

# The Influence of the Integrated Thematic Learning Model of High Order Thinking Skills (HOTS) and Personality Types on Basic Student Learning Outcomes

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**Abstract** –This study aims to analyze the impact of learning models and personality types on the study's performance. All fourth-grade students of the Samadua Public Elementary School had a study sample of 57 people composed of 30 individuals taught by the play learning model at Sd Negeri Kasik Putih. The role and 27 SD Negeri Air Sialang IV classes are taught using a thematic learning model integrated with HOTS. The research approach was an almost experimental one with a factorial configuration of 2 x 2. Data were presented using descriptive statistics followed by inferential statistics using bidirectional ANOVA with significant  $\alpha = 0.05$ , accompanied by the Scheffe test. Previous experiments in the form of test review normality and homogeneity. hasil test study demonstrate: (1) the learning results of students trained to play a role model of learning are higher than the learning result of students taught through a thematically integrated model HOTS.

**Keywords**– HOTS, thematic learning model, personality types

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*Received:* ----.

*Accepted:* ----.

*Published:* ----.

## 1. Introduction

This study was inspired by learning from the Province of Aceh, which is still traditional, particularly in schools in remote areas such as certain primary schools in the District of Singkil, West Aceh, Seumelu, and Nagan Raya. The available facilities and resources are limited. Furthermore, learning programs have not used the local culture and atmosphere, as indicated in the 2013 Curriculum [1]. Students attending school often come from middle to lower-middle backgrounds; teachers are not yet competent in implementing thematic learning. In contrast, thematic learning in the 2013 curriculum has long been implemented in elementary schools, which is an issue.

Based on the preliminary study, there were many fundamental learning problems in Aceh provincial elementary schools, including learning in Aceh province still looks conventional. Teachers use ordinary textbooks as teaching tools, and learning is more prevalent using the teaching process. Hence, students are not motivated to learn.

Researchers' various literature indicates that: until now, teachers use conventional learning more often than applying thematic learning models. The taught content is textual so that students memorize more content [4]. Teachers are not able to perform a range of learning models since teachers do not understand the differences in learning models that have been established today[5].

Furthermore, teachers find it challenging to implement thematic learning models, while the government has long repeated this thematic learning model [4]. Culture's role is very important in building a nation's civilization if traced, many factors influence social issues, including education, cultural changes, changes in national values, the indifference of the younger generation towards customs, etc [6].

In addition to paying attention to subjects' characteristics, in deciding the learning model to be used, condition variables must be considered for optimum learning outcomes [7].

One of the variable conditions is a personality type. Personality style is one factor affecting student learning outcomes [8].

Personality is a relatively sedentary human pattern of specific characteristics affecting actions in various circumstances [9] [10] [11]. There are extrovert and introvert personality forms [12].

An extrovert has a high score in (1) Bravery for adventure, which is dissatisfied when there is no variety and likes to pursue pleasure; (2) affiliation, which is to have warm and friendly feelings towards others, likes to hang out; (3) positive emotions that are joyful or happy, cheerful and hopeful about their future and excited; (4) The energy component describes the movement, moving quickly. These different traits influence learning styles, classroom behaviors, and the propensity to include learning.

In a traditional class situation, judging from the atmosphere or a class situation, in general, is an atmosphere more suited for an introvert. In the classroom, where other people are involved, like it or not, a student must communicate with his peers and teacher. This scenario is an extrovert's favorite environment, loving interactions with others [13].

On the other hand, an introvert prefers relatively little social stimulation in an environment. An extrovert is more suitable for class conditions than an introvert when viewed from a class environment [14].

Based on the anticipated experiences in the classroom, it is predicted that a student who is active in the classroom is better than a passive student. In the classroom, it is anticipated that the teacher's interpretation would address questions and answers. This also means the propensity to interpret or measure observable activity learning outcomes [15].

By default, an extrovert is more active, always asking questions, so extroverts can be judged and considered more active than introverts. An extrovert appears more positive and motivated than an introvert. An extrovert is often seen as more inspired than an introvert. Extroverts are even more resilient to predetermined accomplishments. Therefore, student learning results with extrovert personality types are higher than those with introverted personality types [15].

The role-playing learning style seems best for students with extroverted personality types. This learning model involves a lot of social interaction, intensive communication, difficult circumstances, and responsiveness to new experiences. Meanwhile, the HOTS integrated thematic learning model is more appropriate for students with introverted personality styles due to less frequent social experiences with the HOTS integrated thematic learning model [16]. The integrated thematic learning model of HOTS is likely to cause boredom in students with extroverted personality types. In contrast, a role-playing learning model that constantly demands active and intense interaction with others may stress introverted students [17]. Thus, student learning outcomes may be expected to associate with learning models and personality types.

The study hypotheses are: (1) The learning outcomes of the group of students taught using the role-playing learning model were higher than the groups of students taught using the HOTS integrated thematic learning model; (2) the learning outcomes of students using extrovert personalities were higher than those with introverted personalities.

## 2. Method

The Samadua District conducted this study. The research period was conducted from August to October 2020 within six meetings, each 3 ( three) lesson hours. The study time was tailored to the project implementation calendar.

This study's population was fourth-grade Samadua District Elementary School, students. This study sample was 13 grade IV students at SD N Kasik Putih, class IV-a, and 14 IV-b students. And IV SD N Air Sialang students. Fourteen class IV-a and sixteen class IV-b. Thematically, SD N Kasik Putih and SD N Air Sialang,

In this study, fourth-grade students will be taught using the HOTS integrated thematic learning model at SD N Kasik Putih Harian. In contrast, grade IV students will be conducted using a role-playing learning model.

The analysis approach used is a quasi-experiment. This study approach is used because the class used for treatment is a class formed before or without altering its circumstances and conditions. The study framework used is a factorial design 2x2. This architecture contrasts the role-playing learning model's impact with the HOTS integrated thematic learning model on learning outcomes. The role-playing learning model and the integrated thematic learning model in this study are independent variables, personality type as variable moderator, and student learning outcomes are considered the dependent variable.

There were research variables in this study consisting of the dependent variable, namely student learning outcomes, the independent variable, namely the role-playing learning model and integrated thematic learning model, and the moderator variable, namely the personality form divided into 2 (two) sections, namely extrovert and introvert. (1) Learning outcomes in this study include students' ability to grasp concepts, clarify the relationship between images, and incorporate these concepts in learners' lives. Learning results include students' cognitive and affective fields. Ratings represent student learning outcomes as the effects of the teacher's assessments and findings during and after learning. (2) The learning model is characterized as a learning plan that shows a certain learning pattern in which teachers, students, and learning resources realize learning conditions or environmental structures that trigger learning in students. (3) Personality type is a psychologically inherent component in a person with two personality-type orientations: extrovert personality type and introvert personality type. The introverted personality type is a personality type where a person derives a sense of satisfaction from self-reflection and dislikes others' interactions. On the other hand, extrovert personality styles prefer to enjoy connections with others and hate being alone.

The steps to incorporate treatment in this study are as follows: (1) Performing a pre-test; (2) Implementing learning with integrated thematic and role-playing learning models HOTS; (3) Treatment of basic skills to explain Allah as a savior; (4) After completing a meeting, feedback is conducted to assess the efficacy of learning; (5) At the end of the subject, a format is given. At this point, the teacher awards student groups that achieve the highest achievement. Calculation of group values is performed by adding the importance of individual group growth, and group members separate the results.

The instruments used in this analysis in data collection were: (1) personality-type questionnaires, (2) student learning outcome assessments, and (3) student observation sheets. It's first checked before using the instrument. The learning instrument's test results were reviewed to determine the difficulty index, distinguishing strength, validity, reliability, and distractor efficacy. Personality style questionnaires, learning outcome assessments for awareness aspects, and observations for attitude evaluation were first consulted with several experts on construct validity.

The method used is descriptive and inferential statistical techniques. The statistical methodology used to classify data is to determine to mean, mean, mode, and default deviation values. The data obtained is then provided as a frequency distribution table and histogram. The inferential statistical method used to test the hypothesis is a two-way variance analysis (ANOVA) method. Before evaluating the idea, the research criteria are tested, namely the test of normality and homogeneity.

The normality test used the Liliefors test, and the F and Barlett test used homogeneity. Data is calculated to have a normal distribution if  $L \text{ count} < L \text{ table}$  has a meaning level of 5%. Meanwhile,

to assess the normality of the data using the criterion if the data has a homogeneous variance, the contrast of the measured probability value is lower than the 5 percent meaning level table value.

After checking the research criteria, the two-way ANOVA test is performed. Using a 2 X 2 factorial design, Two-way ANOVA is used to evaluate the hypothesis that states the average group difference. Following the two-way ANOVA test, further research occurs to assess which variables have significant differences using the Scheffe test.

### 3. Result

Normality checks are conducted to determine whether or not the specimen used comes from a population commonly distributed. The normality test was performed on eight sample groups, all of them normally distributed, as shown in Table 1.

Table 1. Normal test results student learning results review. Normal test results.

No	Group	Lt	Lo	Ket
1.	Student Learning Outcomes Are Taught Using Role-Playing Learning Models	0.162	0.154	Normal
2.	Student Learning Outcomes Taught Using the HOTS Integrated Thematic Learning Model	0.171	0.126	Normal
3.	Learning Outcomes of Students with Extroverted Personality Types.	0.162	0.158	Normal
4.	Learning Outcomes of Students with Introverted Personality Types	0.171	0.136	Normal
5.	Learning Outcomes of Students With Extroverted Personality Types Who Are Taught Using Role-Playing.	0.215	0.195	Normal
6.	Learning Outcomes of Introverted Personality Types Taught Using Role-Playing Learning Models.	0.246	0.130	Normal
7.	Learning Outcomes of Extroverted Personality Types Taught Using the HOTS Integrated Thematic Learning Model.	0.246	0.143	Normal
8.	Learning Outcomes of Introverted Personality Types Taught Using HOTS Integrated Thematic Learning Model.	0.237	0.206	Normal

The Barlett test was used to determine the variance's homogeneity. The Barlett test shows homogeneous variances between the combined HOTS study classes and thematic and role-play model learning models extroverted and introverting personality samples, RP E, RP I, JI E, and JI I samples. Table 2 includes a description of the variance homogeneity test.

The testing of hypotheses is performed using variance analysis (ANOVA) techniques. The appropriate data can be seen in Table 3 for the variance analysis in the meantime. As shown in Table 4, the ANOVA calculation results are the 2x2 factor analysis description.

Table 2. Summary of variance homogeneity testing

Sample	Varians	$\chi^2_{hitung}$	$\chi^2_{tabel}$	conclusion
Role Playing	$s^2 = 105,941$			
Integrated thematic HOTS	$s^2 = 67,385$	1,380	3,841	Homogen
Extrovert Personality Type	$s^2 = 102,562$			
The Instrovert Personality Type	$s^2 = 66,256$	1,336	3,841	Homogen
RP E	$s_1^2 = 23,882$			
RP I	$s_2^2 = 51,603$			
IJ E	$s_3^2 = 47,436$	5,963	7,815	Homogen
IJ I	$s_4^2 = 16,527$			

Table 3. Research Main Data

Personality type	Learning model				Personality type	
	RP		JI			
E	X rata	81,76	X rata	63,00	X rata	73,63
	n	17	n	13	n	30
	$\Sigma X$	1390	$\Sigma X$	819	$\Sigma X$	2209
	$\Sigma X^2$	114018	$\Sigma X^2$	52095	$\Sigma X^2$	166113
	s	4,63	s	6,19	s	10,73
I	X rata	63,31	X rata	76,36	X rata	70,07
	n	13	n	14	n	27
	$\Sigma X$	823	$\Sigma X$	1069	$\Sigma X$	1892
	$\Sigma X^2$	52655	$\Sigma X^2$	81877	$\Sigma X^2$	134532
	s	6,52	s	4,24	s	8,50
Total	X rata	73,77	X rata	69,93	X rata	71,95
	n	30	n	27	n	57

$\Sigma X$	2213	$\Sigma X$	1888	$\Sigma X$	4101
$\Sigma X^2$	166673	$\Sigma X^2$	133972	$\Sigma X^2$	300645
s	10,69	s	8,50	s	9,90

For the first hypothesis based on the 2x2 calculation ANOVA, the F count is obtained = 6.66 while the F count = 4.02 for DK (1.53) and actual level = 0.05 were determined. The F count = 6.66 > F table is identified so that the test hypothesis rejects Ho. It can also be argued that the learning results of students taught using role-play learning models are higher than the thematic learning model incorporated by HOTS can be acknowledged and empirically demonstrated. This can also be seen from the average learning model performance of RPL (= 73.77), higher than the integrated thematic learning model HOTS (= 69.93).

For the second hypothesis, based on the calculations of 2x2 factorial ANAVA, F count = 5.72 while F table value = 4.02 for DK (1.53) and the whole level t = 0.05 is obtained. It turns out that the amount of the F count = 5,72 > F table rejects Ho. Thus, students' learning results with an extrovert personality type are higher than those of students with an introverted class, which can be acknowledged and empirically confirmed. This is also evident from the form extrovert (= 76.63), higher than those of the form introverted (= 70.07).

The third test hypothesis based on a measurement of 2x2 factor ANOVA obtained F counts = 112.30. F table values = 4.02 for DK (1.53) and actual levels = 0.05. It turns out that the value of the F count = 112.30 > F table rejects Ho. Thus it can be inferred that the relationship between learning models and personality styles can be accepted and empirically proven to enhance student learning performance.

An additional test was conducted with the Scheffe test to assess the relationship between learning models and personality styles on learning outcomes. Table 5 below displays the calculations for the Scheffe test.

Table 4 Scheffe Test Summary

Statistical Hypothesis		F <sub>table</sub>	F <sub>table</sub> (3,53) α = 0,05
Ho: $\mu_{A1B1} = \mu_{A1B2}$	Ha: $\mu_{A1B1} > \mu_{A1B2}$	4,232	2,780
Ho: $\mu_{A1B1} = \mu_{A2B1}$	Ha: $\mu_{A1B1} > \mu_{A2B1}$	4,395	2,780
Ho: $\mu_{A1B1} = \mu_{A2B2}$	Ha: $\mu_{A1B1} > \mu_{A2B2}$	1,320	2,780
Ho: $\mu_{A1B2} = \mu_{A2B1}$	Ha: $\mu_{A1B2} < \mu_{A2B1}$	0,064	2,780
Ho: $\mu_{A1B2} = \mu_{A2B2}$	Ha: $\mu_{A1B2} > \mu_{A2B2}$	2,797	2,780
Ho: $\mu_{A2B1} = \mu_{A2B2}$	Ha: $\mu_{A2B1} > \mu_{A2B2}$	2,863	2,780

Based on Table 4 above, there are two of the six combinations that are compared, showing insignificant results. This is due to the absence of a significant difference between the average learning outcomes of students taught using role-playing learning models and the extrovert personality type with the mean Learning outcomes student learning outcomes that are learned

using the HOTS integrated thematic learning model and the introvert personality type. The second is that there is no significant difference between students' average learning outcomes students' learning model and the introverted personality type. Intermediate student learning outcomes are guided by using the integrated thematic role-playing learning model HOTS type and extrovert personality. Show significant results.

The implementation of this research has been tried as well and as perfect as possible by using scientific method procedures, but it does not rule out the limitations, namely: (1) Teacher's lack of understanding in implementing HOTS integrated thematic and role-playing learning models ; (2) This research was only conducted on a relatively small sample; (3) Although the research instrument has been tested for validity and reliability, the agency has only measured learning outcomes from the aspects of knowledge and attitudes obtained by students, not all of which can measure aspects of the learning process carried out to get overall learning outcomes; (4) The teacher's experience is minimal with the 2013 curriculum which was only applied in the school year where this study was conducted in which the two teachers for the two sample groups had never attended the 2013 curriculum training. With the limitations that exist in the study, the results of this study need to be interpreted carefully.

#### 4. Conclusions and Recommendations

*First*, this study's results indicate that students taught with the role-playing learning model have higher learning outcomes than if introduced with the HOTS integrated thematic learning model. Thus teachers should have broad knowledge and understanding as well as insight in selecting and compiling learning models. By having knowledge and wisdom, the teacher can design a learning design using a role-playing learning model.

*Second*, if seen from the subjects' characteristics, it takes the learning model to provide a meaningful experience of the religious values that will be applied in everyday life.

*Thirdly*, use of the total model of learning to play a role very appropriate for studying the subject, because according to the characteristics that provide an experience very close to real-world situations, and thus the learning model thematic integrated HOTS are carefully clarifying thoughts, attitudes, and the feelings of learners. But in considering whether to choose a learning model, it is necessary to consider the students' personality type to be taught.

*Fourth*, there is an interaction between the learning model and the personality type of student learning outcomes. The role-playing learning model is more appropriate or suitable for students with extrovert personality types. Simultaneously, the HOTS integrated thematic learning model is more appropriate for students with introverted personality types.

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