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ABSTRACT (11pt)

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A. INTRODUCTION (11pt)

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B. RESEARCH METHODS (11pt)

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The population is the whole subject/object of research. The population was all SMP Negeri 1 Tambangan in the even semester of the 2019/2020 academic year, totalling 160 students in 6 classes, based on considering students' cognitive level who have entered the formal operational stage (Ruseffendi, 2006). The sample is part of the population's size and characteristics (Sugiyono, 2012, pp. 118-200). The sampling technique in this study use Probability Sampling. The type of sampling is Simple Random Sampling. The research sample was selected from two classes of students, class VIII-1 as the experimental class, namely the class treated with the discovery learning model consisting of 26 students, and class VIII-2 as the control class, given regular learning consisting of 26 students.

This research consists of the preparation stage, implementation stage, analysis stage and report writing. Completely, research procedures can be seen in figure 1 below.

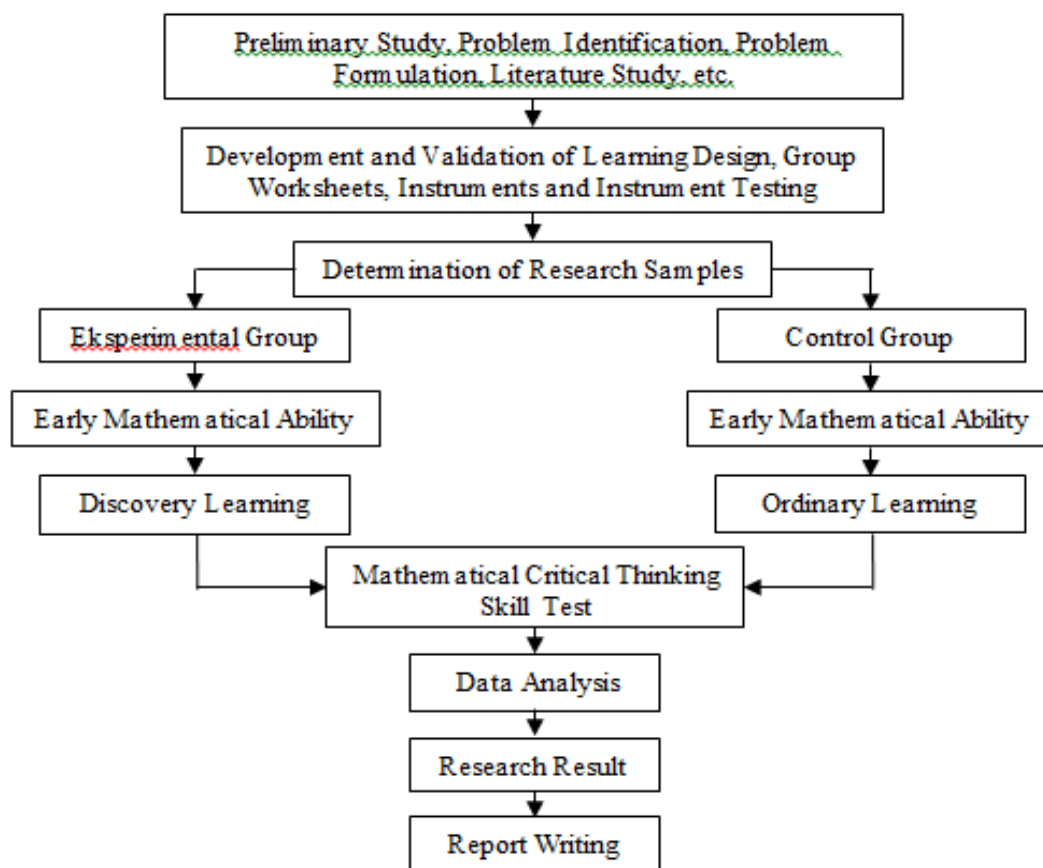


Figure 1. Research Procedure

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Data collection techniques using test instruments, namely the early mathematical ability test and the mathematical critical thinking skills test. Data analysis using quantitative analysis (inferential). The early stage is descriptive analysis, namely calculating the average, standard deviation, maximum and minimum values of the mathematical early ability test data and mathematical critical thinking skills test data. The second stage is the post-test data using the prerequisite analysis test namely normality and homogeneity tests, and the third stage is hypothesis testing. Statistical hypothesis test using two-way ANOVA. Statistical hypothesis test using two-way ANOVA. Two-way ANOVA is an inferential technique used to test the difference in mean values. The statistical model of this study (Syahputra, 2016, p. 169) is listed below:

$$Y_{ijk} = \mu + \alpha_i + \beta_j + (\alpha\beta)_{ij} + \varepsilon_{ijk} \quad (1)$$

where: $i = 1, 2; j = 1, 2, 3; k = 1, 2, \dots, 26$

Information:

- Y_{ijk} = score of mathematical critical thinking skills of k-th students, who get i-th learning, at j-th early mathematical ability.
- μ = actual average score (constant value)
- α_i = the additive effect of i-th learning
- β_j = the additive effect of j-th
- $(\alpha\beta)_{ij}$ = the interaction between the i-th learning and j-th early mathematical ability
- ε_{ijk} = the effect of experimental deviation from the score of the k-th student who gets the i-th learning at the j-th early mathematical ability

1. Sub Title (11pt)

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C. RESULT AND DISCUSSION (11pt)

The Early Mathematical Ability Test is used to determine the research sample class's equivalence and the student's abilities before the learning process is carried out. Table 1 summarizes the descriptive analysis of student Early Mathematical Ability data on the learning objectives.

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Table 2 summarizes the grouping results of students' mathematical ability.

Table 2. Distribution of Research Samples

Research Sample Class	Student Ability		
	High	Medium	Low
Experiment Class (Discovery Learning)	6	15	5
Control Class (Ordinary Study)	5	15	6
Total (N = 52)	11	30	11

The mathematical critical thinking skills test was attended by 26 students for each class so that in the data analysis, the subjects of this study were 26 students who took the final test (post-test). After being given the discovery learning model's application, the students did a mathematical critical thinking skill test to see how much influence the discovery learning model had after being given the treatment.

D. CONCLUSION AND SUGGESTIONS (11pt)

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