentative Essay

Based on the result of SRAE, the students' difficulties in argumentative essays are presented in the following tables.

Table 1. The Low-Level Students' Difficulties in Argumentative Essays

Students	Introduc-tion & Thesis Statement	Develop-ment	Opposition / Refutation	Con-clusion	Orga-nization	Gra-mmar	Voca-bulary	Mech-anics
MA	1	1.5	1.5	2	1.5	1.5	2	1.5
MAF	1	1	1	1	1	2.5	2.5	2.5

WTU	2.5	2.5	2	1.5	2.5	2	1.5	2.5
SB	1.5	1.5	2	2	2.5	3	3	2.5
MIY	2.5	2.5	2	2	2.5	2.5	2	2.5
PM	1.5	1.5	1.5	2	3.5	2	3	4
NS	3	3.5	2	1.5	3	2.5	2	2
JA	1.5	2.5	2.5	2	2.5	4	3	2
MAK	4	5.5	1.5	1	1	2.5	4.5	3.5
SHJ	3	3	3.5	2.5	3.5	3.5	4.5	3
Total	21.5	25	19.5	17.5	23.5	26	28	26
Average	2.15	2.5	1.95	1.75	2.35	2.6	2.8	2.6
Percentage	14.33 %	12.5 %	9.75 %	11.66 %	23.5 %	37.14 %	40 %	43.33 %

It can be said that the low-level students' difficulties aspects of argumentative essay are ranked from the lowest to the highest are: refutation/opposition (9.75 %); conclusion (11.67%); development (12.5%); introduction and thesis statement (14.33%); organization (23.5%); grammar (37.14%); vocabulary (40%); and mechanics (43.33%). However, the results of the low-level students' difficulties in writing argumentative essay are different from the high-level students' difficulties in writing argumentative essays.

Table 2. The High-Level Students' Difficulties in Argumentative Essays

Students	Introduction & Thesis Statement	Development	Opposition/Refutation	Conclusion	Organization	Grammar	Vocabulary	Mechanics
MAJ	11	13.5	13	9	7.5	5.5	6	4
EF	10	13.5	14	11	7.5	4.5	5	4.5
IU	12.5	15	13	11.5	6	3.5	4.5	5
MUZ	12	15	15	12	6	3.5	4	4
AT	12.5	15	13.5	13	5	3.5	4.5	5.5
IY	11.5	14.5	14	13	6	5	4.5	4.5
RS	12	16	14.5	12.5	6	3.5	4.5	4.5
OM	12.5	14	15.5	13	5	4	4.5	5
NA	11.5	15.5	16	15	6.5	5.5	5.5	5.5
ZS	12.5	16	16	14.5	8.5	5.5	5.5	6
Total	118	148	144.5	124.5	64	44	48.5	48.5
Average	11.8	14.8	14.5	12.4	6.4	4.4	4.85	4.85
Percentage	78.67 %	74 %	72.25 %	83 %	64 %	62.85 %	69.28 %	80.83 %

It can be said that the high-level students' difficulties of argumentative essay are ranked from the lowest to the highest are: grammar (62.85%); organization (64%); vocabularies (69.85%); refutation/opposition (72.25 %); development (74%); introduction and thesis statement (78.67%); mechanics (80.83%); and conclusion (83%).

Students' Critical Thinking Competence

Based on the result of CTAR, the students' critical thinking competence in argumentative essays are presented in the following tables.

Table 3. The Low-Level Students' Critical Thinking Competence

Subjects	Interpretation	Analysis	Evaluation	Inference	Explanation	Disposition
MA	1	1	1	1	2	1
MAF	1	1	1	1	1	1
WTU	2	2	1	1	2	2
SB	2	2	3	3	3	3
MIY	2	2	2	3	1	3
PM	2	3	3	3	3	3
NS	2	2	3	3	3	2
JA	3	2	3	2	1	2
MAK	2	2	1	2	3	3
SHJ	2	2	3	2	3	2
Total	19	19	21	21	22	22
Average	1.9	1.9	2.1	2.1	2.2	2.2
Percentage	31.67%	31.67%	35%	35%	36.67%	36.67%

It can be said that the low-level students' critical thinking competencies are ranked from the lowest to the highest are: both interpretation and analysis aspects shows the similar score (31.67%); evaluation and inference are (35%); and explanation and disposition are (36.67%).

Table 4. The High-Level Students' Critical Thinking Competence

Subjects	Interpretation	Analysis	Evaluation	Inference	Explanation	Disposition
MAJ	4	4	3	3	3	3
EF	4	4	4	4	1	1
IU	5	4	4	5	5	5
MUZ	4	4	4	4	4	4
AT	5	5	4	5	5	4
IY	6	5	6	5	5	5
RS	5	6	5	5	6	5
OM	5	5	4	5	4	4
NA	6	6	5	6	6	6
ZS	6	6	6	5	6	6
Total	50	49	45	47	45	43
Average	5	4.9	4.5	4.7	4.5	4.3
Percentage	83.33%	81.67%	75%	78.33%	75%	71.67%

It can be said that the high-level students' critical thinking competencies are ranked from the lowest to the highest are: disposition (71.67%); explanation and evaluation (75%); inference (78.33%); analysis (81.67%); and interpretation (83.33%).

Comparison Between Students' Difficulties and Students' Critical Thinking Competence

Table 5. SRAE Aspects Comparison Between Low and High-Level Students

No	SRAE aspects	
	Low-level students	High-level student
1	Opposition/Refutation (9.75%)	Grammar (62.85%)
2	Conclusion (11.67%)	Organization (64%)
3	Development (12.5%)	Vocabulary (69.85%)
4	Introduction and Thesis Statement (14.33%)	Opposition/Refutation (72.25%)
5	Organization (23.5%)	Development (74%)
6	Grammar (37.14%)	Introduction and Thesis Statement (78%)
7	Vocabulary (40%)	Mechanics (80.83%)
8	Mechanics (43.33%)	Conclusion (83%)

In details, firstly, the low-level students focus more on the mechanics, which meant their main focus was merely on meeting on the essay requirement. Where it is included in surface learning characteristics. Whereas high level students focus on the conclusion which means that they did deep learning characteristic.

Secondly, the low-level students had the low capability on the opposition/refutation in argumentative essay. On the other hand, the high-level students violated the grammatical rules in several areas. It was understandable since they were likely focus on the content of the essay.

Table 6. CTAR Aspects Comparison Between Low and High-Level Students

No	CTAR aspects	
	Low-level students	High-level student
1	Interpretation (31.67%)	Disposition (71.67%)
2	Analysis (31.67%)	Explanation (75%)
3	Evaluation (35%)	Evaluation (75%)
4	Inference (35%)	Inference (78.33%)
5	Explanation (36.67%)	Analysis (81.67%)
6	Disposition (36.67%)	Interpretation (83.33%)

In details, firstly, the low-level students had very low interpretation in which they failed to identify the viewpoint, but offered a bias position based on previously held beliefs, biased interpretation of evidence, statements, information, or the point of view of others, and demonstrated no ability to work with the key concepts. On the other hand, high-level students were able to fairly demonstrate the existence of multiple perspectives.

Secondly, interestingly the low-level students were also able to defend only with a single perspective and fail to discuss other possible perspectives, especially those salient to the provided context. On the other hand, high-level students had high level interpretation which means they understand the ideas of the essay by interpreting evidence, statement, and the questions with precision and detail.

CONCLUSIONS AND SUGGESTIONS

In conclusion, the findings from the SRAE and CTAR on argumentative writing essay revealed that each level of students, whether high and low achievement on argumentative essay had different rank of aspects of critical thinking competence. However, a number of points can be made on the basis of the discussion in this research. A university student needs to have a good writing skill, especially on the argumentative essay, but without knowledge of critical thinking competent, being a critical thinker cannot be guaranteed. Thus, lecturers will always need to make decisions about whether critical thinking

competence should be integrated in the argumentative writing essay. This research suggests that the students, especially from low level achievement, need to understand and eventually apply the critical thinking aspects when composing an essay.

REFERENCES

- Bloom, B. S. (1956). *Taxonomy of educational objectives: The classification of educational goals. Handbook 1: Cognitive domain*. New York: McKay.
- Bouanani, N. (2015). Enhancing critical thinking skills through reflective writing intervention among business college students. *IOSR Journal of Research & Method in Education (IOSR-JRME)*, 5 (1): 50-55
- Edward M. Glaser (1941) *An Experiment in the Development of Critical Thinking* New York: Colombia University. Teachers College
- Ennis, C. (1991). Discrete thinking skills in two teachers' physical education classes. *The Elementary School Journal*, 91, 473-486.
- Facione, P. A. (1990). *Critical Thinking: A Statement of expert consensus for purposes of educational assessment and instruction*. Millbrae, CA: California Academic Press. Retrieved from http://www.insightassessment.com/pdf_files/DEXadobe.PDF
- Febriana, A. (2016). Students' writing strategies to implement critical thinking in an argumentative essay. *IICLLTLC-2*: 45-56
- Garside, C. (1996). Look who's talking: a comparison of lecture and group discussion teaching strategies in developing critical thinking strategies. *Communication Education*, 45, 212-227.
- Hirose, S. (1992). Critical thinking in community colleges. *ASHE-ERIC Higher Education Reports*. The George Washington University, ED348128.
- Indah, R. N. & Kusuma, A. K. (2016). Factors affecting the development of critical thinking of Indonesian learners of English language. *IOSR Journal Of Humanities And Social Science (IOSR-JHSS)*, 21 (6): 86-94
- Jumiarti. (2017). *The Effect of Problem-Based Learning on the Argumentative Writing Skills of Students across Personality Types and English Proficiency Levels*. Doctoral Dissertation, English Language Teaching, Postgraduate Program of State University of Malang.
- Kuek, T. (2010). *Developing critical thinking skills through integrative teaching of reading and writing in the L2 writing classroom* (Doctoral Dissertation Newcastle University). Retrieved from <https://theses.ncl.ac.uk/dspace/handle/10443/1063>
- Lai, E. R. (2011). *Critical thinking: a literature review*. Pearson
- Masduqi, H. (2006). The competency-based curriculum of English subject for senior high school in Indonesia: A critical evaluation. *Jurnal Humanitas*, 1 (2): 56-68.
- McPeck, J.E. (1981). *Critical Thinking and Education*. New York: St. Martin's Press.
- Simon, H.A. and Kaplan, C.A. (1989). In M.I. Posner (Ed). *Foundations of Cognitive Sciences*. Cambridge: MIT Press
- Oshima, A., Hogue, A. (2006). *Writing Academic English Fourth Edition*: Pearson Longman
- Paul, R.C. (1992). *Critical Thinking: What every person needs to survive in a rapidly changing world*. (2nd revised ed.). Santa Rosa, CA: Foundation for Critical Thinking
- Paul, R., & Linda, E. (2005). *Critical thinking: Tools for Taking Charge of Your Learning and Your Life*. Pearson/Prentice Hall
- Plaut, D. (n.d). *How to Apply Critical Thinking and Logic in Argumentative Essays*. Retrieved from <http://http://www.referencepointsoftware.com/how-to-apply-critical-thinking-and-logic-in-argumentative-essays/>
- Ramsden (n.d). *Critical thinking and writing*. Retrieved from <https://www.kent.ac.uk/learning/documents/studentssupport/valuemap/valuemap1516/criticalthinkingandwriting171015alg.pdf>
- Suhartoyo, E., Mukminatien, N., Laksmi, E. D. (2015). The effect of Toulmin's model argumentation within TWPS strategy on students' critical thinking on argumentative essay. *Jurnal Pendidikan Humaniora (JPH)*, 3 (2): 143-153.
- Sulistyo, G. H. (2017). Problem-based writing instruction: its effect on students' skills in argumentative writing. *Arab World English Journal*, 8 (2): 87-100.