The Importance of Mini Research Projects for Accelerating Thesis Writing

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Writing a thesis is often an obstacle for final semester students. A myriad of problems become the reason for every student for not being on time to complete a thesis. This study aims to determine the contribution of mini research projects in supporting thesis writing and the usefulness of mini research projects. This action research was carried out after the end of the 2021/2022 odd semester, in the master's study program of Islamic religious studies, the Islamic University of Indonesia as many as two classes in the education research methodology course. Data collection techniques using a questionnaire. The data analysis technique was carried out descriptively, through the stages of data reduction, data display, and drawing conclusions. The results showed that the writing of a thesis proposal draft was proven by 72% of mini research reports that supported the preparation of student thesis proposals; the value of benefits obtained by students include adding 18% experience, increasing 39% understanding, and speeding up 43% thesis proposal writing. Suggestions from students that strategies like this need to be maintained and improved by making interactive learning videos during learning and the implementation of supervisors so that they can be accessed at any time, especially for the students concerned.

Keywords: acceleration, thesis writing, student, mini research, PjBL

INTRODUCTION

The development of multimedia technology has changed the way people learn, obtain various Learning is a process of interaction among students, and educators and learning resources in a learning environment (*Law on the Republic of Indonesia's National Education System Number 20*, 2003). Project-based learning (PjBL) is an approach that prioritizes students to be able to solve problems which they are encountered. In this learning, students will play the role of a professional who tries to solve problems in everyday life (Hasani et al., 2017; Issa & Khataibeh, 2021; Zancula et al., 2017).

The characteristics of the Project-based Learning model include students being faced with concrete problems, looking for solutions, and working on projects in teams to solve problems. In the PjBL model students not only understand the content, but also develop skills in students how to play a role in the field. Skills developed in PjBL include communication and presentation skills, organizational and time management skills, research and investigation skills, self-assessment and reflection skills, participation, and critical thinking. Performance assessment on PjBL can be done individually by taking into account the quality of the product produced, the depth of understanding of the material, and the contribution made to the ongoing project realization process. PjBL also allows students to reflect on their own ideas and opinions, and make decisions that affect project outcomes and the learning process in general, and present the final product (Educational Technology Division Ministry of Education, 2006; Indrawan et al., 2019; Markula & Aksela, 2022; Putra et al., 2021).

Project-based learning (PjBL) is known to improve various competencies such as: academic achievement, higher order thinking and better critical thinking skills, improving problem solving abilities, developing creativity, increasing independence, the ability to see situations from other perspectives better, a deep understanding of learning materials, a more positive attitude towards the

knowledge being studied, a more positive and supportive relationship with colleagues, increasing the ability to communicate sociably and increasing learning motivation (Abdullah & Salisu, 2017; Almulla, 2020; Ana et al., 2013; Anazifa & Djukri, 2017; Hasani et al., 2017; Issa & Khataibeh, 2021; Supiandi & Ege, 2017; Veselov et al., 2019).

One of the strategies for implementing PjBL in the Research Methods course is mini research activities. In these activities, students are directed to conduct a simplified research in scope and research area. Research is an important approach to improve the quality of learning (Kemendikbud, 2018).. Therefore, integrating learning with research is a form of increasing students' abilities in opening knowledge horizons, honing critical, logical, solution-based thinking skills, and being more sensitive to phenomena that occur in the surrounding environment (Basu, 2020). Research is an activity carried out according to scientific principles and methods in a systematic manner to obtain data, and information related to understand and/or test a branch of science and technology (Basu, 2020; Rathnakar. G, 2018). Through research, solutions and scientific conclusions will be obtained regarding a problem so that humans can practice it directly to change their lives.

PjBL with the strategy of implementing mini research is learning that combines research steps in the learning process according to the type and research method of interest. Learning by implementing a mini research strategy is carried out with a teaching system that is authentic problem solving with the point of view of problem formulation, problem solving, and communicating the benefits of research results (Haryono & Adam, 2021). Research that is small in scale, does not require a lot of actions, is used as a place for novice researchers, especially for students, which is then known as mini research. Mini research is a research-based field practice (Haryono & Adam, 2021) to compile scientific writings made by students as assignments given by the lecturer in charge of the course. The goal is that students are able to express scientifically their creative ideas in solving a problem.

Previous research about mini research projects for students that have been carried out such as the implementation of mini-research projects to train undergraduate students' scientific writing and communication skills (Haryono & Adam, 2021); development of students' final project through PjBL (Ana et al., 2013); acceleration of scientific publications through article writing projects for students (Salamah & Darmalaksana, 2021); effect of learning mini research projects on ability to analyze conservation problems (Leksono et al., 2020); improvements of an undergraduate course (Zancula et al., 2017) and also project-based learning in writing an educational article (Hasani et al., 2017).

The research illustrates that research mini projects are beneficial in all respects, including improving writing skills, analyzing problems, and also improving the quality of learning. Therefore, this study aims to determine the contribution of mini research projects in supporting the acceleration of thesis writing and to determine the usefulness of research mini projects for students. The urgency of this research is to improve and improve the quality of learning. The thesis is not only done perfunctory in the final semester (4th semester), but with the implementation of a mini research project, thesis writing can also begin in the first semester (1st semester). Thus, it is hoped that students can complete their studies on time and their final assignments will be of higher quality.

METHOD

This research belongs to the type of action research, by providing treatment with the application of mini research within 7 mandatory lecture meetings during formal lecture hours and 3 additional free online consultation times. The research was carried out after the 2021/2022 odd semester ended. The research was conducted at the master's program of Islamic religious studies, Islamic University of Indonesia. Subjects and objects of research were two classes in the subject of educational research methodology with 28 students as respondents.

The mechanism, learning is done online for 1 semester. The results of PjBL through this mini research are converted as mid-semester exam scores. The data collection technique used an open-ended question. At the end of the semester, after students have submitted their thesis proposals, students are asked to fill out a questionnaire. The data analysis technique was carried out descriptively, through the stages of data reduction, data display, and conclusions (Miles et al., 2014). At the data reduction stage, data was collected through online survey questionnaires. After the data is collected, the data is tabulated and coding for each element is made. After that, the data are presented in tables and figures as a representation of the research results. Finally, conclusions are drawn and data verification is carried out.

FINDINGS AND DISCUSSIONS
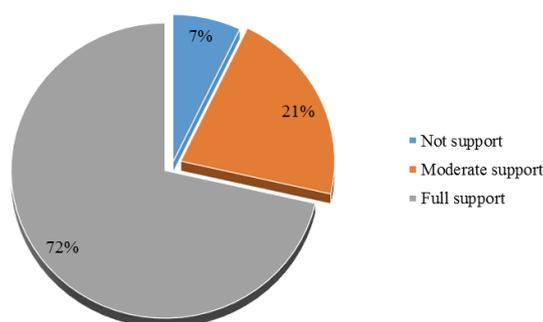**Contribution of mini research projects in support of student thesis proposals**

Figure 1
Contribution of research mini-projects in support of thesis proposal

According to figure 1, as many as 72% of students said that mini research supports writing their thesis proposal. The supporting relevance between research mini projects and the preparation of student thesis proposals is in terms of: research focus, underlying theory, type of research, and research methods. As many as 21% of students who said moderate meant that the mini-research they compiled compared to a thesis proposal whose title had been approved by the head of the study program had a slight difference, but it was not crucial. For example, changes in the object or location of research, research methods, or in terms of diction in the title.

As many as 7% of students stated that the mini research project did not support the thesis proposal. This happened because there was a change between the results of the mini research and the thesis proposals made by students, so that the results of the mini research students were not used as a basis for building the roadmap for their thesis research. The main factor that causes this problem is the confusion factor of students who are still not steady and confident about the research topic taken so that the research focus easily changes according to the mood of students. In addition, other influencing factors are the lack of concentration of students during lectures; the lack of active participation in lectures conducted online and offline due to the busy schedule of dividing time with students' daily tasks, especially those with the status of school principals, teachers, ustadz, teaching the Qur'an, Al-Qur'an education parks, and others.

Student mini research activities carried out in half a semester produce pre-research reports that can be scientifically justified. Next, the results of this mini-research can be used as initial data (needs assessment) as a preliminary study in compiling a student thesis research proposal with a note if the thesis plan has relevance to the previous mini-research that has been carried out. This form of data support can be stated in the background of the thesis proposal to strengthen the issues raised.

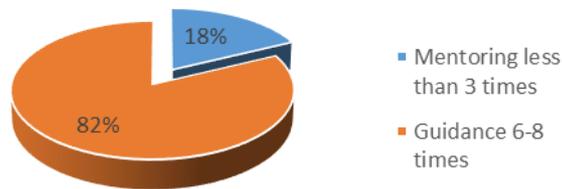**Intensity of lecturer guidance**

Figure 2
Intensity of lecturer guidance

The implementation of mentoring carried out by lecturers who support metopen courses is carried out in online and offline modes that are adapted to each student's free time. In the online mode, guidance is carried out all out, which is not limited by space and time, including mentoring via whatsapp, in addition to guidance every week during lecture meetings. Students who stated that their mini research supported the writing of a thesis, said that they received intensive guidance from lecturers with a time span of 6-8 times as depicted in figure 2. Meanwhile, students who feel otherwise, get mentoring less than 3 times, due to their own mistakes, namely not being able to manage time well.

The benefits obtained by students from the sufficient intensity of guidance make students better understand the direction and flow of the research to be carried out, more easily understand and master the flow of theory formulation, understand the focus of their research, and also are able to choose the right research method to solve problems that have been discussed. In the end, students find a systematic and coherent line of thinking starting from a mini research to a thesis proposal. Furthermore, students are able to manage time well to complete their final assignments on time.

Benefits felt by students with Mini Research Project-based learning
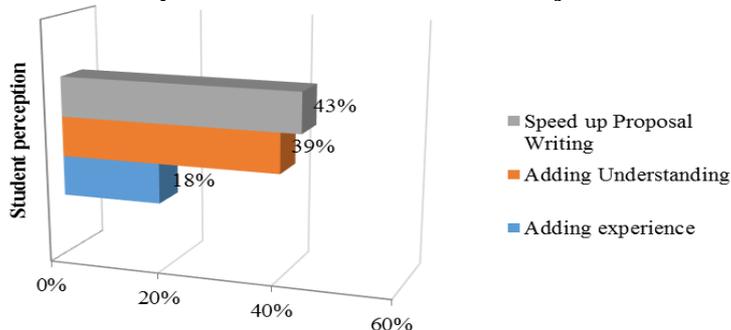

Figure 3
Percentage of usefulness of mini research projects

Mini research project-based learning in research methodology courses provides benefits for postgraduate students such as; increasing motivation, understanding of scientific methodology, improving academic scientific writing technique skills and adding experience and references. Broadly speaking, benefits from implementing a research mini project can be grouped into three groups, namely; increasing experience by 18%, increasing understanding by 39%, and speeding up writing a thesis proposal 43%, as shown in Figure 3.

Student assessment of the learning process

By being given mini research assignments and intensive guidance in a structured way, students can understand how to write in doing mini research and thesis proposals. The more you understand the flow of writing a thesis proposal, the easier it will be for to prepare a thesis proposal. Broadly

speaking, the systematics of mini research also resembles the systematics of thesis. So it is hoped that after successfully compiling this mini research, it will be easier for students to compose a thesis. Because the situation is still in the covid-19 pandemic, learning is done online (Toraman, 2021). Even so, students also said that the lecture strategy even though the dominant online mode was felt to be effective. 100% of students were satisfied with the learning carried out, they mentioned that it was very communicative and interactive, gave many opportunities to explore themselves and even lecturers provided the widest free time opportunity with continue to facilitate and provide time whenever there are students who want to consult directly or through social media. The percentage of student assessment of this learning process can be presented in Figure 4 below.
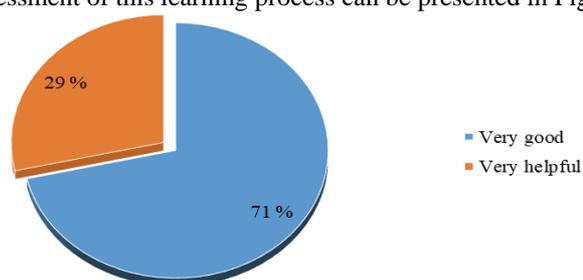

Figure 4
Percentage of student assessment of the learning process

Constructive feedback and suggestions for improving the learning process in the future

The learning process that has been carried out is felt well by the students. Nevertheless, there are student proposals to complete and perfect the mini research-based learning model. The proposals include the following.

> *"It is better to have a lot of face-to-face meetings, it is better if the research methodology courses are in semesters 1 and 2 so as to speed up the preparation of the thesis, an example is needed in providing revisions to the thesis proposal, more intensive mentoring, special assistance for Classroom Action Research (CAR), there needs to be a book guidelines for CAR, it is necessary to provide metopen content in the form of short videos, and a question and answer portal that can be followed by Islamic religious studies classes, as well as inclusion of frequently asked questions so as to save time for studying, added material about Ms. word, Mendeley to all the technicalities for the preparation of proposals and technical can be mastered by students. In addition to being given written guidance, students need to be given suggestions for references, and a schedule for guidance needs to be arranged. To make it easier for all students to be active during the meeting (5 students were taken) to convey the progress of writing their mini research/thesis proposal".*

DISCUSSION

This research is an action research using project based learning (PjBL) in the form of mini research. Mini research is a research-based field practice (Haryono & Adam, 2021). This mini-research is part of a lesson plan prepared by a lecturer in a research methodology course, at the master's program in Islamic religious studies, Universitas Islam Indonesia. As we know that not a few students have difficulty in preparing a thesis proposal. To anticipate the accumulation of these problems and accelerate the preparation of thesis proposals, a project-based learning model was initiated with several treatments carried out.

The project introduced in this course is a mini research project. This project is introduced to all students who take research methodology courses at the beginning of their lectures in lecture contract activities. Once implemented, it provides many benefits for students and is the right solution to speed up writing thesis proposals. As according to Islamiah (2020), the solution for students who have difficulty designing research proposals is reading a lot of international journals, articles and books,

finding lots of material and reference sources, asking for help from lecturers and friends, using several techniques in developing ideas for example through mini research projects and improving their academic language.

Treatment in research mini projects begins with determining research interests. Students are required to choose their respective research interests by considering their understanding, abilities, and references that can be found. Furthermore, students are guided to find the root of the problem that will be revealed by using the 5W+1H (What, Who, When, Why, Where, and How) questioning flow and applying a fish bone diagram. Based on these findings, students are directed to formulate the problem or find the focus of the problem to be studied. Then, they are guided to formulate the title and predict the solution or focus on the problem to be solved. The next step is that students are assisted to find theoretical constructs that will become the theoretical basis and support the results of their research findings. The final step is that students are introduced to the right methodology to solve the problem formulation or research focus. Everything is done with an andragogical learning approach and is more directed to do the inquiry process with assistance that is not limited by time and place (all out).
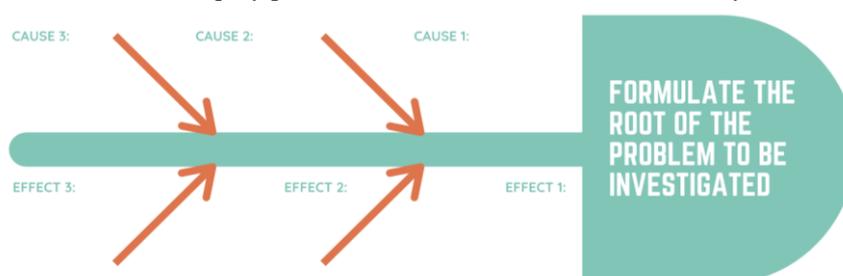
Figure 5
Fishbone diagram

Based on the research results, it was proven that research mini projects contribute (72%) in supporting the preparation of student thesis proposals. The same results study were also found by Haryono & Adam (2021) that 98% of students gained knowledge and skills in scientific writing through writing a practical research mini-report. Students' communication skills also showed a better improvement during presentations. As well as, research mini projects are proven to be able to improve students' understanding, especially in the inquiry process which includes the process of exploring, assessing, interpreting, synthesizing, and informing data (Elisa et al., 2021).

Based on data collected from questionnaire, it can be deduced that students get many benefits in the preparation of mini research projects. Like previous research, this research mini project is useful for training students' on scientific writing, and communication skills, improving their skills in project management collaboration, and communicative competence, improving their ability to analyse conservation problems and for improving of an undergraduate course (Zancula et al., 2017). In addition, project-based learning is also a solution in accelerating not only in writing thesis proposals, but also in scientific publications (Hasani et al., 2017; Salamah & Darmalaksana, 2021). Through research mini project, it is hoped that the quality of student final assignments will be trusted. Consequently, in the future, it is assumed that students can complete their studies on time and their final assignments will be of higher quality.

CONCLUSION

Based on the results of the study, it can be concluded that project-based learning with the application of mini research in research methodology courses has a positive impact on accelerating thesis preparation, as evidenced by 72% respondents. The benefits obtained by students through the

implementation of research mini projects include increasing experience (18%), increasing understanding (39%), and accelerating thesis proposal writing (43%). The benefits obtained by students from the sufficient intensity of guidance make students better understand the direction and flow of the research to be carried out, better understand the focus of their research, and are able to choose the right research method to solve the problems which that have been formulated in their research. In the end, students find a systematic and coherent line of thinking starting from a mini research to a thesis proposal. Suggestions from students that strategies like this need to be maintained and improved by mentoring and making interactive learning videos during the learning process, so that, they can be accessed at any time, especially for the concerned students.

SUGGESTION

This research is still limited to action research with data collection techniques in the form of surveys related to the achievement of mini research projects at the end of the lesson. This research can also be used as part of the evaluation of the implementation of learning. As a form of recommendation, the next research can test the quality and effectiveness of theses and mini research prepared by students, how effective and how much improvement can be measured. The basic research methodology of each student is not the same, therefore a matriculation policy is needed to equalize initial abilities before this course is implemented.

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