

Strengthening Youth Science Club by Conducting Basic Research Investigation for “Santri” Students

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ABSTRACT

This community service is motivated by the shortage of students at Islamic Boarding School to write student scientific papers. The Youth Science Club extracurricular at Islamic Boarding School Daarul Ukhuwuh was established to foster a tradition of research and scientific thinking. The initial initiation of KIR stemmed from not all santri graduates continuing their studies in Arab countries; some santri would continue their studies at Indonesian universities, and scientific writing skills needed to be developed early. However, KIR's efforts to cultivate research and scientific traditions are hampered by the many students interested in this extracurricular activity. To address this issue, the community service team, in collaboration with the person in charge of KIR, selects students who have the potential to participate in KIR and enrolls them in research training on September 9-10, 2023, which aims to increase knowledge of the significance of the research being conducted while also attracting students' interest in participating in KIR. Students in research training are tasked with developing simple research logic, carrying out simple research that has been prepared, and reporting on it through presentations and simple scientific writing. During research training, students demonstrate enthusiasm. This primary research training is expected to help strengthen KIR at the Islamic Boarding School Daarul Ukhuwuh Putri 2. However, the KIR supervisor must demonstrate sustainability to continue this essential research activity.

Keywords

*Islamic Boarding School,
Basic Research,
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ABSTRAK

Pengabdian masyarakat ini dilatarbelakangi dari fakta rendahnya kemampuan siswa di pondok pesantren dalam menghasilkan karya tulis ilmiah siswa di Pondok Pesantren Daarul Ukhuwwah Putri 2, usaha untuk menumbuhkan tradisi riset dan berfikir ilmiah telah diinisiasi lewat pembentukan ekstrakurikuler Karya Ilmiah Remaja (KIR). Inisiasi awal KIR tumbuh oleh kondisi bahwa tidak semua lulusan santri akan melanjutkan studi ke negara Arab, sebagian santri akan melanjutkan studi di universitas dalam negeri dan oleh karena itu bekal menulis ilmiah perlu untuk dibentuk lebih awal. Namun demikian kerja KIR dalam menumbuhkan tradisi riset dan berfikir ilmiah terkendala pada kuantitas santri yang tertarik pada ekstrakurikuler ini. Untuk menanggulangi permasalahan ini, tim pengabdian masyarakat berkoordinasi dengan penanggungjawab KIR melakukan seleksi siswa yang berpotensi untuk mengikuti KIR dan diikuti dalam pelatihan riset yang dilaksanakan pada 9-10 September 2023, dengan tujuan meningkatkan pengetahuan pentingnya riset dilakukan sekaligus menarik minat siswa mengikuti KIR. Dalam pelatihan riset, siswa ditugaskan untuk menyusun logika riset sederhana, melakukan riset sederhana yang telah disusun, dan melaporkannya dalam bentuk presentasi dan tulisan ilmiah sederhana. Selama pelatihan riset berlangsung siswa menunjukkan antusiasme belajar riset sederhana dan mempresentasikan riset mereka di depan kelas di akhir pelatihan. Dengan adanya pelatihan riset sederhana ini, penguatan KIR di Pondok Pesantren Daarul Ukhuwwah berlangsung dengan baik namun perlu sustainabilitas dari pengelola KIR untuk mempertahankan kegiatan riset sederhana ini.

Kata Kunci: Pesantren, Riset Sederhana, Ekstrakurikuler, Siswa Santri

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INTRODUCTION

Extracurricular activities are activities carried out by students outside of face-to-face learning that aim to expand and enrich students' knowledge and abilities (Usman & Setiawati, 1993) according to students' talents and interests. Students who participate in extracurricular activities learn to accept constructive criticism (McKeyane, 2013) and achieve academic and social success (Eccles, 2003); (Leritürk, 2023); (Wormington, et al., 2012)). Relationships with teachers and other adults are considered an asset in developing academic and life success.

Fredericks and Eccles (2008) found that students who participate in extracurricular activities, particularly academic clubs, develop leadership skills.

Structured extracurricular activities are a school strategy for supporting prosocial behavior, instilling resilience and identity through competent non-parental interactions, and internalizing skills and knowledge as role models and challenges for the next generation (Gilman, 2004). Extracurricular activities are typically voluntary, approved by school officials, and do not provide academic credit to graduates (Lunenborg & Ornstein, 2008) but provide opportunities for students to develop skills similar to adulthood (Larson, 2006).

In line with the research above, Emawati et al. (2022) discovered that extracurricular activities in Islamic boarding schools, as well as the obligation to recite the Koran, help shape the character of students' "santri" to be more disciplined, develop the ability to allocate priority time and become more independent, creative, and critical thinkers. The initiation and management of extracurricular activities in the Islamic boarding school environment, which includes the stages of planning, organization, implementation, and supervision, has an impact on students' high interest in participating in extracurricular activities, resulting in fewer violations and increased emotional, social, and economic independence (Hinayatulohi, 2019).

The success of extracurricular activities in Islamic boarding schools is an assortment of several things, notably the sincerity of administrators, caregivers, and alums, student commitment to participating in extracurricular activities, and adequate infrastructure (Hidayat & Zayyinah, 2014). Another factor that can contribute to extracurricular success is the teacher's endeavors to increase the incentive for learners to participate in self-development by hiring experienced outside mentors (Hasbi, 2021). Meanwhile, the inhibiting factors for implementing extracurricular activities in Islamic boarding schools are insufficient facilities, poor human resources (HR) standards, and dipped enthusiasm for carrying out unforeseeable activities (Hidayat & Zayyinah, 2014).

Youth Science Club is one of the many extracurricular activities offered at school. The Youth Scientific Group's (Indonesia: Karya Ilmiah Remaja, KIR) extracurricular activities instill values such as honesty, discipline, creativity, responsibility, hard work, and self-confidence in their members (Winarsih & Warsono, 2017). Aside from that, KIR extracurricular activities have a positive relationship with students' information literacy skills (Septiriani & Hasanah, 2017).

KIR extracurricular activities are also particularly beneficial to students, as they increase curiosity about science, improve thinking and creative abilities, and foster critical thinking. In the face of an onslaught of information via technology, students, particularly those attending Islamic boarding schools, must develop critical thinking skills. Through KIR, Islamic boarding schools can help students prepare for life after graduation, particularly by encouraging critical thinking about social, economic, cultural, and political changes outside the Islamic boarding school while maintaining Islamic boarding school values. It is also necessary to understand how to conduct research and think critically, with one of the outcomes being the publication of scientific papers for students' portfolios.

Program Objectives

This community service is aimed at KIR at the Daarul Ukhuwwah Putri 2 Islamic Boarding School, which was founded in 2020. The effort to establish KIR is an effort to introduce research traditions and provide students with the ability to write scientific papers to continue their education at Indonesian universities. In this case, Gus Dur's opinion is significant, as he states that not all students can become religious experts or scholars; however, some can contribute to becoming scientists without abandoning the Islamic teachings instilled in them at the Islamic boarding school. In agreement with Gus Dur, the KIR supervisors stated that not all students studying at the Daarul Ukhuwwah Putri 2 Islamic Boarding School will continue their studies in the Middle East; for students who intend to continue their studies in Indonesia or Europe, it is critical to equip them with research traditions, mainly writing – scientific work based on research.

Problem's Solution

The KIR extracurricular at Daarul Ukhuwwah Putri 2 Islamic Boarding School faces an obstacle. There are no patented teaching modules, so KIR supervisors can only provide a general overview of the material to KIR participants. Students are less enthusiastic about participating in KIR extracurriculars because there is no clear direction for the final output. Aside from that, activity management could be better coordinated, so the development of KIR extracurricular activities at the Daarul Ukhuwwah Putri 2 Islamic Boarding School could be faster.

A more in-depth introduction is required to build student capacity to strengthen KIR, which aims to instill research traditions in students. As a result, this activity aims to help students improve their ability to conduct research and produce appropriate results. This activity intends to strengthen students' capabilities as learning actors in schools in conducting research and serve as an essential milestone for schools to strengthen research traditions among students through extracurricular KIR.

MATERIAL AND METHODS

Material

The implementation of community service includes the following stages: 1) Material delivery; 2) Group division; 3) Discussion and questions and answers; 4) Conducting observations and interviews; and 5) Presenting results.

Methods

Activities to strengthen the youth scientific work group at the Daarul Ukhuwwah Putri 2 Islamic Boarding School were carried out through several stages: preparation, implementation, and evaluation. As part of the preparation stage, identifying partner problems is crucial in community service activities. Initially, data obtained that research in Islamic boarding schools still needs to be enhanced. The existence of KIR as a dissemination tool to strengthen research in Islamic boarding schools has yet to be widespread, even though KIR is an existing organization.

The community service team worked closely with the KIR supervisor at Daarul Ukhuwah Islamic Boarding School to discuss the overall design of activities, expected outputs and outcomes, technical requirements, the person in charge, and the exact date for implementing community service. After reaching an agreement, the team submitted a community service permit to the leadership of Daarul Ukhuwah Islamic Boarding School. After obtaining permission, the team proceeded to the second stage, which involved community service. The second stage consists of the implementation of basic research training. As part of the evaluation stage, the community service team and KIR supervisors provide feedback on the results of a two-day simple research training session.

Time and Location

This community service activity served to help students at Daarul Ukhuwah Putri 2 Islamic Boarding School in Singosari, Malang Regency, improve their research and critical thinking skills. Aside from that, this community service activity aims to assist the Islamic boarding school in developing a solid curriculum design for the Youth Scientific Work (KIR) at Daarul Ukhuwah Putri II Islamic Boarding School. On September 9-10, 2023, Daarul Islamic Boarding School Ukhuwah Putri 2 hosted community service activities to strengthen the Youth Scientific Work (KIR). We held the first day of community service activities on Saturday, September 9, 2023. This activity runs from 10.00 to 15.00 WIB, with a one-hour break between 12.00 and 13.00 WIB—meanwhile, the second day of community service activities was Sunday, September 10, 2023. The second day's activities began at 09:00 and ended at 13:00 WIB.

RESULTS AND EVALUATION

Introduction to Research Through Lectures

The session commenced with the recitation of the alfatihah and a statement delivered by the KIR supervisor, outlining the objectives of the training event, which include enhancing KIR, catering to the important skills of female students, and establishing a KIR coordinating committee. The programme proceeded with a talk on the topic "How to Initiate a Research". The research material provided is specifically tailored for kids in junior high and high school, as well as others with a similar level of education. The selection of this material was also focused on the essential requirements for students to enhance their grasp of research and strengthen extracurricular activities at Daarul Ukhuwah Putri 2 Islamic Boarding School.

The lecturing session was divided into two parts. First, the primary research material begins with a brief introduction to research and the reason it is crucial in a more ideal, normative context, such as increasing knowledge, as well as a more practical context, such as assisting students in obtaining the scientific writing skills required when continuing their education at universities, both domestic and international. This fundamental knowledge must be indicated to entice students to participate in KIR and get involved in this extracurricular pursuit regularly while in school.

The second session covers technical research and essential research factors, such as identifying problems using 5W 1H and research methods. As part of the study's training,

students will utilize this knowledge to design, conduct, and report on simple research projects in groups. A combination of simple research practical assignments, students are slated to learn about research and attain a comprehensive and technical knowledge of the importance of research and research methodology.



Figure 1.
*Introduction to Research
for Students*

Group Division to Develop Research Theme

The 40 students in attendance fell into eight groups of five each. The random selection of group members was intended to foster closeness among KIR members while also training them to adapt and communicate with new group members, given that the participants were middle and high school students who had never known each other well. By combining middle and high school students into a single group, middle school students will learn from high school students and vice versa, and high school students will be able to mentor middle school students. This skill is required for female students to work in research, which typically involves many people of various ages who have never met before. Besides, random grouping was implemented in the presented research material, ensuring that the student's understanding of the research was theoretical and practical.

Each group was assigned to develop a research theme based on phenomena observed in the Daarul Ukhuwwah Putri 2 Islamic Boarding School environment. The phenomenon surrounding Islamic boarding schools served as an exercise in conducting simple research. The service team chose this theme by weighing the situation of female students who cannot leave the Islamic boarding school and conducting research on topics unrelated to Islamic boarding schools. By selecting this Islamic boarding school theme, female students are taught to be critical of everyday life, which is considered "ordinary." However, they can become a topic for research and scientific writing.



Figure 2.
Research Design Group Work

Discussion and Questions and Answers (Q&A) Session

The service team consults with the presenter to determine the theme for each group. After the theme is approved, the students write research questions based on the research problem formulation. Students who struggle to determine the problem formulation can seek assistance from the presenters in each group. The speaker also actively monitors the students as they complete their assignments. The discussion process continued with the identification of informants and the creation of an interview guide. Each group identified at least three informants, including one key informant and two supporting informants. During the creation of the interview guide, the students confirmed each point of their questions with the presenter.



Figure 3.
Discussion and Q&A Sessions

As a result of this discussion, several themes that emerged as research ideas are as follows:

Table 1.

Proposed KIR Group Research Themes

Group	Proposed Research Theme
1	Lack of student interest in extracurriculars
2	Students lack concern for the environment.
3	Room security discipline
4	Concerns about further studies
5	A lack of enthusiasm in scouting activities
6	Applying everyday language in Islamic boarding schools.
7	The ramifications and consequences of the side dishes have gone.
8	The utilization of Arabic in Islamic boarding schools

Source: Community Service Team Documentation, 2023

Carrying out Observations and Interviews

Based on the predetermined theme, each group was assigned to conduct simple observations and interviews around the Islamic boarding school after the first day's training event. Under the supervision of the KIR supervisor, each group member carried out observations and interviews independently and then presented the results on the second day.

Research Results Presentation Session

The final phase in implementing the strengthening of Youth Scientific Work at Daarul Ukhuwwah Putri 2 Islamic Boarding School will require each group to present. The presenter selects the groups to present at random. The presenter assigned observation and interview assignments, and each group presented the process and results of their work. The order of presentation groups emerged at random using a spin wheel. The presenter gets to assist the students presenting if necessary during the presentation. Other students received instructions to pay attention and listen to the contents of the presentation by the group of students presenting. After the presenting group finished their presentation, students were allowed to ask questions to create an interactive environment.



Figure 4.
Presentation of Research Results

The following are the outcomes of research conducted by students.

Table 2

Research Results of the KIR Student Group

Group	Proposed Research Theme	Research Problem	Results
1	Lack of student interest in extracurriculars	Why are female students lazy about taking part in extracurricular activities?	Some female students feel obligated because they are compelled (forced) to participate in extracurricular activities that do not interest them because of specific quotas for each.
2	Students lack concern for the environment.	Why are students not particularly concerned regarding the state of cleanliness of the environment surrounding the Islamic boarding school?	Students at Islamic boarding schools are selfish, apathetic, and lazy when it comes to retaining the cleanliness of their environment. The response to this issue is self-awareness, providing positive role models among students, and penalties for dissuading them.
3	Room security discipline	Why do female students enjoy spending time in their rooms, primarily while others are engaged in teaching and learning activities?	Every student has to establish a personal view of discipline. SOPs and rules exist to punish those violating these rules to create a sense of deterrence.
4	Concerns about further studies	Female students need an adult to consult with and help locate a way out since they lack anyone to speak in Islamic Boarding School.	The demands of parents and Islamic boarding schools may occasionally rivalry. The treatment of female students at Islamic boarding schools frequently needs to meet their expectations, and the ustadzah's reply to reaching out to parents could be faster. Some parents are hesitant to be parted from their children. The solution to this problem is for both parents and female students to demonstrate a firm stance, hoping that female students will be more attuned to the problems of other female students.

Group	Proposed Research Theme	Research Problem	Results
5	A lack of enthusiasm in scouting activities	What causes female students to run out of side dishes at mealtime?	Some female students use old vouchers today. Voucher use has to occur during the time of grace so that students remain unharmed by side dishes. The solution to this problem is for the kitchen guard to be on time when assisting with opening and closing and verify expired vouchers when grabbing side dishes.
6	Applying everyday language in Islamic boarding schools.	What causes female students not to use certain languages at certain times?	lack of awareness among female students regarding the rules for using certain languages
7	The ramifications and consequences of the side dishes have gone.	Why are female students not enthusiastic and losing interest in scouting activities?	Consumed with activities for female students and no instructors from outside the Islamic boarding school, then a lack of activities or occurrences in scouting to make scouting activities more engaging (boring).
8	The utilization of Arabic in Islamic boarding schools	Why do female students prefer Arabic over English?	Islamic boarding school learners opt for learning Arabic, given that the majority of activities at Islamic boarding schools involve speaking Arabic. At the same time, there are no Arabic language programs for those with no interest in it, so they are compelled to use Arabic regularly.

Source: Community Service Team Documentation, 2023

The event took place in an interactive setting. Each group presents the results of their research to the other groups. Each group, led by a student team, attempted to explore and reflect on their research. What should be added from their previous research, and how can it be improved? The second day's research facilitation, which was primarily delivered by the student team, had two goals: to provide a better picture of how to conduct research by people of similar ages and to hope that the language used is more accessible for students to understand while also providing "from students to students" experience.

On the second day, students participating in this community service activity did their best to present their research findings. However, due to limited facilities, students delivered presentations only on plano paper prepared by the internal community service team. Because community service activities occur in Islamic boarding schools, students have limited access to technology, such as WiFi, to access journals or reading materials, making it challenging to foster research among students. This condition is an exciting aspect of community service.

Program Evaluation

The evaluation procedure for community service activities is divided into two steps: 1) internal review by the community service team and 2) input from students participating in training, which the KIR supervisor qualitatively compiles. According to the internal team evaluation findings, the two-day community service activities went well despite limited resources, such as students' incapacity to look for samples of scientific writing, such as essays or papers, and utilizing electronic searches and WiFi networks. The Islamic boarding school's tight study schedule makes it difficult to perform this service activity, as the chosen period must be free of dormitory and school obligations.

In addition, student feedback is communicated via the KIR online supervisor. According to the KIR supervisor, students who participated in the training were fulfilled, mainly because they learned new things from people outside the Islamic boarding school. The material was also easily assimilated because it was provided in a conversational rather than formal tone. These students, along with KIR supervisors, hope that this activity will continue to be more sustainable.

CONCLUSION

The activities of community service that have been done for 2 days are conducted to strengthen the capacity of KIR in introducing simple research to students of Islamic boarding schools. Aware that KIR at Daarul Ukhuwah Islamic Boarding School was only formed in 2020, this community service activity is the initial initiation to introduce research to students. In the community service, the students were taught how to conduct simple research on topics familiar to their daily routine in the Islamic boarding school. This includes implementing simple data collection by observation and interview, then presenting the findings in the field. This effort of introducing simple research is only the first step toward introducing research to students. Building a stronger KIR requires more time and continuous, consistent activities. Further community service activities can then create simple, easy-to-understand research modules to guide students in developing research and eventually becoming a curriculum.

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COMPETING INTERESTS

There are no conflicts of interest to disclose.