

Measuring Self-Efficacy in English for Specific Purposes: A Case Study of Engineering Students

Apriana Diana

Universitas Muhammadiyah Jakarta, South Tangerang Banten, Indonesia

✉ apriana.diana@umj.ac.id

Received: Desember 30, 2024

Revised: January 28, 2025,

Accepted: February 10, 2025

Citation APA Style: Diana, A. (2025). Measuring Self-Efficacy in English for Specific Purposes: A Case Study of Engineering Students. *English Language in Focus (ELIF)*, 7(2), 121–130. <https://doi.org/10.24853/elif.7.2.121-130>

ABSTRACT

This descriptive statistical study aims to assess students' perceptions of their self-efficacy in *English for Specific Purposes* (ESP). The study involved 40 students from the Mechanical Engineering program at the Faculty of Engineering, Universitas Muhammadiyah Jakarta. Data were collected using a 5-point Likert scale questionnaire, adapted and modified from Kosimov (n.d.), and distributed via Google Forms after undergoing face validity assessment. The data were analyzed using simple percentage calculations and presented descriptively. The findings indicate that the majority of students held a positive perception of their self-efficacy in ESP, as evidenced by the highest response rate for the "agree" option (64.8%), followed by "strongly agree" (14.2%). Furthermore, the analysis suggests that most students demonstrated optimism, high self-efficacy, and a strong commitment to excelling in ESP learning relevant to their field of study.

Keywords: English for Specific Purposes (ESP), Self-efficacy, students' perception

ABSTRAK

Penelitian statistik deskriptif ini bertujuan untuk mengukur perspektif mahasiswa terhadap *self-efficacy* mereka dalam mata kuliah *English for Specific Purposes* (ESP). Sebanyak 40 mahasiswa Program Studi Teknik Mesin, Fakultas Teknik, Universitas Muhammadiyah Jakarta, berpartisipasi sebagai responden dalam penelitian ini. Pengumpulan data dilakukan melalui kuesioner skala Likert 5 poin yang diadaptasi dan dimodifikasi dari Kosimov (n.d.), kemudian didistribusikan melalui Google Form setelah melalui validasi *face validity*. Data dianalisis menggunakan perhitungan persentase sederhana dan disajikan secara deskriptif. Hasil analisis menunjukkan bahwa mayoritas mahasiswa memiliki perspektif positif terhadap *self-efficacy* mereka dalam ESP, yang dibuktikan dengan tingginya persentase respons pada pilihan "setuju" (64,8%) dan "sangat setuju" (14,2%). Selain itu, analisis juga mengungkapkan bahwa sebagian besar mahasiswa bersikap optimis, memiliki tingkat *self-efficacy* yang tinggi, serta berupaya maksimal untuk mencapai keberhasilan dalam pembelajaran ESP yang relevan dengan bidang studi mereka.

Kata kunci: Bahasa Inggris untuk tujuan tertentu, Efikasi diri, perspektif mahasiswa

INTRODUCTION

In Indonesia, despite English being a compulsory subject at all levels of education, many students—including those in higher education—still perceive it as a challenging language to acquire. Munisah (2021) noted that most students consider English a daunting subject due to its complexity. Similarly, Makrami (2010) found that university students learning English for Specific Purposes (ESP) often experience anxiety and lack confidence in their ability to master the language, leading to decreased motivation. This aligns with Greene et al. (2004), who argued that students' cognitive engagement in learning is heavily influenced by their self-perception and motivation.

One of the psychological constructs that play a crucial role in students' success in language learning is self-efficacy. Graham (2022) identified self-efficacy as an indirect but essential factor influencing students' performance in learning a foreign language. According to Bandura (1977), self-efficacy refers to an individual's belief in their ability to accomplish specific tasks successfully. His theory suggests that self-efficacy directly affects a learner's effort, self-regulation, and persistence, which empirical studies have linked to positive learning outcomes (Başaran & Cabaroğlu, 2014; Hwang, 2025). In the same vein, Yoon (2022) found that self-efficacy significantly influences academic writing anxiety among English as a Foreign Language (EFL) learners, affecting their ability to develop writing skills effectively.

Linguists widely agree that self-efficacy shapes how learners approach and apply learning strategies when acquiring a second language (Kosimov, 2021). Since English is not a native language for Indonesian students, mastering it requires strategic approaches tailored to individual needs. Coronado-Aliegro (2007)

emphasized that continuous self-assessment enhances students' self-efficacy, reinforcing their belief in their learning potential. Moreover, Esiyok et al. (2024) found that self-directed learning with technology enhances learners' self-efficacy, particularly in ESP settings where students require specialized English proficiency. In other words, self-efficacy plays a pivotal role in how learners employ strategies to improve their language skills, which ultimately impacts their overall success in learning English.

Several studies have explored self-efficacy in English language learning. Genç et al. (2016) conducted a quantitative study examining the self-efficacy beliefs of 210 undergraduate English majors in Turkey. Their findings indicated that students' self-efficacy levels were moderate, with motivation emerging as a key factor in their English learning process. Similarly, Lestari et al. (2019) investigated self-efficacy among Indonesian vocational students learning English. Their study found that students' self-efficacy levels varied (low, moderate, and high) and influenced their learning strategies and goal achievement. These findings are consistent with Al-Harthy (2011), who demonstrated that goal-setting and self-monitoring enhance students' academic performance, thereby strengthening their self-efficacy beliefs.

The concept of self-efficacy was first introduced by Bandura (1977), who identified four primary sources that shape self-efficacy beliefs:

1. Mastery experiences (previous successful experiences)
2. Vicarious experiences (learning through observing role models)
3. Social persuasion (encouragement and feedback from others)
4. Emotional and physiological states (stress, anxiety, and emotional well-being) (Lopez-Garrido, 2023)

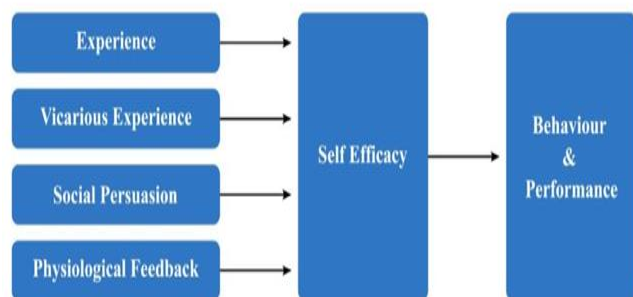


Figure 1. Bandura's Self-Efficacy Model (Adapted from Lopez-Garrido, 2023)

Among these factors, mastery experiences are the most influential. In the context of ESP, students who overcome difficulties in technical or professional English learning are more likely to develop higher self-efficacy (Bailey & Rakushin-Lee, 2021). Meanwhile, social persuasion (such as feedback from instructors) and vicarious experiences (such as role models in their profession) contribute significantly to enhancing students' confidence in using English for professional purposes (Erito, 2023).

Since self-efficacy significantly influences students' language learning outcomes, the effectiveness of English learning depends on its instructional approach. English language learning typically falls into two broad categories: General English (GE) and English for Specific Purposes (ESP). Donesch-Jezo et al. (2012) defined ESP as a branch of language teaching that focuses on specific linguistic and communicative needs related to academic or professional contexts. ESP is divided into two major branches: English for Academic Purposes (EAP): Prepares learners for academic study abroad. English for Occupational/Professional Purposes (EOP/EPP): Equips learners with job-specific English skills

A key feature of ESP instruction is needs analysis, ensuring that teaching materials align with students' career goals (Methvin, 2015). Ideally, ESP is tailored to vocational and university students, with content designed to

support their respective disciplines (Nicolaou & Sevilla-Pavón, 2023).

To effectively teach ESP, instructors must possess fundamental knowledge of students' specialized fields. This often requires collaboration between language teachers and subject-matter experts to create relevant and practical learning materials. However, previous research has identified several challenges in ESP instruction. Hoa & Mai (2016) highlighted lecturers' limited expertise in technical subjects and textbook inadequacy as major issues in university ESP courses. Similarly, Mahendra (2020) reported that ESP teachers in Indonesia struggle to meet students' expectations due to insufficient interdisciplinary knowledge.

Furthermore, Iswati & Triastuti (2021) identified several key challenges in ESP teaching, including limited knowledge of students' disciplines, lack of ESP-specific training, inadequate needs analysis, large class sizes, and diverse levels of students' English proficiency. These factors highlight the complexities that ESP instructors face when delivering specialized language instruction, particularly in contexts where they may lack subject-matter expertise or access to appropriate training and resources.

While much of the existing research has focused on the challenges faced by ESP teachers, Suherman & Kertawijaya (2023) examined how instructors navigate these difficulties. Their findings revealed that ESP teachers employ various strategies to enhance teaching effectiveness, such as adapting pre-existing materials, collaborating with subject-matter specialists, attending ESP-focused training programs, and seeking IT support for technology-enhanced learning. These approaches suggest that ESP instruction can be improved through interdisciplinary collaboration, professional development opportunities, and the integration of digital

tools, all of which contribute to a more effective and tailored learning experience for students.

Similarly, Diana (2023) examined ESP implementation challenges for Mechanical Engineering students, identifying three key issues:

- a) Institutional policies requiring General English instruction for all non-English majors
- b) Restrictions on teaching flexibility due to prescribed textbooks
- c) Limited English proficiency among students, which hinders ESP instruction

These studies suggest that ESP teaching is affected not only by instructors' competencies but also by institutional constraints. However, despite extensive research on ESP pedagogy, studies on students' self-efficacy in ESP remain scarce. Given the strong relationship between self-efficacy and language learning success, investigating students' perceptions of their self-efficacy in ESP could provide valuable insights for ESP curriculum development and teaching strategies.

The present study aims to explore students' perspectives on their self-efficacy in English for Specific Purposes (ESP), considering its crucial role in shaping learning strategies, motivation, and overall success in acquiring language skills relevant to their fields of study. Given the scarcity of research on students' self-efficacy in ESP contexts, this study seeks to measure their perceived self-efficacy levels and examine how these beliefs influence their approach to ESP learning. By investigating students' perspectives, this research aspires to provide valuable insights for ESP practitioners, curriculum designers, and educators in tailoring more effective teaching strategies and instructional materials.

RESEARCH METHODOLOGY

This study employed a quantitative research approach using a descriptive statistical design to analyze students' perspectives on their self-efficacy in English for Specific Purposes (ESP). As explained by Muñoz (2024), descriptive statistics involve summarizing and organizing data into nominal, ordinal, or numerical variables, providing meaningful insights through visual representation and systematic interpretation. This method was chosen to quantify students' perceptions and present the findings in a clear and interpretable format.

The study was conducted during the even semester of the 2023/2024 academic year at the Faculty of Engineering, Universitas Muhammadiyah Jakarta. The research participants consisted of 40 first-year students from the Mechanical Engineering program, all of whom had recently completed their English course as part of their compulsory curriculum. The sample was selected using purposive sampling, a non-random technique in which participants are chosen based on specific characteristics—in this case, students with direct experience in ESP learning within their field of study.

To assess students' self-efficacy, the researcher adapted and modified a self-efficacy questionnaire originally developed by Kosimov (2021). The instrument utilized a 5-point Likert scale, ranging from "strongly disagree" (1) to "strongly agree" (5), enabling respondents to express the extent of their agreement with various self-efficacy-related statements. Prior to distribution, the questionnaire underwent face validity assessment by consulting a lecturer with expertise in psychology to ensure clarity, relevance, and appropriateness of the items. The final version of the questionnaire was then administered via Google Forms, allowing for efficient and standardized data collection.

The collected data were processed using basic statistical computations, primarily percentage analysis, to quantify students' responses. The findings were then presented descriptively, integrating interpretations with relevant literature and previous research findings to contextualize the results. This approach facilitated a comprehensive understanding of students' self-efficacy perceptions while drawing connections to broader discussions in ESP pedagogy and language learning research.

By employing this methodological framework, the study aimed to provide empirical evidence on the role of self-efficacy in ESP learning, offering insights that could inform curriculum design, instructional strategies, and future research on student motivation and confidence in language acquisition.

FINDING AND DISCUSSION

The analysis of students' responses to the self-efficacy questionnaire revealed valuable insights into their perceptions of their capabilities in learning English for Specific Purposes (ESP). The following table presents a summary of their responses:

Table 1. Students' responses summary

No.	Statement	SD	D	N	A	SA
01.	I think I can learn what is being taught in ESP class.	0	13	2	20	5
02.	I think I can figure out any subject materials If I try hard enough.	0	2	10	18	10
03.	In my point of view, if I practiced every day, I could just develop my ESP.	0	3	0	31	6
04.	I think I am a person who once I have decided to	3	7	15	12	3

	accomplish something that's important to me, I keep trying to accomplish it even if it's harder than I thought as well as in doing my English task.					
05.	I think I am always confident that I will achieve ESP learning objective that I set for myself.	0	0	0	29	11
06.	In my perspective, when I'm struggling to accomplish difficult ESP task, I focus on my progress instead of feeling discouraged.	0	2	5	27	6
07.	I feel that I will succeed in whatever ESP learning taught by the lecturer.	1	3	5	30	1
08.	I feel that I will succeed in whatever specific English I learn to support the career path I choose.	1	3	8	22	6
09.	I believe that hard work pays off as well as in acquiring English suitable with my major.	0	0	0	37	3
10.	In my opinion, my ESP proficiency grows with efforts.	0	0	0	32	8
11.	I believe that my brain can be developed like a muscle when learning English for specific purposes.	1	3	8	25	4
12.	I have the opinion that no matter who	2	2	7	21	8

you are, you can significantly change your level of English skills related to your major/profession.

13. I believe that I can change my basic level of ESP ability considerably.	0	0	3	34	3
---	---	---	---	----	---

Total Frequency =	8	38	63	338	74
-------------------	---	----	----	-----	----

Students' Self-Efficacy in ESP Learning

As shown in Table 1, the majority of students expressed positive self-efficacy beliefs, with the highest response rate in the "agree" category (64.8%), followed by "strongly agree" (14.2%). Conversely, neutral responses accounted for 12.1%, while 7.37% disagreed and only 1.53% strongly disagreed. This distribution suggests that most students perceive themselves as capable of succeeding in ESP learning, with only a small percentage expressing uncertainty or lack of confidence.

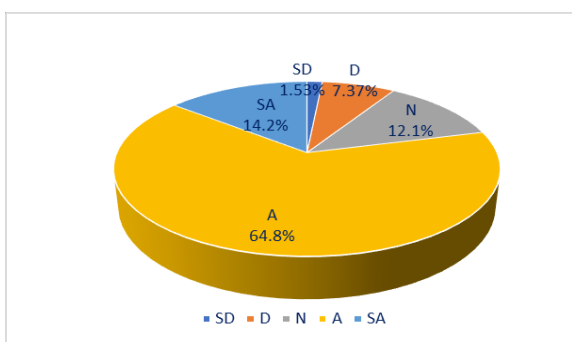


Figure 1. Students' responses in percentages

The strong agreement among students regarding their ability to learn ESP suggests a high level of intrinsic motivation, which is crucial for language acquisition and academic success (Dörnyei, 2005; Pihasniwati et al., 2014). Sarwat et al. (2023) also support this view, arguing that students with higher self-efficacy tend to be more effective in employing language learning strategies, demonstrating

greater motivation and persistence in overcoming learning difficulties.

Challenges in ESP Learning and Self-Efficacy Perceptions

Despite the generally positive self-efficacy perceptions, some responses indicate areas of concern. For example, in Statement 1, while 20 students agreed that they could learn what was taught in ESP class, 13 disagreed. This suggests that some students still struggle with understanding English instruction, potentially due to limited prior exposure to ESP concepts, lack of foundational English skills, or ineffective instructional approaches (Mahendra, 2020). Similarly, in Statement 4, a significant portion of students (15) selected "neutral", indicating uncertainty about their persistence when faced with challenges. This aligns with findings from Richard (2018), who emphasized that learners with low self-efficacy tend to disengage when encountering difficulties, as they lack confidence in their ability to overcome obstacles.

Another critical finding emerged from Statement 2, where 18 students agreed and 10 strongly agreed that they could understand ESP materials if they put in enough effort. However, 10 students selected "neutral", indicating that some students are not fully confident in their ability to succeed, even when they exert effort. This suggests the need for additional instructional support, particularly through scaffolded learning strategies and motivational interventions (Wood et al., 2006).

The Role of Effort and Motivation in ESP Success

Responses to Statement 9 ("I believe that hard work pays off in acquiring English suitable for my major") showed an overwhelmingly positive response, with 37 students agreeing and 3 strongly agreeing. This reinforces the idea that students recognize the role of effort in

language acquisition. Ramli et al. (2023) highlighted that students who exhibit higher levels of optimism and effort tend to achieve better academic performance, as they perceive challenges as opportunities for growth rather than obstacles.

Additionally, in Statement 10, all students agreed or strongly agreed that their ESP proficiency improves with effort, further reinforcing growth mindset principles in language learning (Dweck, 2006). Hwang (2025) also found that writing feedback perception and self-regulated learning strategies significantly impact students' self-efficacy, suggesting that continuous practice and feedback mechanisms should be incorporated into ESP instruction to sustain motivation and self-confidence.

Cognitive and Psychological Aspects of ESP Learning

Students' responses to Statement 11 ("I believe that my brain can be developed like a muscle when learning ESP") indicate a positive belief in cognitive flexibility, with 25 students agreeing and 4 strongly agreeing. This reflects metacognitive awareness, a key factor in successful language acquisition (Nicolaou & Sevilla-Pavón, 2023). Similarly, in Statement 12 ("No matter who you are, you can significantly change your level of English skills related to your profession"), 21 students agreed, and 8 strongly agreed, reinforcing the notion that self-efficacy beliefs are linked to learners' openness to growth and skill development.

This aligns with Bandura's (1997) self-efficacy theory, which posits that individuals who believe they can improve their abilities are more likely to engage in effective learning strategies and persevere in difficult tasks (Lopez-Garrido, 2023). This was further supported by Youfabadi & Ghafournia (2023), who found that students with strong self-efficacy beliefs exhibit greater persistence,

motivation, and willingness to take risks in language learning.

CONCLUSION

This study aimed to examine students' perspectives on their self-efficacy in English for Specific Purposes (ESP), highlighting the role of self-belief in shaping learning behaviors, motivation, and persistence. The descriptive statistical analysis revealed that the majority of students held a positive perception of their self-efficacy in ESP, with 64.8% selecting "agree" and 14.2% selecting "strongly agree". These findings indicate that most students demonstrate confidence, resilience, and a strong belief in their ability to succeed in ESP learning. Furthermore, the results suggest that students with higher self-efficacy exhibit a more proactive approach to learning, showing optimism and a willingness to exert effort in acquiring English skills relevant to their field of study.

Despite the overall positive self-efficacy perceptions, a minority of students expressed uncertainty or lack of confidence, indicating potential challenges in understanding ESP concepts, applying learning strategies, or overcoming difficulties in language acquisition. This highlights the need for further pedagogical interventions, such as adaptive teaching methods, targeted scaffolding, and motivation-enhancing activities, to strengthen students' confidence in ESP learning.

Given the complex interplay between self-efficacy and language acquisition, future research should explore additional psychological and cognitive factors, such as motivation, goal-setting, perseverance, and emotional regulation, which may further influence ESP learning outcomes. Investigating longitudinal self-efficacy development could provide deeper insights into how students' confidence evolves over time and how it can be

enhanced through instructional strategies and curriculum design. By integrating these elements into ESP pedagogy, educators can foster a more effective and confidence-driven learning environment, ultimately contributing to students' professional and academic success in their respective fields.

REFERENCES

- Al-Harthy, I. S. (2011). *Knowledge monitoring, goal orientations, self-efficacy, and academic performance: A path analysis*. Kent State University.
- Bailey, D. R., & Rakushin-Lee, A. (2021). Confidence is everything: The mediating effects of self-efficacy on task value and social media participation. *TESL-EJ*, 24(2). <https://eric.ed.gov/?id=EJ1288719>
- Bandura, A. (1977). Self-efficacy: toward a unifying theory of behavioral change. *Psychological review*, 84(2), 191-215. <https://doi.org/10.1037/0033-295X.84.2.191>
- Başaran, S., & Cabaroğlu, N. (2014). The effect of language learning podcasts on English self-efficacy. *International Journal of Language Academy*, 2(2), 48-69.
- Coronado-Aliegro, J. (2007). Enhancing learner self-efficacy through continuous self-assessment: Implications for the foreign language classroom. *Learning Languages in a Digital World*, 127.
- Diana, A. (2023). The classroom observation in ESP: A case study of mechanical engineering students' EFL course. *ELSA: Edukasi Lingua Sastra*, 21(1), 1-9. <https://doi.org/10.47637/elsa.v21i1.570>
- Donesch-Jezo, E., Modrzewski, A. F., & Hamdanat, I. (2012). English for specific purposes: What does it mean and why is it different from teaching general English?. *ResearchGate*. <https://www.researchgate.net/publication/340390161>
- Dörnyei, Z. (2005). *The psychology of the language learner: Individual differences in second language acquisition*. Lawrence Erlbaum Associates.
- Dweck, C. S. (2006). *Mindset: The new psychology of success*. Random House.
- Esiyok, E., Gokcearslan, S., & Kucukergin, K. G. (2024). Acceptance of educational use of AI chatbots in the context of self-directed learning with technology and ICT self-efficacy of undergraduate students. *International Journal of Human-Computer Interaction*, 1-10. <https://doi.org/10.1080/10447318.2024.2303557>
- Erito, S. N. P. (2023). Exploring ESP students' perception toward the potential of artificial intelligence to promote students' self-efficacy in English writing skill. *Journal of English Language Learning*. <https://www.ejournal.unma.ac.id/index.php/jell/article/view/7598>
- Genç, G., Kuluşaklı, E., & Aydın, S. (2016). Exploring EFL learners' perceived self-efficacy and beliefs on English language learning. *Australian Journal of Teacher Education*, 41(2), 4. <https://doi.org/10.14221/ajte.2016v41n2.4>
- Graham, S. (2022). Self-efficacy and language learning – what it is and what it isn't. *The Language Learning Journal*, 50(2), 186-207. <https://doi.org/10.1080/09571736.2022.2045679>
- Greene, B. A., Miller, R. B., Crowson, H. M., Duke, B. L., & Akey, K. L. (2004). Predicting

- high school students' cognitive engagement and achievement: Contributions of classroom perceptions and motivation. *Contemporary Educational Psychology*, 29(4), 462-482. <https://doi.org/10.1016/j.cedpsych.2004.01.006>
- Hoa, N. T. T. H., & Mai, M. P. T. T. (2016). Difficulties in teaching English for specific purposes: Empirical study at Vietnam universities. *Higher Education Studies*, 6(2), 154-161.
- Hwang, S. (2025). Unpacking the impact of writing feedback perception on self-regulated writing ability: The role of writing self-efficacy and self-regulated learning. *Behavioral Sciences*, 15(2), 100. <https://www.mdpi.com/2076-328X/15/2/100>
- Iswati, L., & Triastuti, A. (2021). Voicing the challenges of ESP in non-English departments. *Studies in English Language and Education*, 8(1), 276-293.
- Kosimov, A. (2021). The impact of self-efficacy in enhancing English proficiency among Uzbek high school students. *ResearchGate*. <https://www.researchgate.net/publication>
- Lestari, Z. W., et al. (2019). Students' self-efficacy in learning English: A case study at a vocational high school. *Advances in Social Science, Education, and Humanities Research*, 443, 418-425.
- Lopez-Garrido, G. (2023). Bandura's self-efficacy theory of motivation in psychology. *Simply Psychology*. <https://www.simplypsychology.org/self-efficacy.html>
- Mahendra, A. W. (2020). Constructing identity: Experiences of Indonesian ESP teachers in a language institute. *English Language Teaching Educational Journal*, 3(3), 229-240.
- Makrami, B. H. (2010). Motivation and attitude of Saudi university's learners of English for specific purposes. *KU ScholarWorks*. <https://kuscholarworks.ku.edu/entities/publication>
- Methvin, M. T. (2015). Teacher perceptions of factors influencing their self-efficacy with using one-to-one technology during literacy instruction. *ProQuest Dissertations & Theses Global*.
- Munisah, E. (2021). Kemampuan bahasa Inggris siswa sekolah dasar melalui program teras belajar. *Jurnal ELSA: Edukasi Lingua Sastra*, 19(1), 24-30.
- Muñoz, C. G. C. (2024). Descriptive vs inferential statistics: An overview. *Students 4 Best Evidence (S4BE)*. <https://s4be.cochrane.org>
- Nicolaou, A., & Sevilla-Pavón, A. (2023). Exploring the impact of virtual exchange in virtual English as a lingua franca (VELF): Views on self-efficacy and motivation. *Virtual English as a Lingua Franca*. <https://doi.org/10.4324/9781003342922-11>
- Pihasniwati, et al. (2014). Achievement motivation training program to increase self-efficacy and optimism in organizational activist students as organizational managers at Sunan Kalijaga State Islamic University. *Jurnal Psikologi Integratif*, 77(2).
- Ramli, A., Antoni, R., Zulkifli, Z., & Sudadi, S. (2023). The Analysis of Relationship Between Level of Optimism, Learning Achievement and Character of Students. *Journal on Education*, 6(1), 2720-2726.
- Sarwat, S. (2023). Investigating the attitude of ESL learners towards self-efficacy with

English language learning achievements. *Russian Law Journal*, 11(1), 242-249.

Suherman, A., & Kertawijaya, L. (2023). Challenges perceived by Indonesian ESP teachers in post-pandemic era: A survey from a higher education institution. *SCOPE: Journal of English Language Teaching*, 7(2), 129-136. <https://doi.org/10.30998/scope.v7i2.15526>

Youfabadi, M. M., & Ghafournia, N. (2023). The impact of self-confidence on English language proficiency. *2nd International Conference on Health Educational Sciences Psychology, Helsinki, Finland*.

Yoon, H. J. (2022). L2 academic writing anxiety and self-efficacy: A mixed methods study of Korean EFL college students. *OhioLINK Electronic Theses and Dissertations Center*.