

## **EFL STUDENTS' ATTITUDE TOWARDS RESEARCH PAPER WRITING FOR PUBLICATION**

Lia Nabila, Hartono\*, Mega Mulianing Maharani, Elok Widiyati,  
Nani Hidayati, Muhamad Rifqi Bakhtiar

*English Education Department, Universitas Islam Sultan Agung, Semarang, Indonesia*

\*Corresponding Author

nabila96@std.ac.id.unissula.com, hartono@unissula.ac.id, megamulianing@unissula.ac.id,  
widiyati@unissula.ac.id, nani@unissula.ac.id, mrifqibakhtiar@unissula.ac.id

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**Abstract:** Many Indonesian undergraduate programs have recently required their students to publish research papers before graduation. However, for some students, this requirement is not easy to meet, especially for students of the English education study program, whose papers must be written in English. This study aims to: 1) describe the attitude of the English education study program students towards English research paper writing for publications, and 2) identify possible factors affecting their attitude. Sixty-five students from the English Education Study Program at three universities in Semarang, Central Java, were conveniently selected to participate in the study as respondents. Data on attitudes were collected using a Likert-type questionnaire and analyzed quantitatively, while data on factors affecting attitudes were collected through interviews and analyzed qualitatively. The results indicate that students have a generally positive attitude, despite facing challenges related to language mastery. The results reveal that students are aware of the potential advantages associated with English research paper writing and publication, such as enhanced knowledge, language mastery, and improved academic performance. However, the findings also reveal that students encounter challenges related to limited vocabulary, grammatical structure, and sentence construction. The implications of the study are presented, and future research directions are outlined.

**Keywords:** EFL students; factors; publication; research papers; writing attitude

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### **INTRODUCTION**

In recent years, many universities, either public or private, have required their students to publish research papers in scientific journals. Postgraduate students are expected to be able to publish in an internationally reputable journal; graduate students are expected to publish in a nationally accredited journal of SINTA 1 or SINTA 2, and the undergraduate students are required to publish in a national journal, either accredited or non-accredited. In general, this policy is good, as in a knowledge-based economy, the quality of research, international publication, and citations are positively correlated to a country's performance (Hartono et al., 2019; Wetter, 2011). Quality research and publication also positively affect the global trust in the country's products, leading to comparative advantages. For universities themselves, the number and quality of publications and citations have become an indicator of scientific activities and reputation (Czellar & Lanarès, 2013; Garcia & Sanz-Menéndez, 2005)

However, writing a research paper for publication is not easy, especially for undergraduate students of English education, who must write their papers in English. Writing has traditionally been considered a challenging and crucial skill (Akhtar et al., 2020). Therefore, it is usually listed

at the end of the spectrum of language skills (Jabali, 2018). It relates to the difficulties students face in copying ideas, compiling them, and comprehending instructions, among other factors (Ceylan, 2019). In writing research papers, Indonesian EFL learners may face problems related to language issues (such as grammar, vocabulary, spelling, coherence), as well as the paper's organization, styles, and citations. The study by Nenotek et al. (2022) identified areas of difficulty in academic writing commonly encountered by Indonesian EFL students, including content, organization, vocabulary, grammar, discourse, and mechanics.

Writing is genuinely viewed as a discovery process, as authors struggle to think, write, and organize their thoughts to find their path (Ismail, 2011). In the context of foreign language learners, writing is seen as the most challenging and complex skill among the four language competencies (Péter, 2002). Students face various challenges when it comes to writing, with linguistics (encompassing language use and vocabulary aspects) posing the biggest challenge. Physiology (content aspect) and cognitive (organization and mechanics aspects) also become big challenges (Pratiwi, 2016).

Research paper writing, as a part of academic writing, differs from general writing in that it follows a precise format, usually referred to as the journal template, employs academic vocabulary, and uses complex phrases. Research papers and academic writing in general must offer a logical argument that meets the intended audience (Aldabbus & Almansouri, 2022). Students must select a topic, provide a background, review previous studies, formulate research questions, design a research method, and present and discuss the findings, implications, and conclusions. Students report, summarize, interpret, and conclude by using appropriate vocabulary and grammar, and avoiding plagiarism. Many students confront significant obstacles to mastering these abilities and, as a result, fail to complete the paper. Additionally, many students stated a high level of problems with their learning activities since they had little experience with academic writing (Lee & Tajino, 2008).

Success in English research paper writing, however, is not determined only by students' topics and language mastery. Several personal factors contribute to the success of the writing task. One of them is the attitude towards writing. Following Herguner and Son (2020), and Hosseini and Pourmandnia (2013), attitude in this study is defined as one's favorable or unfavorable response to the research paper writing task. It is categorized into cognitive, affective or emotional, and behavioral components. The cognitive component of attitudes focuses on the individual's opinions, concepts, or views. The emotional component refers to one's sentiments and emotions towards an item, encompassing feelings such as love, hatred, support, or opposition. The behavioral component consists of a person's behavioral actions or intentions towards an object. Furthermore, Gardner (1983) suggests that attitude is an individual's evaluation of a reference or

object based on their beliefs and opinions. Additionally, he introduced the concept of attitude as a key aspect of motivation in language acquisition. For several years, considerable focus has been placed on L2 learners' attitudes, motivation, principles, and perception of learning and instruction, particularly within the discipline of L2 learning (Gardner & MacIntyre, 1993).

Preferably, having a good attitude toward writing can improve students' writing achievement. Research suggests a link between good attitudes and writing skills (Hashemian & Heidari, 2013). The study found that students with integrative motivation performed better in L2 academic writing than those with instrumental drive. It is commonly acknowledged that students' attitude towards foreign language learning is an essential indicator of success (Getie, 2020). Research also suggests a strong correlation between students' attitudes toward writing and their academic success. Attitude shapes accomplishment rather than accomplishment shaping attitudes (Weinburgh, 2000). Understanding students' attitudes toward language can benefit both teachers and students in the teaching and learning process. As a result, we must evaluate the importance of the emotive realm. Interest, values, and propensity are key features of the emotional domain, which determines most of our attitudes.

A person's attitude is influenced by their values and beliefs, which might influence their decision to engage in a specific activity (McGroarty, 1995). Cabansag (2013) argued that a favorable attitude towards the target learning is crucial. A positive attitude promotes success. Students' writing attitudes are defined as a successful control that causes them to feel joyful or sad during writing activities. Variables impacting diverse attitudes toward writing include education, familial environment, and personal traits (Akaydin & Kurnaz, 2015).

Despite many studies on Indonesian EFL students' attitudes towards writing, those focusing on their attitudes towards research paper writing for publication remain underexplored. Consequently, this study aims to fill the gap by focusing on EFL students' attitudes towards research paper writing for publication. Two research objectives are proposed: 1) to describe the English education students' attitude towards research paper writing for publication, and 2) to identify factors possibly affecting the English education students' attitude towards research paper writing for publication. This study is important because attitude plays a vital role in the success of students' paper writing.

## **METHOD**

### **Research Design**

The research employed a mixed-method research design by collecting both quantitative and qualitative data (Creswell & Creswell, 2018). To meet research objective 1, data on attitudes were collected using a questionnaire and analyzed with descriptive statistics such as mean and standard

deviation. To meet research objective 2, some respondents were interviewed, and the data were analyzed qualitatively.

### **Respondents**

The study's population consisted of students from the English Education study program at three universities in Semarang, Central Java, Indonesia, who were in semester 6. The universities were referred to as University A, B, and C for anonymity. The researchers employed a convenience sampling technique to make the work achievable. With the help of some friends from the universities, the researchers invited the English education students from the three universities to participate in the study. A Google Form link to the questionnaire was then shared through WhatsApp. After two weeks, the researchers received sixty-five questionnaires: twenty-five from University A, twenty from University B, and twenty from University C. Fifty-three of the respondents were female, and the remaining twelve respondents were male. For the interviews, the researchers conveniently invited four students to participate.

### **Instrument and Data Collection**

The instrument used in this study was adapted from the Writing Attitude Questionnaire developed by Hartono and Arjanggi (2017). It was a Likert-type questionnaire with 15 statements requiring responses on a five-point scale of agreement, ranging from "strongly disagree" (scale 1) to "strongly agree" (scale 5). The scales represented the scores for analysis. Scale 1 refers to score 1, scale 2 to score 2, and so on, with scale 5 referring to score 5. For negative statements, the scores were reversed. The questionnaire was written in Indonesian to avoid misinterpretation. The statements in the questionnaire cover behavioral aspects of attitude (items 1, 4, 5, 8), cognitive (items 2, 3, 6, 7, 9, 10), and emotional (items 11, 12, 13, 14, 15). The validity of the questionnaire was assessed using a product-moment correlation, while the reliability was assessed using Cronbach's Alpha. To identify factors affecting attitudes, the researchers conducted one-on-one interviews regarding writing academic papers for publication.

### **Data Analysis**

The data collected through the questionnaire were analyzed quantitatively using the SPSS application, focusing on descriptive statistics. The interviews were recorded, transcribed, and analyzed qualitatively, focusing on the themes following the thematic analysis of Braun and Clarke (2006).

## **FINDINGS AND DISCUSSION**

### **The EFL Students' Attitude towards Writing Scientific Papers for Publication**

The questionnaire addressed the first research question concerning students' attitudes towards writing research papers for publication from three perspectives: behavioral, cognitive,

and emotional. A mean score below three (3.00) indicates that the respondents have a negative attitude towards writing research papers for publication. In contrast, a mean score above 3.00 indicates that the respondents have a positive attitude. The summary of the descriptive statistics is presented in Table 1. A category of the attitude is added in the column.

Table 1. Descriptive statistics of respondents' attitudes

No	Statements	N	Mean	S.D	Category
1	I am engaged in writing a research paper for publication.	65	3.62	.896	Positive
2	Writing and publishing research papers will help me improve my performance as an undergraduate student.	65	4.17	.741	Positive
3	My ability to write and publish research papers will enable me to expand my network with other researchers.	65	3.32	1.017	Positive
4	I will participate if there is a training on research paper writing for publications.	65	3.72	.976	Positive
5	I will keep trying to write research papers even when I encounter challenges.	65	3.98	.760	Positive
6	Writing and publishing research papers will help me develop my academic performance.	65	3.91	.744	Positive
7	Research papers written in English are more likely to be accepted in scientific journals.	65	3.74	.940	Positive
8	Writing and publishing research papers in English will encourage me to read more extensively.	65	3.94	.846	Positive
9	Writing research papers in English is not easy for me. (R)	65	4.26	.871	Negative
10	I cannot develop my ideas if I have to write scientific papers in English. (R)	65	2.63	1.098	Positive
11	Writing research papers in English is enjoyable.	65	3.48	.812	Positive
12	I will be proud if I can finish writing my English research papers.	65	4.51	.710	Positive
13	I will be proud if my paper is published in a journal.	65	4.66	.567	Positive
14	Honestly, I am not interested in writing research papers in English. (R)	65	2.34	1.079	Positive
15	Thinking of writing and publishing research papers will only make me depressed. (R)	65	1.98	.927	Positive

The results indicate that respondents had a positive attitude towards writing research papers for publication. For positive statements, the mean scores are above three, while for the negative statements, the mean scores are below three. Of the 15 statements, fourteen are positive, and only one statement (no. 9) is negative. The data indicate that, although writing research papers was not easy, respondents could derive many benefits from it. They agreed that writing and publishing scientific papers would help them improve academic performance, build professional networks, enhance their academic skills, and encourage them to read more. They also demonstrated strong motivation to learn writing, as they were willing to keep trying and even joined training if necessary. They experienced the enjoyment and pride of writing when they could finally publish a paper in a scientific journal. While acknowledging that writing a scientific paper was challenging, they believed they would still be able to manage it (as indicated by statements 10 and 15), and remained interested in it (statement 14). Overall, it could be concluded that the

students' attitudes were relatively positive, as almost all responses indicate favorable perceptions of writing scientific articles behaviorally, cognitively, and affectively.

Analyzing data on attitude by grouping statements into behavioral, cognitive, and emotional or affective aspects enables researchers to assess the contribution of each aspect to attitude. Table 2 presents the descriptive statistics of attitude scores, categorized by aspect. The minimal score, maximal score, mean, and standard deviation (SD) are presented.

Table. 2. Descriptive statistics of attitude scores

Aspects	N	Min.	Max.	Mean	S.D
Behavioral	65	10	20	15.26	2.508
Cognitive	65	16	28	22.03	2.318
Affective	65	12	22	16.97	1.828
Valid (listwise)	65				

Based on the aspects, the cognitive aspect gained the highest mean score (22.03), followed by the behavioral and affective aspects. The cognitive component concerns students' beliefs, perceptions, and knowledge. Writing ability would enhance students' performance and facilitate the development of their networking with other researchers. They also believed that papers written in English were more likely to be accepted in journals. These beliefs possibly influenced a person's overall attitude and behavioral response to the subject. The mean score for the behavioral aspect is reported as 15.26. It suggests a positive attitude towards behavioral aspects, such as being willing to learn, participating in training, persevering even when it is difficult, and reading relevant topics. The last one, the mean score for the affective aspect, is 16.97. It suggests a positive attitude toward emotions, such as enjoying writing articles, taking pride in completing and publishing them in international journals.

### Factors Influencing Students' Attitudes in Writing Scientific Papers

The data on the possible factors influencing English education students' attitudes toward research paper writing for publication were collected through interviews. The respondents were identified as R1, R2, R3, and R4. The interviews were recorded and then transcribed. Following the thematic analysis suggested by Braun and Clark (2006), themes were identified and grouped into positive and negative factors.

The data analysis revealed that students recognized the potential advantages of the obligation to write and publish research papers in journals. R1 mentioned that writing scientific papers increased knowledge and improved writing skills. She said, *"I can increase my knowledge and scientific writing skills."* According to her, the obligation to write had compelled students to practice more diligently. Therefore, their language mastery would improve. *"My vocabulary mastery has improved, I think, because when reading journals, I found lots of words that I did not know, and it makes me check the meaning."* Furthermore, R2 mentioned that writing activities had made her feel that she made academic progress. *"I feel very relieved when my draft was*

approved by the supervisor, and I can feel that I have made progress academically. I feel that I gained knowledge about the topic.” R2 also mentioned, the paper she completed could be used in her educational journey. “I can use it to continue my educational journey.” She explained that as the paper was published, her name would always be attached to the paper. Therefore, it could be a kind of portfolio for her.

Writing a paper was not as difficult as writing a *skripsi*. For her R3, she did not have problems with the requirement to write a paper. “For me, writing a paper is much easier than writing a *skripsi*. Literature review and data analysis in a paper, for example, are much simpler than those in a *skripsi*. I prefer writing a paper to a *skripsi*”. For R4, the requirement to write a paper for publication presented both challenges and opportunities. Difficulties in writing were challenges to face, not problems to avoid. “Every time I encounter difficulties in writing, I feel even more challenged. For example, in a journal or whatever, I try to understand what this is. Even though I’m not lying, I definitely felt dizzy because I encountered many words I didn’t know. However, the more I came here, the more I realized my responsibility and that English is really my interest. So, I feel okay.”.

The respondents also expressed some negative aspects which may demotivate them from writing papers for publication. The first and most talked-about factor was language mastery. Vocabulary, complex grammar structure, and effective sentences are the concerns. R1 said, “It is written in English. It makes it more difficult to choose sentences and translate them into English.” R2 also revealed that writing an English scientific paper was a challenging task associated with vocabulary mastery. She said, “Sometimes, I find it difficult to write scientific articles due to my lack of vocabulary mastery.” While emphasizing that the language used in the paper writing had to be grammatically correct, as many readers would read it, R3 was deeply concerned about her grammar. She often found her grammar messy when the ideas were complicated. “My difficulty in writing a research paper in English is that I often miss grammar when the ideas are complex; sometimes my supervisor finds my sentences are really messy,” R3 said.

## Discussion

The data analysis revealed that students from the English education study program demonstrated positive attitudes. Behaviorally, they were engaged in writing, willing to participate in training, to keep trying, and to read more. Cognitively, they believed that writing scientific papers for publications would help them improve writing performance, create networks, and develop academic performance. Although they realized that writing English papers was not easy, they believed they would be able to manage the task.

The findings of the study are similar to those of Setyowati and Sukmawan (2018) which found that Indonesian EFL students mostly have moderate to positive attitudes. The study found

that, despite acknowledging the difficulty of writing, EFL students had no fear of writing and looked forward to doing it. Husnaini and Bukhori (2024) also found that most EFL students have positive beliefs and emotions about English writing. Confirmation of the current research findings also comes from EFL students from other countries. For example, Jabali (2018), in his study of 102 EFL students in Palestine, found that students had a positive attitude towards writing.

The current study also found that language has become a problem when writing research papers for publication. This finding aligns with a study conducted by Pratiwi (2016), who reported that the use of language and vocabulary features was the most significant problem for students. The study by Murshidi (2014) suggests that insufficient competency can be a barrier to academic writing. The results of interviews with some students revealed that the challenges in using language were caused by having to deal with a limited vocabulary, grammatical structure, and the difficulty of choosing the correct sentences. It is similar to the study of Ahmed & Sayed (2022) in Omani Higher Education Institutions. The students have a limited vocabulary and lack complexity, with too few vocabulary items at their disposal.

This study also found that students were aware of the potential advantages associated with English scientific writing, including enhanced knowledge, critical thinking, and language proficiency. It is found that writing is seen as more than just a tool for communication. Writing is also recognized as a process for constructing knowledge. They perceive scientific writing as something that will positively affect their skills and academics. The study conducted by Ismail (2011) reported that writing in English gives students opportunities to engage in critical thinking and inspires them to master academic skills.

The current study has at least two implications. First, EFL students are ready to write scientific papers for publication. Therefore, universities may continue requiring them to do so as it is positive for both students and universities. Research and publication have become important indicators of national accreditation. Second, more practice and training need to be provided for the students. Courses on academic writing should be offered more frequently so that EFL students are better prepared to write high-quality papers.

## **CONCLUSION**

This study reveals that students in English education programs in Indonesia have positive attitudes, despite facing language as a challenge. This research also reveals that students are aware of the potential advantages associated with English scientific writing, including enhanced knowledge and language proficiency, improved academic performance, and the development of professional networks. This research is beneficial because it offers data on the attitudes of undergraduate students in the English education study program toward scientific writing. Additionally, it investigates the potential factors that impact students' attitudes. Nevertheless, it

is important to admit the limitation. The small sample size may limit the generalizability of the findings. Future research needs to consider a more diverse range of respondents.

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#### REFERENCES

- Ahmed, A., & Sayed, E. (2022). Difficulties in academic writing in English as a second/foreign language from the perspective of undergraduate students in higher education institutions in Oman. *Arab World English Journal*, 13(3), 41–53
- Akaydin, Ş., & Kurnaz, H. (2015). Lise öğrencilerine yönelik yazma tutum ölçeği: geçerlik ve güvenilirlik çalışması. *Mustafa Kemal University Journal of Graduate School of Social Sciences*, 12(32), 246–261
- Akhtar, R., Hassan, H., & Saidalvi, A. (2020). *The effects of ESL student's attitude on academic writing apprehensions and academic writing challenges*. March. <https://doi.org/10.37200/IJPR/V24I5/PR2020247>
- Aldabbus, S., & Almansouri, E. (2022). Academic writing difficulties encountered by university EFL learners. *British Journal of English Language Linguistics*, 10(3), 1–11. <https://doi.org/10.37745/bjel.2013/vol10n3111>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp0630a>
- Ceylan, N. O. (2019). Student perceptions of difficulties in second language writing. *Journal of Language and Linguistic Studies*, 15(1), 151–157. <https://doi.org/10.17263/jlls.547683>
- Creswell, J. W., & Creswell, J. D. (2018). Research design: Qualitative, quantitative, and mixed methods approaches. In *Writing Center Talk over Time* (Fifth Edit). <https://doi.org/10.4324/9780429469237-3>
- Czellar, J., & Lanarès, J. (2013). Quality of research: Which underlying values? *Scientometrics*, 95(3), 1003–1021. <https://doi.org/10.1007/s11192-012-0928-x>
- Garcia, C. E., & Sanz-Menéndez, L. (2005). Competition for funding as an indicator of research competitiveness. *Scientometrics*, 64(3), 271–300. <https://doi.org/10.1007/s11192-005-0251-x>
- Gardner, R. C. (1983). Learning another language: A true social psychological experiment. *Journal of Language and Social Psychology*, 2(2-3-4), 219–239. <https://doi.org/10.1177/0261927X8300200209>
- Gardner, R. C., & MacIntyre, P. D. (1993). A student's contributions to second-language learning. Part II: Affective variables. *Language Teaching*, 26(1), 1–11. <https://doi.org/10.1017/S0261444800000045>
- Getie, A. S. (2020). Factors affecting the attitudes of students towards learning English as a foreign language. *Cogent Education*, 7(1). <https://doi.org/10.1080/2331186X.2020.1738184>
- Hartono, & Arjanggih, R. (2017). The attitude of non-English lecturers towards writing academic papers in English. In A. A. Danuwijaya, L. Hakim, & M. Zifana (Eds.), *CONPLIN 10 and ELT TECH 2* (pp. 119-122). UPI Press
- Hartono, H., & Arjanggih, R. (2020). Lecturers' attitude toward and anxiety in writing English academic papers for international publications. *English Review: Journal of English Education*, 9(1), 217–226. <https://doi.org/10.25134/erjee.v9i1.3859>
- Hartono, H., Arjanggih, R., Nugroho, K. Y., & Maerani, I. A. (2019). Lecturers' language problems in writing English papers for international publications. *Journal of Education and*

- Learning (EduLearn)*, 13(2), 239–246. <https://doi.org/10.11591/edulearn.v13i2.11438>
- Hashemian, M., & Heidari, A. (2013). The relationship between L2 learners' motivation/attitude and success in L2 writing. *Procedia - Social and Behavioral Sciences*, 70, 476–489. <https://doi.org/10.1016/j.sbspro.2013.01.085>
- Hergüner, G., & Son, S. B. (2020). The effect of online learning attitudes of university Students on their online learning readiness. *TOJET: The Turkish Online Journal of Educational Technology*, 19(4), 102–110
- Hosseini, S. B., & Pourmandnia, D. (2013). Language Learners' Attitudes and Beliefs : Brief Review of the Related Literature and Frameworks. *International Journal on New Trends in Education and Their Implications*, 4(4), 63–74
- Husnaini, R., & Bukhori, B. (2024). Exploring students' attitudes toward learning writing: A case study at English Education Department of an Islamic University. *Indonesia Journal of English Teaching (IJET)*, 13(2), 127–146. [http://repository.uin-suska.ac.id/80607/%0Ahttp://repository.uin-suska.ac.id/80607/2/THESIS\\_RAHNA\\_HUSNAINI.pdf](http://repository.uin-suska.ac.id/80607/%0Ahttp://repository.uin-suska.ac.id/80607/2/THESIS_RAHNA_HUSNAINI.pdf)
- Ismail, S. A. A. (2011). Exploring students' perceptions of ESL writing. *English Language Teaching*, 4(2), 73. <https://doi.org/10.5539/elt.v4n2p73>
- Jabali, O. (2018). Students' attitudes towards EFL university writing: A case study at An-Najah National University, Palestine. *Heliyon*, 4(11), e00896. <https://doi.org/10.1016/j.heliyon.2018.e00896>
- Lee, N. S., & Tajino, A. (2008). Understanding students' perceptions of difficulty with academic writing for teacher development: A case study of the University of Tokyo Writing Program. *1997*, 1–11
- Murshidi, G. Al. (2014). UAE university male students' interests impact on reading and writing performance and improvement. *English Language Teaching*, 7(9), 57–63. <https://doi.org/10.5539/elt.v7n9p57>
- Nenotek, S. A., Tlonan, Z. A., & Manubulu, H. A. (2022). Exploring university students' difficulties in writing English academic essay. *AL-ISHLAH: Jurnal Pendidikan*, 14(1), 909–920. <https://doi.org/10.35445/alishlah.v14i1.1352>
- Péter. (2002). The Cambridge guide to teaching english to speakers of other languages in R. Carter D. Nunan. *ELT Journal*, 56(1), 87–89. <https://doi.org/10.1093/elt/56.1.87>
- Pratiwi, K. D. (2016). Students' difficulties in writing English: A study at the third-semester students of English education program at University of Bengkulu. *E Journal Universitas Bengkulu*, 1(2), 1–13
- Setyowati, L., & Sukmawan, S. (2018). EFL Indonesian students' attitude toward writing in English. *SSRN Electronic Journal*, 4, 365–378. <https://doi.org/10.2139/ssrn.2898636>
- Weinburgh, M. (2000). Gender, ethnicity and grade level as predictors of middle school students' attitudes toward science. Retrieved from ERIC Database (ED442662)
- Wetter, J. J. (2011). *The Impacts of Research and Development Expenditures: The Relationship between Total Factor Productivity and U.S. Gross Domestic Product Performance*. Springer. <https://doi.org/https://doi.org/10.1007/978-1-4419-7530-0>