Toulmin Model Based Argument Diagnosing: Constructing and Evaluating in The Argumention Essay in Indonesia Efl Text Book

Habib Syukri Nasution English Dept. of Fakultas Keguruan dan Ilmu Pendidikan Universitas Muhammadiyah Sumatera Utara, Indonesia

E-mail: habibsyukri@umsu.ac.id

ABSTRACT

This research aims to describe and explain Toulmin's argument patterns in the 2017 revised edition of the 2017 High School English textbook for class XI curriculum. This type of research is qualitative research using document analysis methods. The subject of this research is the 2017 revised edition of the 2013 curriculum 2013 high school English textbook. This book was written by Herman Benyamin. The object of this research is Toulmin's argument pattern. Analysis of the arguments in the discourse in the book is based on Toulmin's arguments whose components consist of Claim (C), Ground (G), Warrant (W), Backing (B), Qualifier (Q), and Rebuttal (R). After finding a pattern in each discourse, a conclusion is given. The results of this research show that this book contains patterns formed in discourse. From the results of Toulmin's argument analysis, in topic 1, patterns C (10%), RC (10%), GC (10), GQC (10%), GWC were found. (10%), GWBC (10%), GWOC (10%), GWRC (10%), GWBOC (10), GWBORC (10%), Topic 2 is in C (14.3%), RC (0), GC (14.3%), GQC (14.3%), GWC (14.3%), GWBC (14.3%), GWQC (14.3%), GWRC (0%), GWBQC (14.3%), GWBQRC (0%). Discourse that does not have an argument is 20% and there are arguments that are not good according to Toulmin's argument. According to Toulmin, a good argument from this book is 85%, meaning that the presentation of this argument in the 2013 edition of the high school English textbook issued by the government can be said to be very good

Keyword: Toulmin's argument, English textbook

Corresponding Author: Habib Syukri,

Universitas Muhammadiyah Sumatera Utara, Indonesia

Email: habibsyukri@umsu.ac.id



1. INTRODUCTION

The goal of education is to actively help students realize their potential for religious and spiritual strength, self-control, personality, intelligence, noble character, and skills needed by themselves and society. Education is a conscious and planned effort to create a learning environment and learning process (UU SISDIKNAS No.20,2003). The educational process refers to Permendikbud 22 of 2016.

According to *Permendikbud 22 of 2016* (Process Standards), the learning process is interactive, motivating, enjoyable, and challenging, encouraging students to participate actively and providing enough room for initiative, creativity, and independence by students' abilities, interests, and physical and psychological development. Thus, lesson design, execution of the learning process, and Assessment of the learning process are all done in schools to maximize the efficacy and efficiency of acquiring graduation competencies.

The government is improving the quality of education by developing a curriculum. The curriculum is an aspect that plays an essential role in education. Almost all schools have implemented the independent curriculum, but in line with the passing of government regulations regarding the education system,

improvements have been made to the independent curriculum. Implementing the 2013 curriculum improvements is also equipped with student books and teach guides provided by the government. Schools implementing the independent curriculum improvements require teachers to use textbooks published by the government and used in classroom learning.

Marisa (2021:26) stated that the independent curriculum is a form of optimizing educational development that is adapted to various developments occurring in society. Fitriyah & wardani (2022:15) stated that the merdeka curriculum was designed as a manifestation of the ideals proclaimed by Ki Hajar Dewantara, that through an independent learning process by giving students the freedom to learn independently and creatively, an independent character will also be formed, One of them is freedom of opinion so that students are able and understand critical thinking in expressing opinions.

S. Erduran and Jimenez-Aleixandre (2007:68) stated that argumentation is a structured element that is used to solve an issue by applying argumentation model statements, Simon and Maloney (2007:79) stated that some of these tactics, such as reasoning, assessment, and justification, can take the shape of a sequence or arrangement.

Khun D (2019:102) stated that argumentative skills are emphasized as a teaching objective at all grade levels and across the curriculum to promote critical thinking. According to Redhana (2013:115) stated that ritical thinking abilities play an important strategic function in the sphere of education. Therefore, learning refers to higher-order thinking skills, namely critical thinking skills. One way to improve students' necessary thinking skills is by arguing Argumentation Toulmin instrumented the data collected to analyze the student's argumentation. Stephen Toulmin, a philosopher, created the Toulmin method, essentially a framework for deconstructing arguments. But because the analytical components are so distinct and organized, many teachers now require students to use the Toulmin components when writing argumentative essays. A textbook is one of the books that can be developed from Toulmin's argument.

Textbooks are the primary source of learning to achieve essential and core competencies. The Arguments contained in the learning that used as student learning resources are not all appropriate. They are declared appropriate by the Ministry of Education and Culture for use in educational units (*Permendikbud No. 8 of 2016*). Textbooks/lesson books are the main operational tools for implementing the curriculum. Reed et al. (1998:30) stated that textbook is primarily used as a teaching tool in the classroom. The textbook is always used as a learning resource by the instructor to aid in the teaching and learning process. Furthermore, the textbook aids and encourages the achievement of the learning objectives. The instructor can then adjust and change the textbook materials to meet the needs of the students.

Therefore, textbooks are one of the leading learning resources for students containing elements that can improve students' critical thinking skills. This is by the demands of the curriculum, which emphasizes that students have high-level thinking skills (creative thinking and critical thinking)

2. RESEARCH METHOD

This research is qualitative research using the document analysis method (Sugiyono,2009). The documents analyzed in this study were the revised edition of the 2017 SMA class XI curriculum 2013 English textbook. This book was written by Herman Benyamin and published by Grafindo Media Primary in Bandung. The ISBN for this book is 978-602-01-1901-4. The subject of this study will the 2013 edition of high school English textbooks for class XI, the 2017 edition. The object of this study was Toulmin's argument patterns contained in the book. Data collection in this study was carried out in the following way:

- Observe the book by reading every discourse contained in the book.
 Discourse is a series of related sentences so that a harmonious meaning is formed between the sentences. In this way, a series of sentences cannot be called discourse if there is no harmony in importance, and vice versa. If a series of sentences form a discourse, because of this sequence, a harmonious purpose will be included (Alwi et al., 2000).
- 2. Every discourse that is read is then entered into aspects of Toulmin's argumentation with the help of an analysis form document.
- 3. Results in the form are validated the results are checked for the reliability of the Assessment with the percentage of agreements.

The reliability of the Assessment by Data analysis in this study was carried out in the following way.

- 1. Arranging a pattern from the aspects of the argumentation.
- 2. Each discourse pattern is described again, and the truth of its content is compared with other literature to

obtain more accurate results.

- 3. Each pattern in the discourse is grouped.
- 4. The group of discourse patterns obtained in each discourse is then made a percentage of the group of discourse patterns in each Topic.
- 5. Determine the discourse pattern, including arguments and non-arguments, based on Toulmin's arguments.
- 6. Determine argumentative discourse, including arguments good and bad, based on Toulmin's argument. The results are expressed in per cent form.
- 7. Determine the category of book quality using general steps from Sugiyono (2017) by finding the percentage of all Toulmin's arguments that are good in the book.

Based on the instrument used, the percentage of each discourse pattern obtained from the results of Toulmin's argumentation analysis on the Topic is obtained as follows.

Toulmin on Topic =
$$\begin{bmatrix} a \\ --- \\ b \end{bmatrix}$$
 x 100%

The number of each discourse pattern from the results of the argumentation analysis Information:

- a = Discourse patterns from the results of Toulmin's argumentation analysis on the topic
- b = Total number of discourse patterns from the results of Toulmin's argumentation analysis of the Topic

The percentage of the number of good Toulmin's arguments in the book is obtained as follows Toulmin's arguments are good in the book = x 100 %

Information:

- c = total number of good arguments
- d = total number of discourse patterns from the results of Toulmin's argumentation analysis in the book

 The steps that need to be considered in making a book quality assessment category are as follows:

The steps that need to be considered in making a book quanty assessment category are as follows:

- 1) make 5 categories (number of intervals): not good, not good, pretty good, good, and very good,
- 2) determine the lowest and highest values,
- 3) determine the value of the interval level (Sugiyono, 2017).

Lowest value = 0 Highest value = 100

3. RESULTS AND DISCUSSION

Globalization era where English plays a role in the process of communication and delivery of information. The English language is considered to have cultural and linguistic values that can be a solution to facing various limitations in today's global world.

English language and literature is an important subject for SMA/MA/SMK/MAK students because English is a medium for understanding science as well as a means of interaction and expression. In language learning, language knowledge and skills related to everyday life are studied, both orally and in writing, for formal and non-formal activities.

This book contains materials and learning processes related to English language and literature, namely interaction texts related to suggestions and offers, interaction texts related to opinions and thoughts, special texts in the form of official invitations, exposition texts related to actual issues, interaction texts on information about conditions/actions /activity/event without mentioning the culprit, special text in the form of a personal letter, information interaction text related to causality, explanation text, and song lyric text. The materials are presented in an interesting way so that students are more enthusiastic about learning English.

The learning material presented in this book has been adapted to the 2013 Curriculum (*Permendikud RI No. 24 of 2016*). Presentation of learning material is also equipped with creative enrichment, innovative, contextual and in accordance with the material, as well as the concepts being studied. Thus, students are expected to be able to develop productivity insights, life skills, curiosity and a desire to learn further.

This English Book 2 for SMA/MA/SMK/MAK Class XI Compulsory Group is laid out in an attractive format and is supported by the use of simple language. In addition, this book is equipped with activities and practice questions to train students to develop thinking power, think critically and logically, dare to express opinions, and be creative in language.

Discussion

This study refers to Toulmin's argument. The results of the research are described and included patterns formed in each discourse. This analysis was carried out on English material for SMA class XI in the 2013 curriculum in 2017. There were 2 topics analyzed in the English material for SMA class XI in the 2013 curriculum, namely: 1) A Ten Speaks: The Pros and Cons of Facebook, 2) Why Global Warmin Needs to Stop.

The validation of Toulmin's argumentation product in the 2017 curriculum 2013 SMA class XI English book was carried out by 1 researcher. There are 29 aspects in product validation that are assessed by experts. In the first topic, "A Ten Speaks: The Pros and Cons of Facebook" there are 14 aspects and the second topic, "Why Global Warming Needs to Stop" has 15 aspects.

The results of the topic validation are used as a reference in making the results and discussion in this study. Based on the topic validation reference carried out by ,the researcher and after being analyzed again, the results of the discourse analysis are as follows.

- 1). On the topic "A Ten Speaks: The Pros and Cons of Facebook" there are 10 aspects consisting of 1 C, 1 RC, 1 GC, 1 GQC, 1 GWC, 1 GWBC, 1 GWQC, 1 GWRC, 1 GWBQC. Judging from the analysis on this topic, it includes Toulmin's argument because it fulfills the requirements of Toulmin's argument which has 6 complete elements.
- 2). On the topic "Why Global Warming Needs to Stop" there are 6 aspects consisting of 1 C, 1 GC, 1 GQC, 1 GWC, 1 GWBC, 1 GWBQC. Judging from the analysis on this topic, it is not an argument because it only consists of 5 toulmin elements and there is no rebuttal, so it can be called not an argument. because discourse can be said to be an argument if it has complete toulmin elements, namely 6 elements, and if only one element is lacking, it cannot be said to be an argument. The overall results are presented in tabular form

TPC	С		RC		GC		GQC		GWC		GWBC		GWQC		GWR C		GWBQ C		GWB QRC		Т
	Т	%	Т	%	Т	%	Т	%	Т	%	Т	%	T	%	T	%	T	%	Т	%	
1	1	10	1	10	1	10	1	10	1	10	1	10	1	10	1	10	1	10	1	10	10
2	1	14,3	0	0	1	14,3	1	14,3	1	14,3	1	14,3	1	14,3	0	0	1	14,3	0	0	7
Т	2	24,3	1	10	2	24,3	2	24,3	2	24,3	2	24,3	2	24,3	1	10	2	24,3	1	10	17

Tabel 1. Toulmin's Argument Analysis

Information:

TPC : Topic

TPC 1 : A Ten Speaks: The Pros and Cons of Facebook

TPC 2 : Why Global Warmin Needs to Stop

T : Total C : Claim

GWC : Ground, Warrant, and Claim

GWBC : Ground, Warrant, Backing, and Claim GWQC : Ground, Warrant, Qualifier, and Claim GWRC :

Ground, Warrant, Rebuttal, and Claim

GWBQC: Ground, Warrant, Backing, Qualifier, and Claim

You can see the description according to the toulmin elements, as follows: On the first topic, namely "A Ten Speaks: The Pros and Cons of Facebook"

- 1. Everything in the world has good and bad aspects (claim)
- 2. People of all ages can chat with their friends and family from all around the world for a price call. Facebook becomes a platform upon which teenagers can express their feelings and voice ther opinions (ground)
- 3. In this social media, they know that they will be heard, if not by adults, at least by their peers (Warrant)
- 4. This concept, for me personally, is difficult to fully grasp. I get it, I understand it, I know that some

- people just need to feel loved and cared about, but I'd prefer face-to face contact than virtual communication and relation (rebuttal)
- 5. have been to multiple seminars and workshops through school, been forced to fill out a variety of surveys and questionnaires, and listened to endless amount of case studies all concerning the topic (backing)
- 6. While I personally have never been affected by cyber bully or online stalkers, I am fully aware how detrimental the time spent in cyberspace can be (qualifier)
- 7. Parents actually do have points when moaning about their children spending too much time on Facebook instead of doing their homework or getting outside (backing)
- 8. A balance between work and play is what a healthy lifestyle consists of (ground
- 9. And when this balance is upset by countless hours spent on Facebooks, the situation rarely ends well (backing)
- 10. I don't see social networking, in particular Facebook, as an entirely bad thing or a completely good thing, but simply a combination of the two (warrant)
- 11. As human beings we can't help but succumb to the latest trend, and I'll admit to occasionally overdoing it and sacrificing valuable time that could be spent on study or exercise, but we're not completely to blame (rebuttal).

Based on the results obtained in the analysis of the book, a discussion is made on topics that have problems that need to be discussed. The explanation is as follows. 1) A Ten Speaks: The Pros and Cons of Facebook, 2) Why Global Warmin Needs to Stop.

On the first topic, namely: "A Ten Speaks: The Pros and Cons of Facebook", Incomplete explanation found on *claim*, then it needs to be added to each people, so the sentence becomes everything in the world has good and bad aspects to each people. Incomplete words found between warrant and rebuttal it is necessary to add a conjunction, namely but so the sentence becomes In this social media, they know that they will be heard, if not by adults, at least by their peers but this concept, for me personally, is difficult to fully grasp and then I get it, I understand it, I know that some people just need to feel loved and cared about, but I'd prefer face-to face contact than virtual communication and relation. Incomplete explanation found on backing, then need to add words however so the sentence becomes have been tmultiple seminars and workshops through school however been forced to fill out a variety of surveys and questionnaires, and listened to endless amount of case studies all concerning the topic.

On the second topic "Why Global Warmin Needs to Stop".

- 1. Global warming affects global problems, It also causes various diseases to spread faster (claim)
- 2. Global warming needs to stop for some reasons (warrant)
- 3. First, the greenhouse effect causes the rising global temperature (backing)
- 4. Earth's atmosphere behaves like a gigantic green- house, though it traps heat a different way. Gases high in the atmosphere, such as carbon dioxide and methane, behave like a giant piece of curved glass wrapped right round the planet. The Sun's rays (mostly visible light and short-wavelength, high-energy ultraviolet radiation) pass straight through this greenhouse gas and warm up Earth (ground)
- 5. Second, global warming makes our fresh water shortages and a major problem (backing)
- 6. The rising temperature affects that each year the glaciers are getting smaller and smaller. Over 30% of the earth's fresh water comes from glaciers (ground)
- 7. Each year in retrospect, there is less and less water from these glaciers because they are melting from global warming, So from this we can see how if global warming keeps on getting worse and worse, we will have no water left at all (qualifier)
- 8. Third, the rising temperature doesn't just make the land hotter and the shortage of the fresh water but it affects the sea, which is an important commodity. It infects animals and sea life that we eat with parasites that come from the warmer sea temperatures. These rising temperatures have caused oysters to be infected with a certain parasite that makes humans sick (backing)
- 9. Global Warming needs to stop because we will reap what we sow and we will have some very dire consequences on our hands (claims)
- 10. We might sick and we might deplete our water resources. This is why we need to stop global warming now (warrant).

On the second topic, namely "Why Global Warmin Needs to Stop" found an incomplete explanation between backing and ground then it is necessary to add conjunctions, namely starting from, as well as, and also, so the sentence becomes First, the greenhouse effect causes the rising global temperature starting from earth's atmosphere behaves like a gigantic green-house, though it traps heat a different way as

well as gases high in the atmosphere, such as carbon dioxide and methane, behave like a giant piece of curved glass wrapped right round the planet. And also the Sun's rays (mostly visible light and short-wavelength, high-energy ultraviolet radiation) pass straight through this greenhouse gas and warm up Earth.

A good argument according to Toulmin's argument from this book is 85%, meaning that the presentation of this argument in the 2013 edition of the 2013 edition of the high school English textbook issued by the government can be said to be very good, but there are a number of things that still need to be considered such as there are arguments that are not good according to the arguments Toulmin.

4. CONCLUSION

After collecting the data and analyzing the result of the research, the researcher drew some conclusion and suggestion in research on Analysis of Toulmin's Argument Patterns in Class XI High School English Textbooks. From the study of Toulmin's Argument Pattern Analysis in Class XI High School English Textbooks, the following conclusions are obtained:

- (1) Patterns formed in discourse from the analysis results Toulmin's argument is that on topic 1 a pattern is found C (10%), RC (10%), GC (10), GQC (10%), GWC (10%), GWBC (10%), GWQC (10%), GWRC (10%), GWBQC (10), GWBQRC (10%), Topic 2 found on C (14,3%), RC (0%), GC (14,3%), GQC (14,3%), GWC (14,3%), GWBC (14,3%), GWQC (14,3%), GWRC (0%), GWBQC (14,3%), GWBQRC (0%).
- (2) Discourse that is not an argument by 20% and there are arguments that are not good according to the arguments Toulmin.
- (3) A good argument according to Toulmin's argument from this book is 85%, meaning that the presentation of this argument in the 2013 edition of the 2013 edition of the high school English textbook issued by the government can be said to be very good.

Considering the result of the research, the research would like to give some suggestion as follows.

- 1. For the English teacher: Teachers can use the results of this book analysis as material for consideration in selecting books that can improve students' critical thinking skills, and also should look for sources other than books teacher's handbook as an additional learning media
- 2. For the School: The Schools should provide recommendations for high school English textbooks for class XI that reflect Toulmin's arguments used by teachers and students.
- 3. For the Government: The government can review and update books again regarding material in class XI high school English textbooks in improving critical thinking skills
- 4. For the Other Author: The author of the book must consider Toulmin's argument in presenting this book as input in revising the textbook Next grade XI high school English.

REFERENCES

- Alwi, H., Dardjowodjojo, S., Lapoliwa, H., & Moeliono, A.M. 2000. Indonesian Standard Grammar (Third Edition). Jakarta: Balai Pustaka.
- Andriessen, J. (2006). Arguing to learn. In R. K. Sawyer (Ed.), Cambridge handbook of the learning sciences. New York: Cambridge University Press.
- Aull, L. (2015). First-year university writing: A corpus-based study with implications for pedagogy. Springer. https://doi.org/10.1057/9781137350466.
- Aull, L. L., & Lancaster, Z. (2014). Linguistic markers of stance in early and advanced academic writing: A corpus-based comparison. Written Communication, 31, 151–183. https://doi.org/10.1177/0741088314527055
- Bastardi, A., Uhlmann, E. L., & Ross, L. (2011). Wishful thinking: Belief, desire, and the motivated Evaluation of scientific evidence. Psychological Science, 22, 731–732. doi:10.1177/0956797611406447.
- Boscolo, P., Arfé, B., & Quarisa, M. (2007). Improving the quality of students' academic writing: An intervention study. Studies in Higher Education, 32, 419–438. https://doi.org/10.1080/03075070701476092.
- Clark, J. K., Wegener, D. T., &Fabrigar, L. R. (2008b). Attitude accessibility and message processing: The moderating role of message position.

- Dong, Y. R. (1996). Learning how to use citations for knowledge transformation: Non-native doctoral students' dissertation writing in science. Research in the Teaching of English, 30, 428–457.
- Duschl, R. A., & Osborne, J. (2002). Supporting and promoting argumentation discourse in science education. Studies in Science Education, 38(1), 39–72. https://doi.org/10.1080/03057260208560187.
- Erduran, S., and M. Jimenez-Aleixandre. 2007. International Journal of Science Education Argumentation in Science Education: Perspectives from Classroom-Based Research.
- Fernando, W. (2018). Show me your true colours: Scaffolding formative academic literacy assessment through an online learning platform. Assessing Writing, 36, 63–76. https://doi.org/10.1016/j.asw.2018.03.005.
- Fitriyyah; Roudhotul. (2021). Process students' mathematical arguments in working on open ended questions based on gender.
- Graves, Kathleen, 2000, Designing Language Courses: A Guide for Teachers, Canada: Heinle & Heinle Publishers.
- Halpern, D.F. (1989). Thought and knowledge: An introduction to critical thinking.

Hillsdale, NJ: Erlbaum.

- Suartha, Setiawan, & Sudiatmika. 2020. Toulmin's Argument Pattern in the Learning Process IPA Junior high school. Scientific Journal of Education and Learning.
- Hemberger, L., Kuhn, D., Matos, F., & Shi, Y. (2017). A dialogic path to evidence- based argumentative writing. Journal of the Learning Sciences, 26(4), 575-607.
- Hyytinen, H., Löfström, E., & Lindblom-Ylänne, S. (2017). Challenges in argumentation and paraphrasing among beginning students in educational sciences. Scandinavian Journal of Educational Research, 61, 411–429. https://doi.org/10.1080/00313831.2016.1147072.
- JimeÂnez Aleixandre, M.P., Pereiro Munoz, C., & Aznar Cuadrado, V. (1998, November). Promoting reasoning and argument about environmental issues. Research in Didaktik of Biology. Proceedings of the Second Conference of European Researchers in Didaktik of Biology. University of GoÈteborg, Sweden
- Johnson, R.H., & Blair, J.A. (1991). Contexts of informal reasoning: commentary. In Voss, J.F., Perkins, D.N., & Segal, J.W. (Eds.), Informal reasoning and education (pp. 131-150). Hillsdale, NJ: Erlbaum.
- Kat Cooper, A., & Oliver-Hoyo, M. T. (2016). Argument construction in understanding noncovalent interactions: A comparison of two argumentation frameworks. Chemistry Education Research and Practice, 17(4), 1006–1018. https://doi.org/10.1039/C6RP00109B.
- Kuhn, D. (1991). The skills of argument. Cambridge, England: Cambridge University Press.
- Maharani, Anak, A.P. (2019). "Application of Problem Based Learning with Lesson Study Cycles to Improve Ability to Write Argumentative Essays". Journal of Linguistics and Literature. 11(1). 36-44.
- Means, L.M., & Voss, J.F. (1996). Who reasons well? Two studies of informal reasoning among children of different grade, ability, and knowledge levels. Cognition and Instruction, 14(2), 139-178.
- Miekley, Joshua, 2005, "ESL Textbook Evaluation Checklist. The Reading Matrix. 5(2), 1-9" Online Journal (www.readingmatrix.com/)Retrieved on October 20th, 2016.
- Mudzakir, 2003, "Paper of the National Seminar on Arabic Language Teaching", JPBA FPBS Arabic Language Education Program UPI
- Mukundan, Jayakaran, 2012, "Evaluative Criteria of an English Language Textbook Evaluation Checklist", Journal of Language Teaching and Research-Universiti Putra Malaysia, Vol. 3, No. 6, pp. 1128-1134.
- Patronis, T., Potari, D., & Spiliotopoulou, V. (1999). Students' argumentation in decisionmaking on a socioscientiFIc issue: Implications for teaching.
- International Journal of Science Education, 21, 745-754.
- Perkins, D.N., Farady, M., & Bushey, B. (1991). Everyday reasoning and the roots of intelligence. In Voss, J.F., Perkins, D.N., & Segal, J.W. (Eds.), Informal reasoning and education (pp. 83-105). Hillsdale: Erlbaum.
- Rakovi_c, M., Marzouk, Z., Chang, D., & Winne, P. H. (2019). Towards knowledge-transforming in writing argumentative essays from multiple sources: A methodological approach. In Companion proceedings 9th international conference on learning analytics & knowledge (LAK19). The Society for Learning Analytics Research (SoLAR).
- Ranganath, K. A., Spellman, B. A., & Joy-Gaba, J. A. (2010). Cognitive "Category- Based Induction" research and social "Persuasion" research are each about what makes arguments believable: A tale of two literatures. Perspectives on Psychological Science, 5, 115–122. doi:10.1177/1745691610361604.
- Redhana, I.W. 2013. Problem-Based Learning Models for Improving Problem Solving Skills and Critical Thinking. Journal of Education and Teaching. Volume 46, No. 46. Hal.76-86.
- Richards, Jack. C, 2001, The Role of Textbooks in a Language Program. http://www.professorjackrichards.com (accessed: 27 October 2016).

- Rimbun, and Nesi (2021). Toulmin's Argument as a Basic Reference for Evaluating Construction of Text Arguments in Indonesian Language Test Instruments. Universitas Katolik Indonesia Santu Paulus Ruteng. https://jurnal.unikastpaulus.ac.id/index.php/je.
- Simon, Shirley, and Jane Maloney. 2007. "Activities for Promoting Small-Group Discussion and Argumentation." School Science Review 88(324): 49
- Stanovich, K. E., & West, R. F. (1997). Reasoning independently of prior belief and individual differences in actively open-minded thinking. Journal of Educational Psychology, 89, 342–357. doi:10.1037//0022-0663.89.2.342.
- Tardy, C. M. (2005). "It's like a story": Rhetorical knowledge development in advanced academic literacy. Journal of English for Academic Purposes, 4, 325–338. https://doi.org/10.1016/j.jeap.2005.07.005
- Toulmin, S. (1958). The uses of argument. Cambridge, England: Cambridge University Press.
- Toulmin, S. E. (2003). Uses of argument (Updated edition). Cambridge, UK: Cambridge University Press. (Original work published 1958).
- Toulmin, Stephen, Richard Rieke, and Allan Janik. 1979/1984. *An Introduction to Reasoning*. New York: Macmillan Publishing Co.
- Voss, J.F., & Means, M.L. (1991). Learning to reason via instruction in argumentation. Learning and Instruction, 1, 337-350.
- Widiastiningsih, dkk. (2022). "Development of E-Modules based on Toulmin's Argumentation Patterns to Improve Student Arguments on Acid-Base Material". Journal of Science Education. https://doi.org/10.33369/pendipa.6.2.410-414
- Widyastiti, dkk. (2020). "the analysis of Toulmin's argument patterns in class XI high school chemistry textbooks". Mathematics and Science Forum: Journal of Mathematics, Science, and The learning. 14 (2).