



Intensive Assistance for Writing A Scientific Paper (WASP) to Build Students with Achievement

Helmi Muhammad¹, Ahmad Taufiq², Suharyadi³, Niki Puspita Sari^{4*},
Abdillah Ubaidi⁵, Hoirul Anam⁶

^{1, 4, 5, 6} Universitas Islam Raden Rahmat, Malang, Indonesia

^{2, 3} Universitas Negeri Malang, Malang, Indonesia

*Corresponding author: nikipuspita@uniramalang.ac.id

Received 07-09-2024

Revised 20-10-2024

Published 07-12-2024

ABSTRAK

Menulis karya ilmiah adalah sarana mengembangkan potensi kognitif dan kreativitas siswa selain eksplorasi pengalaman, pengetahuan dan perasaan. Dibutuhkan sinergi edukasi dan pengalaman empiris dalam mewujudkannya secara berkesinambungan. Kegiatan ini mengarah pada tujuan tersebut melalui praktik nyata secara intensif yang dikemas dalam program pendampingan karya tulis ilmiah berbasis riset. Sasarannya adalah siswa MA Alif Laam Miim Surabaya yang didampingi guru pembimbing. Pendekatan kegiatan pengabdian ini adalah menggunakan metode ABCD (*Asset Based Community Development*). Program kegiatan yang dilakukan adalah penulisan proposal, presentasi proposal, proses penelitian, dan laporan penelitian serta karantina. Program pendampingan intensif ini menghasilkan delapan laporan penelitian dalam berbagai tema yang siap diikuti dalam kompetisi ilmiah yang terbagi dalam rumpun sosial humaniora dan sains dan teknologi. Selain itu, hasil kegiatan ini diakui berkontribusi positif dibandingkan dengan sebelum ada program pendampingan intensif. Kontribusi program ini sangat relevan dengan upaya mewujudkan karakter siswa sebagai insan akademik kritis dan inovatif.

Kata kunci: Pendampingan Intensif, Menulis Karya Ilmiah, Siswa Berprestasi.

ABSTRACT

Writing scientific papers allows students to strengthen their cognitive abilities and creativity while also exploring their experiences, knowledge, and feelings. It takes a combination of education and empirical experience to realize it on a continuous basis. This activity achieves this goal by combining extensive real-world experience with a research-based scientific writing aid program. The target audience is MA Alif Laam Miim Surabaya students accompanied by a supervising teacher. This service activity uses the Asset Based Community Development technique. The activities included proposal drafting, presentation, research, report, and quarantine. This program resulted in eight research reports on various topics that were ready to be entered into scientific contests divided into social humanities, science and technology categories. Furthermore, the effects of this activity are recognized as having a favorable impact when compared to the previous intense mentorship program. This program's contribution is significant to develop students' critical and inventive academic personalities.

Keywords: Intensive Assitance, Write a Scientific Paper, Students with Achievement.

INTRODUCTION

Scientific writing holds significant importance in the enhancement of critical thinking abilities, alongside being an essential prerequisite for academics to advance in their professional journeys (Grech, 2017). The development of scientific writing



skills can be facilitated through the smooth integration of educational efforts and their practical implementation in daily routines through research (Deutz, Delzenne, Grimbale, & Lobo, 2023; Pulido, 2023). Therefore, proficiency is required in the scientific domain following the acquisition of listening, speaking, and reading skills, which is exemplified in written works that are made available to the public. It is important to note that a research endeavor is considered unfinished unless it has been officially published (Barclay, 2024). The objective of scientific writing lies in the cultivation of cognitive capacity and innovation, ultimately resulting in the enhancement of critical prowess. Through engaging in scientific writing endeavors, scholars delve into various experiences, knowledge, and emotions that necessitate the utilization of imagination and creativity, ultimately imbuing the written work they peruse with significance. Consequently, it becomes imperative to adhere to a sound approach to scientific writing, ensuring that the outcomes are comprehensible, primed for publication, citation, and influential in nature.

Writing scientific literature that possesses significance, is embraced, and comprehended by others, is a challenging endeavor (Grech, 2019). Consistent and rigorous training is essential to refine scientific and analytical cognitive abilities (Goulis, 2023). Often, a researcher encounters the predicament of determining the initial point and the primary focus of their written work. Consequently, it becomes crucial to establish methods for enhancing one's proficiency in scientific writing from the earliest stages, by seeking guidance in composing scientific papers. In accordance with prior research, it has been indicated that mentoring serves as a viable approach to advancing one's aptitude in scientific writing (Grech, 2017; Rana & Paul, 2020).

This program of scientific paper writing assistance was conducted at MA Alif Laam Miim Surabaya, drawing upon findings and evidence from a preliminary study. The preliminary findings indicate that there is a significant deficiency in students' literacy culture, a lack of confidence among students in writing scientific papers, limited critical thinking abilities, and a lack of proficiency in the various elements of effective and accurate scientific writing. Institutionally, MA Alif Laam Miim aims to enhance proficiency in scientific competitions. This mentoring program is also motivated by preceding empirical studies that demonstrate the efficacy of the mentoring model as an active learning approach, particularly in addressing students' deficiencies in scientific writing skills (Delzenne, Deutz, Lobo, & Grimbale, 2023; Grech, 2019). The mentoring activities encompass equipping students with knowledge pertaining to scientific article composition, cultivating students' cognizance of scientific reasoning, and ameliorating students' aptitude in scientific article composition.

The significance of providing support in the realm of scientific writing is widely acknowledged as crucial in equipping the younger cohort to effectively navigate and actively participate amidst the ever-evolving landscape of information and communication technology. The guidance and assistance offered for the composition of scientific papers at MA Alif Laam Miim are geared towards optimizing the potential

and aptitude of the students to engage in the Madrasah Young Researchers Supercamp (Mayres) activities organized by the Ministry of Religion of the Republic of Indonesia. Mayres' endeavors aim to enhance and acquaint research customs within the Madrasah setting, with the purpose of fostering a generation that is not solely spiritually developed, but also intellectually and socially astute. Furthermore, the provision of guidance in composing scientific papers equips students with the necessary skills to participate in the Indonesian Student Research Olympiad (OPSI), an event organized by the Ministry of Education, Culture, Research, and Technology of the Republic of Indonesia, wherein they can engage in healthy competition. OPSI endeavors to foster scientific, imaginative, and inventive dispositions. This undertaking heightens students' awareness of the encompassing environment, particularly the potential of local resources that possess a global influence. Furthermore, OPSI facilitates SMA/MA/equivalent students in manifesting their aptitudes, affinities, and capabilities in the realms of inquiry and innovation. OPSI activities encompass a compilation of outstanding research endeavors, which are intended for inclusion in research competitions, scientific symposiums, and national as well as international publications.

Consequently, the provision of instruction and guidance for MA Alif Laam Miim students proves highly advantageous in preparing them for their participation in competitions as delineated by the institutional orientation. This rigorous mentoring initiative will be conducted from April 2022 to September 2023, encompassing a comprehensive series of preparatory activities. Firstly, engaging in dialogue with the leadership of MA Alif Laam Miim in Surabaya, which serves as the collaborating institution. Secondly, establishing a partnership with Malang State University, which will act as a mentor for the partner institutions. Thirdly, formulating a timeline for the execution of the mentoring activities prior to the schedule for the Mayres and Option competition in 2024.

METHOD

The intended recipients of this service are the students enrolled at Madrasah Aliyah Alif Laam Miim, Surabaya. The choice of MA Alif Laam Miim as the venue stems from its status as a nascent educational establishment founded in 2021 within the Pondok Pesantren Kota (PPK) Alif Laam Miim, Surabaya, boasting a global outlook. The aim of this endeavor is to expedite the realization of its objectives, particularly in enhancing the production of scholarly articles. Employing the Asset Based Community Development (ABCD) approach, this community engagement initiative is anticipated to make a valuable contribution. The adoption of this strategy is deemed pertinent due to its focus on leveraging the existing resources of both participants and the designated institutions (Forrester et al., 2020; Ibrahima, 2017).

This community service initiative entails an implementation of rigorous training and guidance, coupled with the incorporation of proposal seminars and the

dissemination of scholarly research findings. The training and mentoring sessions are conducted in multiple stages of engagement, namely the creation of proposals, their subsequent presentation, the research process itself, the generation of research reports, and finally, the period of quarantine. In the preliminary phase of formulating a proposition, individuals are furnished with fundamental information concerning the craft of scientific composition and the methodology of preparing scientific manuscripts in conformity with established conventions. In the subsequent phase, the participants were assigned the duty of delivering a proposition encompassing a research blueprint to be executed by the students employing the Power Point software. The research process conducted by students represents the third activity in the training and mentoring program. The final phase of the training and mentoring program, also referred to as the fourth stage, entails the compilation and presentation of research and quarantine reports formulated at Malang State University. In summary, the steps for implementing community service are visually depicted in the subsequent figure 1.

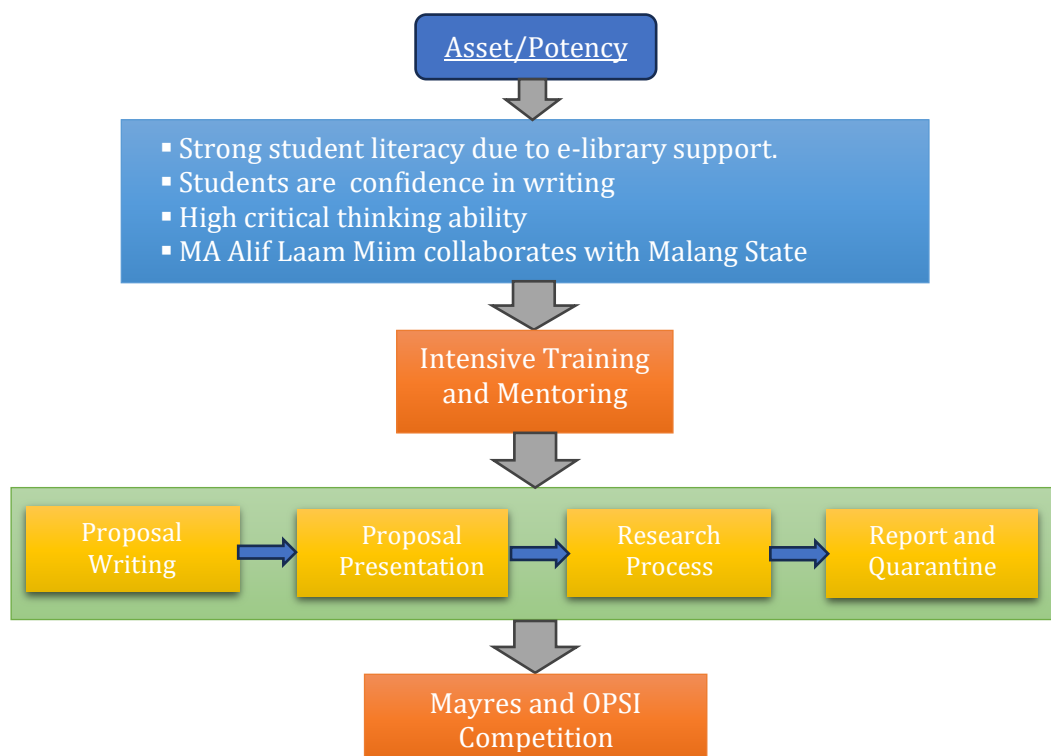


Figure 1. Flow of the Community Service Program

RESULTS AND DISCUSSION

The primary objective of this service program is to provide comprehensive support to students in their academic writing endeavors, specifically in relation to research conducted at MA Alif Laam Miim, Surabaya. A total of 45 students hailing from the tenth and eleventh grades engaged in this program, which was later systematically categorized into 20 separate groups. Multiple phases have been organized to facilitate the execution of mentorship, commencing with the formulation of proposals, followed

by the research process, and culminating in the delivery of the final report. A comprehensive account of these stages is elucidated in the subsequent discourse.

a. Composing a Proposal

The process of composing a proposal commences with fundamental comprehension of the art of scholarly writing, the utilization of appropriate Indonesian language conventions, the act of selecting cogent ideas, the formulation of an accurate introductory section, the provision of comprehensive scholarly backing, the application of appropriate research methodologies, and the proper citation practices. Furthermore, the utilization of the reference management tool, Zotero, is extensively expounded upon within this process. At the initial phase, the students of MA Alif Laam Miim, Surabaya were promptly segregated into multiple groups and accompanied by two instructors holding undergraduate (S1) and graduate (S2) degrees. During this process, after the submission of all the relevant materials for proposal formulation, the assistants are instructed to identify the research theme to be deliberated upon with the students. It is advisable for this process to be concentrated and geared towards ascertaining the viability of the plan (Attard, 2018; Kumar, Paul, & Unnithan, 2020). The subsequent stage involves the participants employing the inverted pyramid technique to deliver an introduction encompassing the context, primary objective, problem statement, and research gaps (Cuschieri, Grech, & Savona-Ventura, 2018). Despite the presence of numerous errors during this preliminary process, after receiving extensive assistance, the introduction was enhanced and rendered more viable. From an academic standpoint, the participants have devoted their time, energy, and cogitation towards formulating the protocol for the ongoing research project (Delzenne et al., 2023; Rosado-Serrano, Paul, & Dikova, 2018).

The act of conducting literature reviews is implemented to establish the foundational basis of the introduction formulated (Paul & Criado, 2020; Snyder, 2019). Students, alongside their instructors, undergo training to thoroughly explore literature from numerous reputable academic journals with the aim of acquiring the most up-to-date information pertaining to the given subject matter (Cao, Liu, Fang, Xu, & Wang, 2023). The subsequent section entails the utilization of the research methodology that is tailored to meet the requirements of the specific research. Students are educated to select methods in accordance with the distinct characteristics of their research. The selection of a suitable methodological approach by a student is contingent upon the nature of the research question and the way it is addressed (Grech, 2017; Paul, Merchant, Dwivedi, & Rose, 2021).

b. Proposal Presentation

This section elucidates the way students ought to present their written research proposal before a panel of esteemed authorities. The presentation of the proposal holds significant weight as it constitutes a prerequisite for participation in the highly-regarded Mayres and Options competition. Appointed experts, hailing from the domains of Religion, Social and Humanities, Science and Technology, are selected to judge the proposals in accordance with the prescribed fields of knowledge. In this particular instance, students serving as researchers put forth proposals using a power point platform before a panel of experts and an audience. The allocated time for this endeavor is a 15-minute presentation followed by a 30-minute period for questions and answers. During this process, the experts scrutinize the proposals and pose a variety of inquiries that necessitate responses. From a psychological standpoint, the students receive mental preparation to confront challenging questions and devise solutions. In addition, there are numerous criteria for assessment, including the appropriateness of ideas and content, the coherence of the written material, the originality of the research, as well as the clarity of the research and presentation techniques. Proposal presentations serve as a means for students to develop their ability to articulate research plans and persuade assessors of the merit of their proposed research topic. Furthermore, these presentations shed light on the significance of linguistic proficiency and scholarly aptitude (Delzenne et al., 2023). The conclusive evaluative outcomes pertaining to the proposal are represented in Figure 2 presented below:

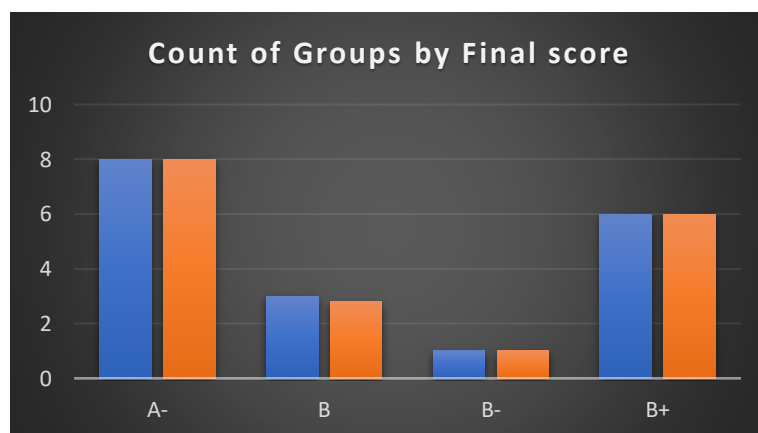


Figure 2. Final Proposal Assessment Score

The subsequent text is a documentation illustrating the procedure of delivering research proposals for Surabaya students pursuing a Master's degree in MA Alif Laam Miim, in the presence of examiners and participants.



Figure 3. Proposal Presentation

c. Research Process

The research procedure constitutes the subsequent phase that follows the successful delivery of the students' presentations. During this phase, the accompanying educator imparts instructions pertaining to the techniques of data extraction, data examination, and the presentation of the findings in an exemplary report. The themes are divided into two distinct categories, namely social humanities and science and technology, each bearing unique characteristics.

1) Social Humanities Theme

The social humanities theme pertains to the social and humanitarian phenomena that arise within society. The reason for selecting this theme is due to the notable interest of the MA Alif Laam Miim Surabaya's social department. The quantitative research for data mining was conducted by gathering data from respondents who were MA Alif Laam Miim Surabaya students and teenagers with disabilities at Galuh Handayani High School Surabaya. On the other hand, the qualitative research collected data from community leaders, religious leaders, caregivers, and students of PPK Alif Laam Miim Surabaya. The quantitative research employed mean difference tests, correlation tests, and factor analysis for data analysis. Conversely, the qualitative research utilized interactive models for data analysis, while the research and development research employed product trials. The research had a duration of three months and was closely monitored by the supervising teacher.

2) Science and Technology Theme

There are two themes in the fields of science and technology, namely Performance Test of Anadara Clam Shells (*Anadara Granosa*) as an Agent for Increasing the pH of Catfish Ponds and Investigation of Plankton Variability in Kenjeran Waters, Surabaya. Data mining was conducted in Surabaya for these two themes and subsequently assessed in the laboratory of MA Alif Laam Miim Surabaya and at the State University of Malang. The laboratory examinations are performed repeatedly, as precision with a minimal margin of error is imperative. In the event of even the most minute discrepancy, reexamination becomes necessary to attain a heightened

degree of accuracy in the data. The findings from this analysis will be expounded upon in the research report.

d. Research Report and Quarantine

The analysis and presentation of the research data collected are imperative in the final research report. During this phase, students incorporate Chapter IV and Chapter V, which encompass the discussion and conclusions of the research. Nevertheless, this particular chapter holds the utmost significance as it plays a pivotal role in determining the students' proficiency in interpreting the data exploration (Habtu & Deressa, 2024). Besides the ability to construct scientifically-oriented sentences, a sufficient level of scientific competence is also required. In addition to this, the report necessitates the inclusion of tables, diagrams, graphs, or illustrations to achieve its entirety. The final presentation of the research report, spanning from the cover to the research attachments, serves as the comprehensive manifestation of the research report to be submitted during the final presentation phase. This presentation is conducted before examiners who possess expertise in the respective field in accordance with the chosen theme. The examiners conduct meticulous evaluations spanning from the outset till the conclusion in order to achieve a comprehensive enhancement. All amendments and suggestions are compiled by the accompanying instructor for subsequent actions. The documentation of the research report presentation is depicted in the ensuing illustration.



Figure 4. Research Report

The revised research report underwent examination and subsequently delivered at the State University of Malang (UM) during the Quarantine program. The objective of this initiative is to ascertain the scholarly preparedness of research reports prior to their submission on the Mayres and Option systems. The selection of UM as the designated quarantine location was based on its accreditation as an institution of

interest subject to periodic oversight. The quarantine program entailed the delivery of presentations in the presence of professors who possessed expertise in their respective domains. This phase constitutes the culmination of a sequence of preparatory measures leading up to the Mayres and Option competitions. This endeavor is acknowledged for its role in advancing academic pursuits through the generation of research outputs that hold scholarly merit. Consequently, ensuring sustainability in the long run necessitates fostering synergy through multifaceted collaborations, such as institutional partnerships focusing on the tri dharma principles and optimizing resource allocation.

The depiction of the quarantine procedure and its exposition at UM can be observed in the accompanying visual representation.



Figure 5. Quarantine

CONCLUSION AND SUGGESTION

The research-based scientific writing mentoring program conducted at MA Alif Laam Miim, Surabaya was executed with great proficiency. The main objective of this initiative was to guide students in achieving successful administrative selection in esteemed national events within the Mayres and OPSI programs, with a particular emphasis on their scientific writing capabilities. A sequence of activities was organized in order to endorse this admirable objective, specifically workshops on the composition of proposals, presentations of proposals, assistance with research, presentations of research reports, and programs for isolation.

This program carries optimistic consequences for establishments that contribute to the attainment of an intellectual milieu that proves advantageous for both educators and learners. Naturally, contributions from various stakeholders, ranging from high-ranking decision-makers to even the most junior members, must exhibit an equal measure of zealous commitment. Furthermore, there is a necessity for the enhancement of training resources, specifically in transforming research findings into scholarly articles suitable for publication in esteemed national or international

journals. It is imperative to consistently cultivate a culture of continuous learning and scientific inquiry, as the fields of scientific research and writing are constantly evolving.

REFERENCES

- Attard, N. (2018). WASP (Write a Scientific Paper): Writing an academic research proposal. *Early Human Development*, 123, 39–41. doi: 10.1016/j.earlhumdev.2018.04.011
- Barclay, P. (2024). Are papers in Evolution & Human Behavior easy? A review of Scientific Papers Made Easy: How to Write with Clarity and Impact in the Life Sciences. *Evolution and Human Behavior*, 45(1), 129–130. doi: 10.1016/j.evolhumbehav.2023.09.008
- Cao, R., Liu, X. F., Fang, Z., Xu, X.-K., & Wang, X. (2023). How do scientific papers from different journal tiers gain attention on social media? *Information Processing & Management*, 60(1), 103152. doi: 10.1016/j.ipm.2022.103152
- Cuschieri, S., Grech, V., & Savona-Ventura, C. (2018). WASP (Write a Scientific Paper): How to write a scientific thesis. *Early Human Development*, 127, 101–105. doi: 10.1016/j.earlhumdev.2018.07.012
- Delzenne, N., Deutz, N. E., Lobo, D. N., & Grimble, G. (2023). Presentation and publication skills: How to develop a protocol and write a grant. *Clinical Nutrition ESPEN*, 57, 73–76. doi: 10.1016/j.clnesp.2023.06.009
- Deutz, N. E., Delzenne, N., Grimble, G., & Lobo, D. N. (2023). Presentation and publication skills: How to get your paper published. *Clinical Nutrition ESPEN*, 57, 387–390. doi: 10.1016/j.clnesp.2023.07.010
- Goulis, D. (2023). How to write a scientific paper. *Maturitas*, 173, 54. doi: 10.1016/j.maturitas.2023.04.113
- Grech, V. (2017). WASP – Write a Scientific Paper course: Why and how. *Journal of Visual Communication in Medicine*, 40(3), 130–134. doi: 10.1080/17453054.2017.1366825
- Grech, V. (2019). WASP (Write a Scientific Paper): Miscellaneous practical and material aspects. *Early Human Development*, 128, 105–106. doi: 10.1016/j.earlhumdev.2018.09.008
- Habtu, Y., & Deressa, W. (2024). How to write a “results section” in biomedical scientific research papers?: Critical review. *Research Methods in Medicine & Health Sciences*, 26320843241237444. doi: 10.1177/26320843241237444
- Kumar, A., Paul, J., & Unnithan, A. B. (2020). ‘Masstige’ marketing: A review, synthesis and research agenda. *Journal of Business Research*, 113, 384–398. doi: 10.1016/j.jbusres.2019.09.030
- Paul, J., & Criado, A. R. (2020). The art of writing literature review: What do we know and what do we need to know? *International Business Review*, 29(4), 101717. doi: 10.1016/j.ibusrev.2020.101717
- Paul, J., Merchant, A., Dwivedi, Y. K., & Rose, G. (2021). Writing an impactful review article: What do we know and what do we need to know? *Journal of Business Research*, 133, 337–340. doi: 10.1016/j.jbusres.2021.05.005

- Pulido, M. (2023). What should I do if I want to publish a paper? *Cirugía Española (English Edition)*, 101(3), 222–223. doi: 10.1016/j.cireng.2022.02.016
- Rana, J., & Paul, J. (2020). Health motive and the purchase of organic food: A meta-analytic review. *International Journal of Consumer Studies*, 44(2), 162–171. doi: 10.1111/ijcs.12556
- Rosado-Serrano, A., Paul, J., & Dikova, D. (2018). International franchising: A literature review and research agenda. *Journal of Business Research*, 85, 238–257. doi: 10.1016/j.jbusres.2017.12.049
- Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, 104, 333–339. doi: 10.1016/j.jbusres.2019.07.039