

Examining Argument Elements and Logical Fallacies of English Education Students in Oral Discussion

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Highlights

There are various forms of arguments and logical fallacies presented by the students with three major factors, including a lack of understanding of arguments and logical fallacies, limited vocabulary as well as nervousness.

ABSTRACT: This study aims to report on the argument elements and logical fallacies performed by English education students. This study is framed within a descriptive qualitative study in that it interprets the ways students of English education deliver their arguments. The data were collected through observation, recording and in-depth interviews on the objects studied. The findings of this study showed that the students' ability to present logical arguments varies with the dominant label in the "non-standard argument" category. In regard to the logical fallacy, hasty generalization becomes the most general logical fallacy found in students' arguments, followed by the appeal to pity, the appeal to fear, the questionable statistics, the slippery slope, the appeal to the bandwagon, the circular reasoning, the pointing to another wrong, and the personal attack. Based on the interview, lack of understanding of arguments and logical fallacies, limited vocabularies, as well as nervousness are identified as the possible causes of these phenomena. Finally, it is suggested that students should be given exposures on how to structurize the logical arguments and avoid logical fallacies.

Keywords: Argument, logical fallacy, oral discussion.

Introduction

It is essential for students to have argument skills. An argument enables students to fully comprehend and analyze the existing arguments around them and raise their responses through unique voices (Lunsford et al., 2004). Alike in perspective, Warren (2010) argues that argument skills require students to carefully analyze and evaluate various information from different sources and synthesize them into their own ideas. Further, he emphasizes that ability in making arguments helps students to master academic knowledge since the processes allow them to investigate their subject matter, state claims based on their related investigations, provide reasons and evidence to support those claims, and convince their colleagues to agree or vote with their previous claims. Moreover, if the students have issues directly or indirectly affecting them and their communities, they must be prepared to be able to make claims with logical reasons and evidence, offer different viewpoints, and persuade their targetted audiences.

Various teaching approaches have been laid out to foster students' argument and critical thinking skills in English classroom, and one prominent approach is a discussion approach. Gall & Gillett, (1980) defines the discussion approach as a strategy to achieve instructional objectives which include a group of students, usually having roles as moderators and participants, who communicate with each other by using speaking, listening, and nonverbal activities. According to Reznitskaya et al., (2001) students in discussions are exposed to alternative perspectives, stimulated to formulate their own ideas, and create situations in which their peers will challenge their ideas. Congruently, Kuhn et al., (1997) address particular impacts of students' participation in a discussion toward their argumentative qualitative improvements including an increase in argument ranges, density of counterarguments, and awareness of alternative solutions and perspectives.

Despite the discussion-method is a way to train students' argument skills, the fact that it is not always easy for them to structurize the logical arguments. Firstly, to acquire the logical structure of arguments appropriately, at the bottom, students are required to have the ability to abstract and conceptualize it (Freedman & Pringle, 1984). Secondly, the presence of logical fallacy in students' arguments is a real problem. A logical fallacy is an error in reasoning which illustrates either illegitimate or irrelevant arguments (El Khoiri & Widiati, 2017).

Likewise, Fogelin et al., (1980) noticed that logical fallacy is a form of defective conclusion. An argument may be flawed due to (1) the speaker does not aware that his or her argument was flawed, and (2) the speaker intentionally misleads audiences, distorts the reasons, or manipulates the use of language to create responses (Budden, 2007).

Based on the background above, this research investigates the argument elements and logical fallacies of English education students in the oral discussion as well as the causes of the phenomenon. This study describes the phenomenon dealt with the students' argument elements and logical fallacies found in the English education department. Nonetheless, this study is expected to give a better insight into how to make a logical argument and avoid logical fallacies, which in turn, provides better insight for students, lecturers, and teachers alike.

The Nature of Argument

Arguments are conclusions which someone makes concerning particular issues, these conclusions must be supported by reasons and evidence (Boghossian, 2002). Quinn, (2009) explains that an argument should consist of a label, explanation, examples, and tie-back. According to him, the label is a short and simple statement which needs an explanation, then an explanation is a logical reason to explain how and why the label is true, while examples are the evidence to support the previous explanation, and tie back is a a clear and explicit link to justify whole structures of an argument.

Furthermore, Van Eemeren et al., (2002) introduces three types of argument. *The simplest* argument is a single argument consisting of only one premise. *The second type* of argument is multiple arguments which consist of some alternative standpoints or premises with the same level and weight for a problem that does not depend on one another and are generally presented one by one. *The third type* of argument is a coordinative argument that consists of a combination of a premise, explanations, and proofs that is sufficient to maintain the point of view and form a conclusion, and this is the minimum standard of a completed argument. *The last type* of argument is a subordinative complex argument. In this type of argument, a premise is elaborated

by layer after layer of other arguments. This means that if certain arguments are inadequate to support an initial point of view, then other arguments will be elaborated to support the basic premise of a point of view. This process is carried out continuously until the main argument seems clear and certain.

The Importance of Arguments in Discussion

When viewed from learning activity, argumentative discussion enables students to achieve the various learning goals. First, argumentation is involving elaboration, reasoning, and reflection which has been regarded as a contribution to deeper conceptual learning (Bransford J D Brown A L, 1999). Second, involving in argumentative discussion provides students with learning about argumentative structures (Kuhn, 2001). Third, argumentative discussion prioritizes collaboration among students, then it helps students developing social awareness and general collaborative ability (Vygotsky, 1980; Wertsch, 1985). Fourth, people in many places in social life often share a common habit to argue, then students' involvement in those groups requires the ability to argue competently (Billig, 1996; Koschmann, 2003). Alike in perspective, Warren (2010) argues that argument skills require students to carefully analyze and evaluate various information from different sources and synthesize them into their own ideas. Further, he emphasizes that ability in making arguments helps students to master academic knowledge since the processes allow them to investigate their subject matter, state claims based on their related investigations, provide reasons and evidence to support those claims, and convince their colleagues to agree or vote with their previous claims. Moreover, if the students have issues directly or indirectly affecting them and their communities, they must be prepared to be able to make claims with logical reasons and evidence, offer different viewpoints and persuade their targetted audiences.

Logical Fallacy

A logical fallacy is an error in reasoning which illustrates either illegitimate or irrelevant arguments (El Khoiri & Widiati, 2017). The logical fallacy occurs when the reasons do not adequately prove the claims in a number of ways (Kemerling, 2002). In addition, Fogelin et al., (1980) state that logical fallacy is a form of defective conclusion. An argument may be flawed due to (1) the speaker does not aware that his or her argument was flawed, and (2) the speaker intentionally misleads audiences, distorts the reasons, or manipulates the use of language to create responses (Budden, 2007).

Consequently, students' awareness of making mistakes in conveying arguments is beneficial. As suggested by Inayati and Emaliana that students are expected to avoid fallacy and aware of the power of someone's arguments (Inayati & Emaliana, 2017). Moreover, Mayfield (2014) argues that there are at least three benefits if students understand logical fallacies. First, they are able to create correct logic; second, they will avoid wrong logic; and third, the arguments containing logical fallacies will not affect them. Therefore, understanding logical arguments and logical fallacies cannot be separated from students' learning atmosphere.

Logical Fallacy Classification

Mayfield (2014) tries to clarify logical fallacy into four broad categories;

Table 1

Types of logical fallacies

Type of Logical Fallacy	Definition
Manipulation Through Language 1. Ambiguity in words 2. Misleading Euphemism 3. Prejudicial Language	Delivering unclear phrases with multiple definitions within the argument, and uses vague and undefined words. Hiding meaning by making words that make the less acceptable idea seem positive. Using loaded words, phrases, or overall verbal and written communication that conveys bias
Manipulation Through Emotions 1. Appeal to Fear 2. Appeal to Pity 3. Appeal to False Authority 4. Appeal to Bandwagon 5. Appeal to Prejudice a. Personal Attack b. Poisoning the Well	Trying to persuade listeners by arousing fear in the arguments. Attempting to distract from the truth of the conclusion by the use of pity Insisting that a claim is true simply because a valid authority or expert on the issue said it was true, without any other supporting evidence offered Seeking to persuade by appealing to the wisdom of popular momentum, namely the assumption that the opinion of the majority is always valid. Attacking a person's character on matters irrelevant to the issue Committing a preemptive attack against the opponent from the start, to make the claim more acceptable
Manipulation Through Distraction 1. Red Herring 2. Pointing to Another Wrong 3. Straw man 4. Circular Reasoning	Attempting to redirect the argument to another issue and abandoning the original argument. Pointing out that the one making the argument is not acting consistently with the claims of the argument. Substituting a person's actual position or argument with a distorted version of the argument. Creating a circle in reasoning where no useful information is being shared.
Inductive Fallacy 1. Hasty Generalization 2. Either-or-Fallacy 3. Questionable Statistics 4. Inconsistencies and Contradictions 5. Loaded Questions 6. False Analogy 7. False Cause 8. Slippery Slope	Concludes insufficient sampling. The assumption that there are only two choices or possible outcomes when there are more choices. Stating statistics whose validity is highly questionable because there is no reasonable method for compiling such statistics. Using the claims that contradict one another Asking a question that has an assumption built into it so that it can't be answered without appearing guilty. Using analogy to prove or disprove an argument, but the analogy is too dissimilar to be effective. Concluding that one thing caused another, simply because they are regularly associated. An assumption that if we allow "A" to happen, then "Z" will eventually happen too, therefore "A" should not happen.

Methodology

Research Design, Subject, and the Instrument

The research design used in this study was descriptive qualitative research. The researchers wanted to describe the phenomenon dealt with argument elements and logical fallacies

presented by the fourth-semester students of the English education department at the University of Muhammadiyah Sumatera Utara (UMSU) in the academic year 2019/2020.

The researchers chose three classes from the fourth semester which consisted of 74 students in total. Meanwhile, the data of this study were utterances that contained arguments or logical fallacies.

The researchers took roles as the key instruments. The researchers themselves did collect the data through recording, collecting the data, identifying, comparing, and counting. Then, the researchers did interview the students personally to get more information to complete the research findings.

There were three steps to collect the data of this study. In the first step, the researchers asked the students in an oral discussion to deliver their arguments with the given topic “Public figures who have committed crimes must be given harsher penalties”. In delivering arguments, students were given space to express their arguments without time limitation. In the second step, students’ utterances were recorded, transcribed, and analyzed by the researchers to discover the students’ argument elements and logical fallacies. In the last step, the researchers interviewed the students right after the discussion to discover the possible factors of difficulties in making arguments and avoiding logical fallacies.

After collecting the data, the researchers analyzed the data. Three steps were done in analyzing the data. The first step was data reduction. This means that the researchers focused the raw data that contained argument elements and logical fallacies into meaningful information. Next step, the researchers organized the data into narrative form, figures, and other forms in order to discover the findings of this study. In this step, researchers relied on the theory of Van Eemeren et al., (2002) and the theory of Mayfield (2014) to interpret the findings of this study. Furthermore, the researchers also analyzed the interview transcription to discover the students’ responses to answer the research questions. Finally, the researchers concluded the data. In this step, researchers summarized the findings to answer the formulation of the research questions.

Findings and Discussion

Based on data analysis, there were three types of arguments out of four, and nine types of logical fallacy out of twenty found in their oral discussion. In the analysis, the first type of argument found was the single argument. The single argument is the simplest argument which consists of only one premise, such as *I agree that the heavier punishment is for public figures who committed the crimes because **they have a big influence on the large community***. In that regard, the student successfully created a single premise (*they have a big influence on the large community*) to support her position, however, she was unable to provide further logical reasons to explain her claim and failed to provide evidence to support her claim. There were 24 students (32.4%) who presented this type of argument. The second type of argument found was multiple arguments. Multiple arguments are arguments which consist of some alternative standpoints or premises with the same level and weight for a problem that does not depend on one another and are generally presented one by one, such as *I don’t agree with today’s topic because **we must uphold the values of justice and fair law for all Indonesian people including public figures and ordinary society, and public figures are also Indonesians who have the right to get equality***. In that regard, the student was able to present two different premises (*we must*

uphold the values of justice and fair law for all Indonesian people including public figures and ordinary society and public figures are also Indonesians who have the right to get equality), but he did not complete them with logical explanations and detailed examples or evidence to justify the conveyed premises. There were 35 students (47.3%) who presented this type of argument. The third type of argument found was the coordinative argument. The coordinative argument is an argument consists of a combination of a premise, explanations, and proofs that is sufficient to maintain the point of view and form a conclusion, and this is the minimum standard of a completed argument, such as *I agree that bad public figures should be punished harsher because public figures are individuals who are seen and imitated by the community. From the ways they dress, speak, act, and behave, they are always able to influence the community directly or indirectly. If they make mistakes or crimes, there will be people who become their fanatic fans who will imitate those mistakes. These fanatic fans have always lost their minds to prevent themselves from making the same mistake. For example, when some artists in the US who involved in drug use or free sex, their followers do the same without thinking about the consequences of that bigotry. Therefore, there is a need for heavier penalties for public figures who dare to commit crimes.* In that regard, the student was able to present a completed argument by stating a clear premise (*public figure are individuals who are seen and imitated by the community*), providing reasons (*From the ways they dress, speak, act, and behave, they are always able to influence the community directly or indirectly. If they make mistakes or crimes, there will be people who become their fanatic fans who will imitate those mistakes. These fanatic fans have always lost their minds to prevent themselves from making the same mistake*), providing evidence to support the reasons (*For example, when some artists in the US who involved in drug use or free sex, their followers do the same without thinking about the consequences of that bigotry*), as well as a conclusion (*Therefore, there is a need for heavier penalties for public figures who dare to commit crimes*). There were 15 students (20.3%) who presented this type of argument. However, there are no students presented the fourth type of argument (subordinative complex argument) at all. The subordinative complex argument is an argument that consists of premises elaborated by layer after layer of other arguments, and this continues to be done until a major argument seems clear and certain. In sum, most students are only able to provide two or more premises without providing enough reasons and pieces of evidence required to achieve a standard argument.

In addition, there were ten logical fallacies that occurred in students' arguments during the oral discussion. 1) Appeal to fear. This is a logical fallacy by showing a frightening reason, such as *public figures must be given a deterrent effect with heavier penalties, if not, then they will indirectly influence their fans, especially the younger generation to make the same mistakes or crimes.* At this point, the student tried to convince her listeners and opponents by displaying frightening reasons (*they will indirectly influence their fans*). Overall, there were 13 (14.1%) occurrences of this logical fallacy presented by 10 students. 2) Appeal to pity. This is a logical fallacy by bringing feelings and emotions in arguments, such as *public figures have been trying to provide their best services through their work, it's a pity if they have to receive a tougher penalty just because they are artists.* At this point, the student tried to convey arguments by prioritizing feelings and emotions (*it's a pity if they have to receive a tougher*) rather than logical reasons. There were 16 (17.4%) occurrences of this logical fallacy made by 14 students. 3) Appeal to the bandwagon. This is a logical fallacy by stating opinions trusted

by most people, such as *we all know that women cannot be suitable to be public leaders because they always prioritize feelings rather than thoughts*. At this point, the student tried to convince the listener by bringing stories or opinions (*women always prioritize feelings rather than thoughts*) trusted by most people so far, and without giving additional reasons, but there is no guarantee that the crowd's beliefs must be true. A total of 7 (7.6%) occurrences of this logical fallacy made by 5 students.

4) Personal attack. This is a logical fallacy by attacking the characters of a person, such as *how could Vidra agree with our topic, she likes to watch gossip programs about artists, her style also imitated the artists, she even wants to be an artist*. At this point, the student tried to attack the characters and behaviors of the opponents (*her style also imitated the artists, she even wants to be an artist*) to convince the listener that what the opponent says is wrong, and even the student discussed something that was not relevant to the topic being discussed. There was only 1 (1.1%) occurrence of this logical fallacy in students' oral discussion.

5) Pointing to another wrong. This is a logical fallacy by declaring the opponent's mistake, such as *I can take examples of this from myself, right? Those from the opponent group also bring their personal example*. At this point, the student tried to convince the listeners that the statement they conveyed was true because their opponents also do or declare the same thing (*those from the opponent group also bring their personal example*). There were 4 (4.4%) occurrences of this logical fallacy stated by 4 students during the discussion.

6) Circular reasoning. This is a logical fallacy by spinning the reasons without useful information, such as *if the public figures are punished with a heavier sentence, then they will not commit a crime at all or repeat the same mistake because of those public figures aware of the heavier sentences*. At this point, the student tried to explain the premise of the argument with reasons that spin in the absence of useful information.

7) Hasty generalization. This is a logical fallacy by taking small examples and served them as justification in arguments, such as *all public figures are role models, and every role model must have received proper education, an orderly wise, and caring attitude in acting and speaking*. At this point, the student tried to present their arguments by taking small examples that they knew and served as general justifications (*every role model must have received proper education*) for their arguments, even though not all were the same. There were 24 (26.1%) occurrences of this logical fallacy presented by 20 students, and this was the most common (dominant) fallacy that occurred in students' oral discussion.

8) Questionable statistics. This is a logical fallacy by mentioning data from a certain place or time which is not recognized by listeners, such as *my friend copied whatever Ariel Peterpan did because he was too fond of him, including following how to dress, haircut, and even how to interact with other people, therefore public figures must be warned with the threat of a heavier sentence than ordinary people*. At this point, the student mentioned data or examples from their daily lives that occurred at a certain place or time (*my friend copied whatever Ariel Peterpan did because he was too fond of him*), and not everyone could get access to ensure its truth scientifically. A total of 13 (14.1%) occurrences of this logical fallacy presented by 12 students.

9) Slippery Slope. This is a logical fallacy by predicting something else can be happened if something is done at this time, such as *if we give more severe punishment to public figure because of their mistakes, then no one wants to be a public figure in the future such as singers or film actors, if there are no public figures then we won't have entertainment at all, and if all that happens then human life will end*. At this point, the student tried to convey arguments by giving incomplete explanations, or

convey that if one thing is done, then other bad things will happen (*no one wants to be a public figure in the future such as singers or film actors, if there are no public figures then we won't have entertainment at all, and if all that happens then human life will end*). There were 8 (8.7%) occurrences of this logical fallacy presented by 6 students in oral discussions. In brief, several logical fallacies became particular problems that students still encountered when they presented their arguments in the discussion, and hasty generalization was the most common (dominant) logical fallacy occurred in students' oral discussion.

From the interview, it revealed that three major causes of why students' most students failed to present a standard argument and why logical fallacies occurred during their discussion, including lack of understanding to create standard arguments and avoid logical fallacies, lack of vocabularies, and nervousness/anxiety. Most students asserted that they did not know how to create the standard argument (coordinative argument) which consists of a combination of a premise, explanations, and proofs to form a conclusion as well as did not know how to avoid logical fallacies. This is understandable since they did not get the argumentative course materials fully at the beginning of the fourth semester. Reznitskaya et al., (2001) confirmed that many problems encountered by students in making arguments are caused by their lack of knowledge of what an argument requires, particularly in developing their own position.

Furthermore, some students highlighted their difficulties in understanding or applying new vocabularies in argumentation. For example, it is challenging for students to understand terms or words related to politics, economics, and other fields in a particular discussion due to the unfamiliarity of the terms. This finding is in line with the study conducted by (Aravind & Rajasekaran, 2019; Rodriguez & Sadowki, 2000), in which they argue that accomplishing students will always have an adequate vocabulary, and assume that vocabulary is an essential part in the complete speech arrangement and writing composition.

In addition, it is also found that nervousness or anxiety was also part of students' problem in making arguments and avoiding logical fallacy. Based on the interview result, several students stated that they were feeling nervous due to fear of making mistakes and feeling rushed in creating and delivering their argumentative speech. This finding is in line with the finding of a study conducted by Muhammad, (2018) about EFL junior high school students' difficulties in speech production, he found that anxiety or nervousness is identified as one of the causes of students' speaking difficulties. Moreover, this psychological feeling significantly affects negatively the students' speaking performance (Haidara, 2016).

Conclusion

Based on the findings, it is confirmed that the students' ability to present arguments varies with the dominant label in the "non-standard argument" category. This means that most students are only able to provide two or more premises without providing enough reasons and pieces of evidence required to achieve a standard argument. In addition, students still made several logical fallacies when they presented their arguments, and hasty generalization was the most common (dominant) logical fallacy occurred in their oral discussion. Besides, there are three major causes of those phenomena including lack of understanding to create standard arguments and avoid logical fallacies, lack of vocabulary, and nervousness/anxiety. Consequently, teaching about the structure of an argument must be carried out carefully. Lecturers should provide exposures on how to structure the logical arguments and avoid logical fallacies.

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