Analysis of the influence between study plan, locus of control learning achievement at BSM 1 High School in 2024

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A R T I C L E   I N F O

ABSTRACT

All learning objects at the high school level should be a concern. Theoretical and practical studies are balanced. Investigation and understanding at the theoretical and practical levels provide an understanding of the various materials of all subjects provided by the school to students. Improved student abilities demonstrated through learning outcomes can certainly be used to adapt and innovate to meet economic, environmental and social needs in an ever-evolving world. This includes addressing the global challenges of climate change and energy constraints by designing processes to maximize the efficient use of the earth's limited resources. Some lessons are practical learning. Learners are trained to conduct simple qualitative and quantitative research both individually and collaboratively on a range of real-world phenomena. Learners learn to find problems, make hypotheses, design simple experiments, conduct experiments, analyze data, draw conclusions and communicate the results of experiments both in writing and orally.

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1. INTRODUCTION

The current education system in schools primarily focuses on the cognitive growth of kids, with the ultimate goal of cultivating intelligence and achieving excellent academic performance in order to get admission to prestigious colleges (Susac, 2021). Schools often neglect the cultivation of pupils' individuality (Mulang, 2021)(Samsudin, 2021). Who assert that schools tend to place greater emphasis on fostering proficiency in science and technology, while neglecting the cultivation of qualities such as faith, dedication, creativity, human emotions, intuition, and responsiveness (Wibowo, 2021)(Sulman, 2021). This is further corroborated by (La, 2021)(Jawad, 2021) viewpoint, which asserts that the emphasis on cognitive growth within the educational system frequently leads to student boredom, frustration, and internal conflict due to the lack of other learning options and excessive reliance on rote memorization.

Consequently, kids develop apathy and exhibit behaviors such as rejection, laziness, quarrels, resistance towards professors, and even physical altercations (Şahin, 2022). Given this scenario, there is a requirement for services and management systems aimed at fostering student personality development (Al Mulhim, 2020). Enhancing the locus of control is one aspect that may be enhanced to promote character development in alignment with the autonomous curriculum (Sari,

2022). According to (Indiana, 2021), posits the existence of a personality trait in humans known as locus of control, which serves as the central determinant of their behavior.

In his work, (Marwan, 2020) explains that there are two distinct forms of locus of control: internal locus of control and external locus of control. An internal locus of control refers to the belief held by individuals that they have control over and are accountable for certain occurrences in their life (Nasib, 2023). They will engage in a more proactive approach to studying diverse educational materials that are applicable to the challenges they encounter, in order to enhance their comprehension of the methodologies and strategies for resolving them (Arahman, 2024). In contrast, individuals with an external locus of control firmly believe that success is primarily determined by chance (Pasaribu, 2024). As a result, they tend to adopt a passive approach, waiting for success to come their way without actively exerting effort (Sujadi, 2020). Consequently, when it comes to learning, they rarely demonstrate the motivation to independently solve problems or seek out related challenges (Simanjuntak, 2020). Moreover, they typically only engage in scholastic analysis when explicitly instructed to do so by their teachers. Individuals with an internal locus of control attribute the situations they encounter to their own behavior and actions (Karaman, 2020).

Based on this, it is necessary to systematically link internal locus of control with the learning management system that uses an independent curriculum. By examining the locus of control that students have, it can identify and later produce an appropriate management so that students show a respectful and enthusiastic attitude towards this subject.

Problem Formulation

Based on the background of the problem above, the problem formulations in this study are: Is there an effect of study plan on learning achievement of class XII students of SMA BSM 1 in the 2023/2024 academic year, is there an effect of locus of control on learning achievement of class XII students of SMA BSM 1 in the 2023/2024 academic year and is there an effect of study plan and locus of control on learning achievement of class XII students of SMA BSM 1 in the 2023/2024 academic year. Is a learning plan, locus of control and learning achievement of XII grade students of SMA BSM 1 in the 2023/2024 academic year.

2. RESEARCH METHOD

With the case study method, this research is an exposure to the variables studied, namely the study plan variable and the locus of control variable by involving qualitative data and quantitative data which will produce comprehensive information about the variables studied. This research requires a detailed and in-depth study over a period of time including the environment. This study also aims to measure the influence between the study plan variable and the locos of control variable and analyze how the independent variables, namely the study plan and locus of control, can affect the dependent variable, namely learning achievement using the independent curriculum.

The subjects chosen in this study were students of SMA BSM 1, school year 2023/2024. So the population in this study were students of class XII SMA BSM 1. The class was chosen based on the following considerations: Grade XII students have participated in pre-employment activities, so they have more knowledge and experience than grade X and XI students. Grade XII students are considered to have a more mature level of thinking than grade X and XI students. Grade XII students will soon complete their education at school, so it is very important for grade XII students to immediately prepare their learning achievements.

The BSM 1 high school class program consists of four classes, so the sampling technique used is proportional random sampling, which is a way of taking samples by paying attention to the

proportion of the number of sub-populations. Determination of sample size using the Isaac and Michael formula with an error rate of 5%. The Isaac and Michael formula can be seen as follows.

$$S = \frac{x^2 . N . P . Q}{d^2 (N-1) + x^2 . P . Q}$$

Description:
S = number of samples
N = population size
x^2 = chi squared with dk = 1, 5% error rate
d = 0,05
P = Q = 0.5

Based on calculations using the Isaac and Michael formula, the number of samples for each BSM 1 high school class can be seen in the following table:

Table 1. Research Sample

No	Class	Population	Sample
1	XII - 1	31	24
2	XII – 2	27	21
3	XII – 3	29	23
4	XII – 4	26	20
Total		**113**	**88**

The data collection method is a method or technique used by researchers to obtain research data. Good or bad research results are determined by the data collection techniques used by researchers. This study uses a questionnaire or questionnaire method as a data collection method, from the questionnaire method interval data will be obtained which is then interpreted in data analysis. The questionnaire is a data collection technique that is done by giving a set of questions or written statements to respondents to answer (Sugiono, 2012). The questionnaire used in this study is a closed questionnaire, which is a questionnaire that has been equipped with alternative answers so that respondents only need to choose answers according to actual conditions or close to these conditions. Closed questionnaires were used to measure all variables in this study.

Data analysis is carried out after the research data is collected. Data analysis techniques are directed at testing and answering the formulation of the problems posed. Data analysis in this study includes:

Descriptive analysis is used to describe and determine the state of the data based on each research variable which includes study plan, locus of control and learning achievement. Descriptive analysis was carried out with the help of the Windows Excel program. Descriptive analysis in this study includes the average score (mean), the most frequently occurring score (mode), the middle score (median), standard deviation (std. deviation), maximum score (max), minimum score (min), range (range), which is then presented in the form of tables and Pie charts. The data that has been analyzed is classified according to the tendency of the data.

3.   RESULTS AND DISCUSSIONS
Descriptive Statistics
In this descriptive statistics section, data information on each variable will be presented including frequency distribution and categorization of measurement results. To find out the description of each variable in detail, it can be seen in the following description:

Study Plan Data
Study plan data obtained from a study plan questionnaire consisting of 20 statement items and given to respondents as many as 88 students in class XII SMA BSM 1. Details of the research data can be seen in the table as follows:

Table 2. Statistical Description of Study Plan

Statistik	Nilai
Mean	67,59091
Standard Error	0,561904
Median	67
Mode	65
Standard Deviation	5,271124
Sample Variance	27,78474
Kurtosis	0,438547
Skewness	0,004552
Range	26
Minimum	56
Maximum	82
Sum	5948
Count	88

Locus of Control Data

Locus of control data was obtained from a locus of control questionnaire consisting of 24 statement items and given to respondents as many as 88 students in class XII SMA BSM 1. Details of the research data can be seen in the following table:

Table 3 Statistical Description of Locus of Control

Statistik	Nilai
Mean	84,29545
Standard Error	0,964652
Median	83
Mode	86
Standard Deviation	9,049238
Sample Variance	81,88871
Kurtosis	-0,83883
Skewness	0,236412
Range	33
Minimum	69
Maximum	102
Sum	7418
Count	88

Learning Achievement Data

Learning achievement data obtained from a learning achievement questionnaire consisting of 20 statement items and given to respondents as many as 88 students of class XII SMA BSM 1. Details of the research data can be seen in the table as follows:

Table 4. Statistical Description of Learning Achievement

Statistik	Nilai
Mean	67,625
Standard Error	0,573563
Median	67
Mode	70

Standard Deviation	5,380494
Sample Variance	28,94971
Kurtosis	1,057909
Skewness	-0,24759
Range	30
Minimum	50
Maximum	80
Sum	5951
Count	88

Analysis Requirements Testing.
Before testing the hypothesis, the assumption test is first carried out. Assumptions that must be met in correlation techniques are normality, linearity and multicollinearity.

Normality Test
A summary of the results of the normality test on each is as follows :

Table 5. Normality Test result

No	Variable	Notation	L count	L table	description
1	Study Plan	X1	0,090084	0,094448	Normal
2	*Locus of Control*	X2	0,088289	0,094448	Normal
3	Interest in Learning	Y	0,094438	0,094448	Normal

Based on the summary of the normality test results above, the data obtained that the value of L count on each variable is smaller than L table 0.094448. Namely 0.090084 (study plan), 0.088289 (locus of control) and 0.094438 (learning achievement) which means L count < L table, so the conclusion is that all research variables are normally distributed.

Linearity Test
A summary of the linearity test results on each independent variable with the dependent in this study is as follows.

Table 6. Linearity Test Results

No	Variabel	F hitung	F tabel	Description
1	X1 to Y	1,076570	1,918758	Linear
2	X2 to Y	1,485279	1,790165	Linear

Based on Table above about the summary of the linearity test results, it can be obtained that the F value for variable X1Y is 1.076570 and the F table value for variable X1Y is 1.918758, meaning that F count < F table. Then X1 is considered linear. Meanwhile, the calculated F value for the X2Y variable is 1.485279 and the F table value for the X2Y variable is 1.790165, meaning that F count < F table. Then X2 is considered linear Because X1 is linear and X2 is linear; then the conclusion is to do regression analysis can use linear regression analysis.

Multicollinearity Test

A summary of the multicollinearity test results on each independent variable is as follows.

Table 7. Multicollinearity Test Result

rX1X2	r²	tolerance	VIF		Description
0,903314	0,815977	0,184023	5,434090	If tolerance > 0,1 dan VIF < 10	This means that there are no symptoms of multicollinearity (no strong relationship) between the independent variables so that it can be continued for hypothesis testing.

Hypothesis Testing

Before testing the hypothesis, the assumption test is first carried out. Assumptions that must be met in correlation techniques are normality, linearity and multicollinearity.

First Hypothesis Testing

The simple linear regression analysis technique is used to prove the first hypothesis which reads:
H0: "There is no positive and significant influence between study plans on the learning achievement of students in class XII SMA BSM 1".
H1: "There is a positive and significant influence between study plans on the learning achievement of students in class XII SMA BSM 1".

Based on the results of the calculation, the results of the simple linear regression analysis X1 on Y are obtained, as presented in the table as follows.

Table 8. Result Of Simple Linear Regression Analysis X1 To Y

	Coeff	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95,0%	Upper 95,0%
Intercept	52,34	7,27	7,19	0,00	37,87	66,80	37,87	66,80
X1	0,22	0,10	2,10	0,03	0,01	0,43	0,01	0,43

Based on Table above obtained the magnitude of the constant or intercept (a) = 52.34 and the value of the regression coefficient X1 (b) = 0.22, so that the linear regression equation between the learning plan (X1) and learning achievement (Y) is as follows. Y = a + bX is Y = 52.34 + 0.22 X1. The equation shows that the value of the constant or intercept (a) is 52.34 and the value of the coefficient (b) of the study plan is 0.22 which means that if the study plan (X1) increases by one point it will lead to increased learning achievement (Y) by 0.22 points.

Testing The Second Hypothesis

Simple linear regression analysis technique used to prove the second hypothesis that reads:
H0 : there is no positive and significant influence between Locus of Control on student achievement Class XII SMA BSM 1".
H1: There is a positive and significant influence of Locus of Control on student achievement Class XII SMA BSM 1".

Based on the calculation results, the results of a simple regression analysis of X2 to Y, as presented in the following table.

Table 9. Result Of Simple Linear Regression Analysis X2 To Y

	Coeff	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95,0%	Upper 95,0%
Intercept	57,40	5,32	10,78	0,00	46,82	67,98	46,82	67,98
X2	0,12	0,06	1,93	0,05	- 0,00	0,24	- 0,00	0,24

According To Table above obtained the magnitude of the constant or intercept (a) = 57.40 and the value of the regression coefficient X2 (b) = 0.12, so that the regression equation between Locus of Control (X2) and learning achievement (Y) is as follows. Y = a + bX i.e. Y = 57.40 + 0.12 X2. The equation shows that the value of the constant or intercept (a) is 57.40 and the value of the coefficient (B) Locus of Control is 0.12 which means that if the Locus of Control (X2) increases by one point it will lead to increased learning achievement (Y) by 0.12 points.

Testing The Third Hypothesis
Multiple linear regression analysis techniques were used to prove the third hypothesis which reads:
H0 : there is no positive and significant influence between the study plan and Locus of Control on student achievement Class XII SMA BSM 1".
H1: there is a positive and significant influence between the study plan and Locus of Control on student achievement Class XII SMA BSM 1".

Based on the calculation results, it obtained the results of multiple linear regression analysis X1 and X2 to Y, as presented in the following table.

Table 10. Results of multiple linear regression analysis X1 and X2 to Y

	Coeff	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95,0%	Upper 95,0%
Intercept	55,48	8,96	6,20	0,00	37,67	73,29	37,67	73,29
X1	0,03	0,34	0,08	0,93	- 0,65	0,71	- 0,65	0,71
X2	0,12	0,20	0,61	0,55	- 0,28	0,52	- 0,28	0,52

Based on Table 9, obtained the magnitude of the constant or intercept (a) = 55.48, the value of the regression coefficient X1 (b1) = 0.03 and the value of the regression coefficient X2 (b2) = 0.12, so that the multiple linear regression equation between the learning plan (X1), Locus of Control (X2) and learning achievement (Y) is as follows. Y = a + b1X + b2X i.e. Y = 55.48 + 0.03 X1 + 0.12 X2. The equation shows that the value of the constant or intercept (a) is 55.48, the value of the coefficient (b1) study plan is 0.03 and the value of the coefficient (b2) Locus of Control is 0.12. Which means that if the study plan (X1) and Locus of Control (X2) each increase by one point, it will lead to an increase in learning achievement (Y) by 0.15 (0.03+0.12) points.

4. CONCLUSION
Based on the results of the research and discussion in the previous description, it can be concluded that there is a positive and significant effect of study plans on the learning achievement of class XII SMA BSM 1 students with a correlation coefficient of 0.22 and a contribution of 4.91%. then there is a positive and significant effect of locus of control on the learning achievement of class XII SMA BSM 1 students with a correlation coefficient of 0.20 and a contribution of 4.16%. Furthermore, there is a positive and significant effect of study plan on locus of control of class XII SMA BSM 1 students with a correlation coefficient of 0.90 and a contribution of 81.60%. Finally, there is a positive and significant effect of study plan and locus of control on learning achievement of class XII SMA BSM 1 students with a correlation coefficient of 0.20 and a contribution of 4.18%.

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