Logical Fallacies in Indonesian EFL Learners' Argumentative Writing: Students' Perspectives

Niamika El Khoiri
Universitas Negeri Malang
niamika@yahoo.com

Utami Widiati
Universitas Negeri Malang
*uwidiati@yahoo.com*

Abstract

In argumentative writing, the presence of logical fallacy, which can be simply defined as error in reasoning, shows either illegitimate arguments or irrelevant points that will undermine the strength of a claim. Despite its significant role in determining the quality of an argument, the topic of logical fallacy has not been widely explored in the context of EFL, the possible reason being the fact that there are other aspects that need more immediate intervention, such as grammar, organization, or mechanics. The objective of the current study is to identify and discuss logical fallacies in the argumentative writing of Indonesian EFL learners. For this purpose, 40 argumentative essays written by the students of the English Department of State University of Malang were analyzed. An FGD discussion involving students who participated in the essay writing process was organized following the identification of logical fallacies in their writing. The results of the study showed that students still produced a number of logical fallacies in their work, some of which were very basic they can actually be avoided through simple, explicit instruction.

Keywords: logical fallacies, argumentative writing, students' perspectives

A. Introduction

Logical fallacies can simply be defined as defective conclusion (Sinnott-Armstrong and Fogelin (2010). Interestingly, these mistakes in reasoning may be intentional or unintentional (Cottrell, 2005). In this case, an argument may be flawed because (1) the author did not recognize that their own arguments were flawed, and (2) the author intended to mislead their audiences and deliberately distorted the reasoning, or manipulate the language use to create a certain response. The knowledge on this logical fallacy is important for students to prevent them from making the mistake as well as to make them more alert to the flaws in other people's argument.

The presence of fallacy in students' arguments is often associated with problems in critical thinking. Regarding the assessment of an argumentative writing, Stapleton (2001) proposes several criteria to evaluate a written text in terms of critical thinking elements. In his criteria, those elements include (1) arguments, which can be defined as 'claim supported by reason', (2) evidence to support the reason, (3) conclusion which direct readers to believe, (4) recognition of opposition and refutation, (5) fallacy identification. Stapleton's (2001) elements of critical thinking can be represented in the following chart.
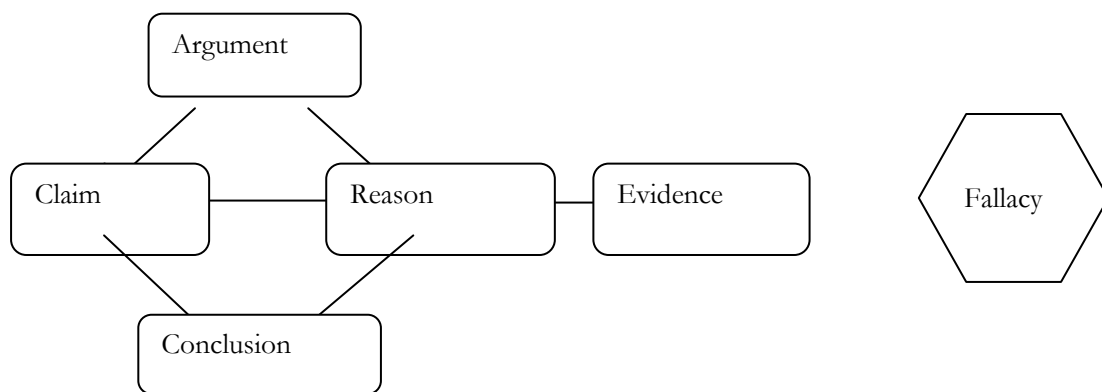
Other viewpoints
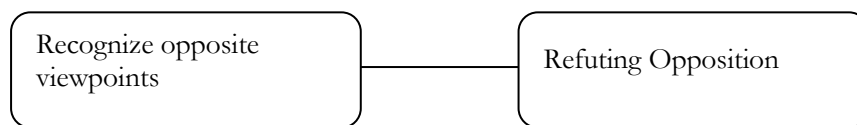
With regard to the types of fallacies, Sinnott-Armstrong and Fogelin (2010) believe that there is little point in trying to construct a complete list of fallacies, because the number and variety are limitless. What is more important, they add, is to get a feel for the most common and most tempting kind of fallacy.

A fallacy classification presented by Mayfield (2007), for example, tries to classify common fallacies into four broad categories: fallacy that manipulates through language, fallacy that manipulates through emotions, fallacy that manipulates through distraction, and inductive fallacy.

Table 1: Type of Fallacies

Type of Fallacies	Definition
Manipulation through language	
1. Word ambiguity	Uses vague or undefined words
2. Misleading euphemism	Hides meaning by creating words which make less acceptable idea seems positive
3. Prejudicial language	uses loaded words that convey bias
Manipulation through Emotions	
1. Appeal to fear	Seeks to persuade by arousing fear
2. Appeal to pity	Seeks to persuade by arousing pity
3. Appeal to false authority	Seeks to persuade by citing a fake or inappropriate authority
4. Appeal to bandwagon	Seeks to persuade by appealing to the wisdom of popular momentum
5. Appeal to prejudice	
a. Personal attack	Attacks a person's character on matters irrelevant to the issue
b. Poisoning the well	Seeks to prejudice others against a person, group or idea so that their arguments will not be heard on their own merits
Manipulation through distraction	
1. Red herring	Diverts attention to other issues
2. Pointing to another wrong	Claims that similar actions went unnoticed and unpunished
3. Straw man	Attacks a minor point in an argument, then claims this maneuver invalidates the whole argument
4. Circular reasoning	Repeats the same conclusion in different words
Inductive Fallacy	
1. Hasty generalization	Draws conclusion from insufficient sampling
2. Either-or fallacy	Asserts there are only two (extreme) choices while actually there are many
3. Questionable statistics	Presents unknown or unsound statistics
4. Inconsistencies and contradictions	Uses claims that contradict one another
5. Loaded questions	Uses a biased question
6. False analogy	Ignores significant differences when comparing two things
7. False cause	Presents unreasonable claim of causal connection
8. Slippery slope	Presents unwarranted claim that one event would lead to chain reaction

The taxonomy of fallacy can be seen as a practical guide to evaluate the strength of arguments presented in an essay. The method of evaluating argument using the list of fallacy like the one presented above is what is often referred to as *fallacy approach*. In such an approach, the assessment focuses on the identification of specific fallacies that weaken the strength of an argument. Using this approach, assessment of argument works by determining if an arguments contains fallacies. A more recent *criterial approach*, on the other hand, evaluates arguments by determining if a given argument satisfies certain criteria, which include criteria of acceptability, relevance and adequacy (Hughes, 2008). The two seemingly distinctive approach, however, differ mainly on the focus of

the attention. As can be summarized from Hughes' further explanation, the criteria of a sound argument involve three aspects that should be present. The failure to satisfy the criteria can be identified, among other things, from the use of fallacious statements to support the argument. For example, he mentions some particular fallacies under each criteria (as used in the *criterial* approach), such as fallacies of acceptability, fallacies of relevance, and fallacies of adequacy.

B. Literature Review

There have been various studies with regard to logical fallacies, particularly in EFL setting. A study conducted by Algozlu (2007) observed a number of fallacies produced by 76 Turkish sophomore undergraduate students in a literature class. The fallacies comprised oversimplification (41), straw man fallacy (36) irrelevant conclusion (24), hasty generalization (8), begging the question (1), and d hominem fallacy (1). Atai and Nasseri (2010) conducted a similar study which sought to examine the frequency of informal fallacies of argumentation in Iranian EFL learners. In addition to the identification of fallacies, they tried to probe whether there was a pattern regarding the use and selection of these fallacies in their writings. The study also found that the three variables under research (i.e. gender, age, and discipline) did not have any significant effect on the use of informal fallacies of argumentation in Iranian EFL learners' writing.

In the context of Indonesian EFL setting, a study on logical fallacy was conducted by Indah and Kusuma (2015). The study resulted in the identification of fallacies in the students' argumentative writing, which were classified into fallacies in claims of facts, claims of value, and claims of policy.

Despite the different method used in the abovementioned studies, the studies had one thing in common: they relied on the researchers' judgment in the process of identifying and classifying the fallacies. The current study therefore tries to employ a different approach on this issue in an attempt to provide explanation of the phenomenon from the students' point of views.

The need to take students' voice into account is necessary to bring about a better understanding of the subject and to create a different perspective regarding the matter. The fallacy identification by the researchers alone also has its own inevitable shortcoming: while it is important for EFL teachers to map out the pattern of logical fallacy committed by students in their writing, the process of identification itself is quite complicated. Referring to her own study, Algozlu (2007) admitted that fallacies identification is considered the most challenging and intricate part of the analysis. The problem might come from the fact that there are simply too many varieties of fallacies (Sinnott-Armstrong and Fogelin, 2010), which make the topic has a scope problem (Aikin, 2016). The challenge for any researcher seeking to identify and classify fallacies is therefore quite obvious: "limitless" number of fallacies, different version of taxonomy, and in many cases, overlapped classification of fallacies in a single statement. Such a complication in fallacy identification has understandably led to the "simplification" of the categorization of fallacy to serve the researchers' practical purposes.

Students' voice is also important in relation to the subsequent step that needs to be taken once the common fallacies have been identified and explained by previous research. The result of the current study can therefore be useful to design the possible

types of pedagogical intervention which can improve the students' awareness of the concept of fallacy.

C. Research Methodology
1. Research Design
The study was basically qualitative in nature. It was conducted in two stages. In the first stage, the students were asked to write an argumentative essay from which the fallacious statements were identified. Next, a Focus Group Discussion was organized by involving the students who participated in the previous stage of the study. The fallacies identified in the students' essays were used as the starting point of the discussion.

2. Subject
40 students from the English Department majoring in ELT were involved in the study. The students had all passed all the writing courses provided in the syllabus, including argumentative writing which was offered in the 4th semester.

3. Instruments
A writing prompt was used to elicit written responses from the students in the form of argumentative essays. The prompt contained a (hypothetical) context of Indonesian government's decision to remove English from the curriculum of Elementary school. In the writing instruction, students were given a background statement and were asked to write an essay as a response to the situation. A Focus Group Discussion involving several students from the first stage of the study took place after the identification of fallacies.

4. Data Analysis
For the purpose of the study, the students' argumentative writing was analyzed using *fallacy approach*, by referring to the classification of fallacy provided by Mayfield (2007). Instead of focusing on the frequencies of various fallacies found in the students' writing, the identification stage was emphasized on finding some interesting samples of fallacies in each category as the representatives of students' common problem in understanding the concept. The identified fallacies were then used as the trigger for the discussion with the students during the FGD session.

D. Findings
The study was successful in identifying a number of fallacious statements in the students' essays. The focus of the study was limited to the identification of logical fallacy in the students' writing regardless of their stance towards the issue or the overall performance of their skill in writing an argumentative essay.

Referring to the classification by Mayfield (2007), the followings are some of the fallacies produced by students in their argumentative writings:
1. Fallacy by manipulation through language
I think it is **ridiculous** *based on some reason* [S32.2]

The sentence contains emotive language which is considered not neutral and therefore less academic.

2. **Fallacy by manipulation through emotion**

Supposed English is totally erased from the curriculum, then what is our knowledge for? What do we have to do in the future? [S3.1]

The student (who disagrees with the option to delete English from the curriculum) tried to support her argument by using a personal reason involving the appeal of fear and pity. The reasons presented by the subject mainly aims at getting support or agreement from the similar group of audience who share the sentiment of the writer. The subject, a prospective English teacher who was afraid that her "future career" would be in danger should the policy be implemented, spread the fear among the reader to finally agree with her position. In academic writing, such fear mongering technique was not only unscientific, but also irrelevant and biased.

3. **Fallacy by Distraction**

It is so unfair for the children that they cannot have English in their primary school education. Why English? Why not other subjects? [S21.1]

In the fallacy taxonomy, the reason presented by the subject falls into the category of Red Herring. Red Herring itself is a sharp-smelled Atlantic fish which was traditionally used to lure and distract dogs in a wolf-hunting competition so that they will go to the wrong direction. In the example given by the subject, he tried to draw the debate away from the original issue, by introducing a new topic (of other school subjects which he thought were less important than English). In this instance, the subject failed to give any explanation of the "unfairness" he mentioned in his previous statement. Finally, the discussion has shifted from "why it is wrong to delete English from the curriculum" into "there are many other subjects which deserve to be deleted from the curriculum"

4. **Fallacy in inductive conclusion**

But when young learners study new language in this case English and their mother language also still under development, it causes young learners prefer English than their mother language. It also gives impact on the culture preference too. Young learner prefer western culture than their own culture [S5.3]

The fallacy produced by the subject was the result of a hasty generalization unsupported by adequate data. In addition, the statement lacks the use of hedging (a linguistic feature used to moderate a claim, for example the use of modal auxiliary "*might* prefer" or quantifier "*several* students"), which made it too strong and left no room for other possibilities. This results in an overgeneralized statement which claims that "all learners" will have the same tendency.

The followings are the list of sentences containing logical fallacies in students' work:
1. The government feels reluctant to solve the problem of teaching English and prefer to just remove it. [S4.1] *(assumption, oversimplification)*
2. For me, rather than banning students to learn a new culture, it will be better if the government put more concern on giving more education on character

building and religion which will guide the to face the new culture wisely. [S7.2] *(fallacy by distraction, introducing a new topic)*

3. If English is really erased from the curriculum then what we are doing now is wasting our money, time and energy. [S8.1] *(exaggeration, my-side argument)*

4. As we all know, Indonesia has a really messed up curriculum. [S12.1] *(overgeneralization, inappropriate diction)*

5. It is embarrassing to see the citizen of Indonesia put the foreign in the top and put aside their national language. So I think it is enough for the learners to start learning English in their Junior High School not in the Primary school. [S20.1] *(assumption, overgeneralization)*

6. The fact that nowadays English is taught since kindergarten, support the argument that English should be taught in primary school as well. [S24.2] *(fallacy based on fact: English in kindergarten is not a part of national curriculum since kindergarten is not considered formal education system. Besides, not all kindergarten teach English to their students)*

7. It is better to remove regional language other than English. [S27.1] *(fallacy by distraction)*

8. All people have understood the urgency of using English in their daily lives *(overgeneralization)*. Even parents prefer to send their kids to school where the instructional language is English. [S30.1] *(appeal to bandwagon: just because "everybody does it", it does not automatically mean that it is the "right" thing to do. In addition, the use of "everybody" -and lack of quantifier for "parents"- is also an overgeneralization)*

9. As the time goes by, the English skills will grow just like the kids grow. [31.2] *(false analogy).*

10. Seeing a parrot in Junior High School is not a good scenery. [S31.3] *(false analogy)*

11. The statement saying that English will make students have many more complex materials is totally wrong. English materials taught to young learners are actually enjoyable. [S33.1] *(overgeneralization)*

12. First of all, there is no strong reason why [it] should be English. There are many subjects that can be removed as consideration. [S34.1] *(fallacy by distraction).*

13. Compare[d] to local language, not all students can learn English in their surrounding[s]. Therefore they should learn English in their school. [S35.2] *(overgeneralization: curriculum should not be based on "anything" students cannot learn in their surrounding)*

14. Indonesians are reluctant to learn English *(overgeneralization, assumption)*. They may think that English is not important *(assumption)*. That's why the government need[s] to put English in primary school. [S36.1] *(false inductive reasoning, conclusion based on false premises)*

15. The benefit of learning foreign language in early age is rejected because of some real cases that state the parents who brings their kids since kindergarten to learn English cannot communicate with them in Indonesian fluently. [S37.1] *(questionable claim concerning "real cases" which are scientifically absurd; false inductive reasoning: a policy cannot be made just because "some" parents have issues)*

16. It is rare for now to find Indonesian children speaking Bahasa Indonesia proudly. They prefer to speak foreign language which they consider is cooler

than their own language. [S38.1] *(overgeneralization, personal judgment with not enough data. The statement is also factually incorrect).*
17. Instead of teaching foreign language, why don't we teach them their local language? [S38.3] *(fallacy by distraction, irrelevant to the topic)*
18. Student need English in their Elementary school period, (because) it will be too late if English was taught in Junior High School [S40.1] *(an "empty" causal relationship, circular reasoning)*

During a Focus Group Discussion with the students who participated in the study after the data were collected and the fallacies were identified, it was revealed that the concept of logical fallacy seemed to be something quite new to them. When the list of sentences containing fallacious statement from their essays were displayed, some were successful in pointing out that there were "something wrong" in the way the arguments were presented, but few managed to give the reason why they were wrong. In some cases, students were able to give more acceptable alternatives to the statements they believed were not quite right. There was one interesting, though predictable, conclusion from the FGD: no student was familiar with the term "logical fallacy", let alone the classification of fallacy in the taxonomy. During the FGD, a fallacy taxonomy was displayed, and some participants admitted that even though they recognized a number of the samples cited in the taxonomy as "problematic", they had never learned a complete set of fallacy taxonomy as the topic in their course, particularly in the argumentative writing class. As a result, they had not been aware of the seemingly trivial aspect which would make their argument considered fallacious. One student, for example, claimed that she would not have produced a fallacious statement in her writing "had she known" she was not allowed to use an emotive language in academic writing.

It has been mentioned previously that the students involved in the data collection process had passed all writing courses, including argumentative writing course. Based on the catalogue of the English Department, the argumentative writing course, which has 4 credits, has the objectives to "develop students' ability to present logical reasoning, strong and convincing argument, as well as critical analysis and judgment in the form of subject-related argumentative essays". Theoretically speaking, the subject of logical fallacy perfectly fits the description. The fact that there was no logical fallacy material in the scheduled meeting in the course profile implies that the decision to include logical fallacy to the students was left to the discretion of the lecturers. Should the topic be delivered, it is also for the lecturers to decide whether it will be taught in an explicit fashion (e.g. by using fallacy taxonomy and discrete exercises) or it will be delivered implicitly as a part of the students' writing process.

E. Discussion

Based on the results of the current study, it was revealed that Indonesian EFL learners still have problems regarding logical fallacy. The fallacy taxonomy is in fact very useful in helping EFL learners to learn about the concept of fallacy and to avoid making erroneous claims in their argumentative writing.

In spite of the practical benefit of the taxonomy, it is also important to point out that the *fallacy approach* itself has been under strong criticism for its failure to evaluate an

argument based on a more comprehensive context. Hundleby (2010), for example, argues that fallacy approach relies too much on the fallacies taxonomy to judge an argument. Such taxonomic technique, according to her, begins with the assumed fallaciousness and aims at rationalizing the argument's defeat simply by identifying it according to the fallacies taxonomy. Based on her study involving 20 books on critical thinking, Hundleby (2010) also discovers that with regard to fallacy, more than 50% books use short examples of a few sentences, removing the premise and conclusion from the dialectical context in which they occur. In addition, the discussion is limited to labeling fallacy or judging if a statement is fallacious or not without actually discussing the acceptable counterparts for fallacies listed.

Despite the weaknesses of fallacy approach mentioned by Hundleby (2010), the fact that the presence of fallacy is often associated with low critical thinking has also raise a concern, especially in the context of EFL. In the proposed model for assessment of written text in terms of critical thinking element, Stapleton (2001), for example, include logical fallacy as one of the elements that needs to be taken into account when assessing students' work.

While teachers should be more concerned in helping students to produce good reasoning in their writing rather than just focusing on the label to the fallacious statement, the fact that students have very limited knowledge on logical fallacy needs to be addressed. When students have some basic understanding of what fallacy is, it will be easier to make them aware of the possibility that their reasoning might contain one. This will certainly help them to produce an argumentative essay which is fallacy-free. Such knowledge will also help them to be more critical in giving judgment on somebody else's statement and will not be led to believe in something which is fallacious.

In EFL setting, the importance of explicit instruction in improving students' critical thinking is even more urgent considering the fact that even in more general contexts, the explicit teaching of critical thinking is highly favorable. A meta-analysis study conducted by Abrami, et al (2008), for example, reveals that among various kinds of pedagogical intervention aiming at improving critical thinking, it is only the explicit interventions which have significant results. The study, which involved 117 previous studies with 20,698 participants, concludes that improvements in students' critical thinking skills and dispositions "cannot be a matter of implicit instruction", and that it is important for educators to take steps to make critical thinking objectives explicit in courses.

In EFL argumentative writing, the importance of giving explicit instruction is shown by the result of two studies conducted by Nussbaum and Kardash (2005) and Khodabandeh, et al (2013). Referring to the absence of counterarguments and rebuttals in the students' papers, the studies reveal that it is useful to explicitly ask students to generate and rebut counterarguments, and that explicit instruction was particularly effective in assisting students to learn about rhetorical pattern.

With regard to fallacy, Atai and Nasseri (2010) suggest that one of the implications of their study is the need for EFL writing teachers to raise the awareness of the students concerning reasoning pitfalls, including informal fallacies in their argumentative writings. In relation to the students' awareness, the current study reveals

that an explicit explanation of the logical fallacy and the fallacy taxonomy helps the students to get familiar with the concept.

The explicit instruction regarding logical fallacy can be implemented, among other things, by setting a specific schedule to discuss the topic in an argumentative writing course. The session will be helpful to introduce the concept of logical fallacy, including the most common fallacies produced by EFL students in various research, so that the students will be more aware of the quality of their arguments.

F. Closing Remarks

Introducing logical fallacies (and fallacy taxonomy) through explicit instruction to EFL students who are learning argumentative writing can be seen as a practical step to bridge the gap in their knowledge on logic. By observing examples of sentence containing logical fallacies, students will be made aware of several categories of logical fallacies and refrain themselves from making similar mistakes in their own writing. This approach, combined with the basic writing skill teaching, will result in better writing products which not only comply with all the conventions of argumentative writing but also display sound claim as the result of fallacy-free reasoning.

BIBLIOGRAPHY

Abrami, P.C., Bernard, R.M., Borokhvski, E., Wade, A., Surkes, M.A., Tamim, R., & Zhang, D. (2008). Instructional interventions affecting critical thinking skills and dispositions: A stage I meta-analysis. *Review of Educational Research*, 78, 4, 1102-1134.

Aikin, S. F. (2016). A (modest) defense of fallacy theory. In Bondy, P., & Benacquista, L. (Eds.). *Argumentation, Objectivity, and Bias: Proceedings of the 11th International Conference of the Ontario Society for the Study of Argumentation (OSSA),* 1-11.

Alagozlu, N. (2007). Critical thinking and voice in EFL writing, *The Asian EFL Journal*, 9(3), 118-136.

Atai, M. R. & Nasseri, M. (2010). A Gender-based study of informal fallacies of argumentation: The Case of Iranian Advanced EFL Learners' Writing. *IJAL,* 13, 2, 19-45.

Cottrell, S. (2005). *Critical thinking skills: Developing effective analysis and argument*. Hampshire: Palgrave McMillan

Hughes, W. (2008). *Critical thinking: An introduction to the basic skills, 5th edition.* **Peterborough, Ontario: Broadview Press Ltd.**

Hundleby, C. E. (2010). The authorities of the fallacies approach to argument evaluation. *Informal Logic*, 30, 3, 279-308.

Indah, R.N. & Kusuma A.W. (2015). Fallacies in English Department students' claims: A rhetorical analysis of critical thinking. *Jurnal Pendidikan Humaniora,* 3, 4, 295-304.

Khodabandeh, F., Jafarigohar, M., Soleimani, H., & Hemmati, F. (2013). *The Impact of Explicit, Implicit, and No-Formal Genre-based Instruction on Argumentative Essay Writing. The Linguistics Journal*, 7, 1, 134-166.

Mayfield, M. (2007). *Thinking for yourself: Developing critical thinking skills through reading and writing* (7th ed). Boston, MA: Thomson Wadsworth.

Nussbaum E.M., and Kardash, C.M. (2005). The effects of goal instructions and text on the generation of counterarguments during writing. *Journal of Educational Psychology*, 97, 2, 157-169.

Sinnott-Armstrong, W., & Fogelin, R. (2010). *Understanding arguments: An introduction to informal logic.* Belmont, CA : Wadsworth Cengage Learning.

Stapleton, P. (2001). Assessing critical thinking in the writing of Japanese university students: Insights about assumptions and content familiarity. *Written Communication*, 18, 4, 506-548.