



Digital Receipt

This receipt acknowledges that **Turnitin** received your paper. Below you will find the receipt information regarding your submission.

The first page of your submissions is displayed below.

Submission author: Irfin Novita Arifin
Assignment title: Cek 1
Submission title: THE INFLUENCE OF LEARNING M...
File name: 2646-10468-1-PB.pdf
File size: 1,001.61K
Page count: 8
Word count: 2,754
Character count: 15,137
Submission date: 27-Nov-2020 09:35PM (UTC+1100)
Submission ID: 1458057851



European Journal of Education Studies

ISSN: 2501 - 1111

ISSN-L: 2501 - 1111

Available on-line at: www.ojs.umsida.ac.id

doi: 10.3281/zenodo.349900

Volume 6 | Issue 6 | 2019

THE INFLUENCE OF LEARNING MOTIVATION ON BASIC CONCEPTS OF NATURAL SCIENCES 2 LEARNING OUTCOMES

Irvin Novita Arifin¹
Universitas Negeri Gorontalo,
Indonesia

Abstract

The objective of this study is to explore the influence of learning motivation on students' learning outcomes in Basic Concepts of Natural Sciences 2. This survey research was conducted in the Department of Elementary Teacher Education, Faculty of Education, Universitas Negeri Gorontalo. The data from questionnaires and evaluation tests were further analyzed by using descriptive and inferential analysis with *path analysis* approach. The population consisted of all 202 undergraduate students in the previously mentioned department; further, only 130 of them were selected as the research sample. The study finds that learning motivation directly and positively influences the learning outcomes of the students in the subject mentioned above. Such a finding indicates that students with high learning motivation are more likely to enhance their academic performance, thus attaining the learning goals easily. This situation is because the encouragement in learning which drives the students to perform all-out in a particular subject, accomplishing the subject according to the timeframe and be responsible throughout the course to meet the learning objectives. In other words, high learning motivation ensures the probability to improve the learning outcomes of the students in the subject mentioned above. This finding indicates that students with high learning motivation are more likely to enhance their academic performance, thus attaining the learning goals easily.

Keywords: motivation, learning outcomes, natural sciences

1. Introduction

Learning process correlates with teaching-learning activities in which the success of the process depends on the cooperation between lecturers and students. A lecturer is obliged to provide learning modules successfully; the students' learning motivation, however, is required to meet this condition. In this study, the learning motivation varies among students in the Department of Elementary Teacher Education in Natural

¹ Correspondence: email irvinovitaarifin@gmail.com

THE INFLUENCE OF LEARNING MOTIVATION ON BASIC CONCEPTS OF NATURAL SCIENCES 2 LEARNING OUTCOMES

by Irfin Novita Arifin

Submission date: 27-Nov-2020 09:35PM (UTC+1100)

Submission ID: 1458057851

File name: 2646-10468-1-PB.pdf (1,001.61K)

Word count: 2754

Character count: 15137



THE INFLUENCE OF LEARNING MOTIVATION ON BASIC CONCEPTS OF NATURAL SCIENCES 2 LEARNING OUTCOMES

Irvin Novita Arifin¹

Universitas Negeri Gorontalo,
Indonesia

Abstract

The objective of this study is to explore the influence of learning motivation on students' learning outcomes in Basic Concepts of Natural Sciences 2. This survey research was conducted in the Department of Elementary Teacher Education, Faculty of Education, Universitas Negeri Gorontalo. The data from questionnaires and evaluation tests were further analyzed by using descriptive and inferential analysis with *path analysis* approach. The population consisted of all 202 undergraduate students in the previously mentioned department; further, only 130 of them were selected as the research sample. The study finds that learning motivation directly and positively influences the learning outcomes of the students in the subject mentioned above. Such a finding indicates that students with high learning motivation are more likely to enhance their academic performance, thus attaining the learning goals easily. This situation is because the encouragement in learning which drives the students to perform all-out in a particular subject, accomplishing the subject according to the timeframe and be responsible throughout the course to meet the learning objectives. In other words, high learning motivation ensures the probability to improve the learning outcomes of the students in the subject mentioned above. This finding indicates that students with high learning motivation are more likely to enhance their academic performance, thus attaining the learning goals easily.

Keywords: motivation, learning outcomes, natural sciences

1. Introduction

Learning process correlates with teaching-learning activities in which the success of the process depends on the cooperation between lecturers and students. A lecturer is obliged to provide learning modules successfully; the students' learning motivation, however, is required to meet this condition. In this study, the learning motivation varies among students in the Department of Elementary Teacher Education in Natural

¹ Correspondence: email irvinnovita.arifin@gmail.com

Sciences course-some are able to maintain their focus and determined throughout the course, while the others are the opposite.

Motivation is essential in learning every subject, including the previously mentioned course; this component helps the students to attain the learning objectives. University students are driven by their mental strength to complete their study; the strength comes from their willingness, attention or dreams. This inner strength of mine also conceptualizes the students' learning motivation. Within the students' motivation are embedded different values, e.g. intention, hope, objective or target, and incentive. Student's needs are a product of imbalanced situation between everything a student own and everything that the student expects. A preliminary observation finds that the students who have problems in the subject of Natural Sciences somehow assume that their problem is because of poor learning motivation.

To attain maximum learning outcomes, the students should change their approaches or methods in learning; this can also be actualized by encouraging themselves to focus on satisfying the learning objectives for the Basic Concepts of Natural Sciences subject as among the subjects that demand high learning motivation. Being highly determined or motivated students is insufficient, considering several internal (factors that come from the student self) and external contributing factors of the students' motivation. The external factor mainly revolves around facilities (such as laboratory, literature, books, journal and magazines), compliments, rewards and other elements that can improve the learning motivation.

2. Method

This research was conducted in the Department of Elementary Teacher Education, Faculty of Education, Universitas Negeri Gorontalo. The population involved 202 students of the fourth semester; only 130 of the total population were selected as the research sample in this survey research. The variable involves the independent (exogenous) and dependent (endogenous) variable. The exogenous variable refers to learning motivation (represented by the letter X), while the students' learning outcomes are the endogenous variable (represented by the letter Y). The data were analyzed in two processes, namely descriptive analysis and inferential analysis. The descriptive analysis encompasses processes, such as displaying data through frequency distribution table, histogram, average and the standard deviation. Inferential analysis was done to test the research hypothesis; this type of analysis used a regression and correlation method. Prior to hypothesis testing, the normality of the data of the three variables was examined using the *Liliefors* test. Path analysis was also used in testing the hypothesis of this research.

3. Results and Discussion

This section provides information about the data, including the data of the learning outcomes (Y) as the endogenous variable, and the early knowledge (X).

Table 1: Description of Variables of the Study

Variable of Research	Total Item	Theoretical		Empirical	
		Minimum	Maximum	Minimum	Maximum
Learning Outcomes (Y)	25	25	125	20	84
Learning Motivation	27	27	135	47	94

Following the process of data collection in the research site was a statistical analysis phase. The result of this analysis reveals that the mean score arrives at 44.18 with the median (*me*) and mode at 40.83 and 34 respectively. The distribution of the frequency is displayed in a table; the result shows that the minimum score of nine classes gets 20 with the maximum score at 84. Furthermore, the range of the score is 64. Table 2 provides the detail of these outcomes.

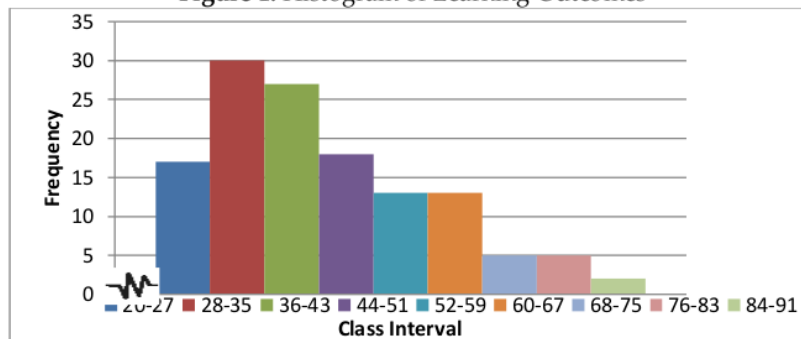
Table 2: Distribution of the Frequency of Students' Learning Outcomes

Interval Class	f _i	f _{relative} (%)	x _i	f _i .x _i
20-27	17	13.08	23.5	399.5
28-35	30	23.08	31.5	945
36-43	27	20.77	39.5	1066.5
44-51	18	13.85	47.5	855
52-59	13	10.00	55.5	721.5
60-67	13	10.00	63.5	825.5
68-75	5	3.85	71.5	357.5
76-83	5	3.85	79.5	397.5
84-91	2	1.54	87.5	175
Σ	130	100		5743

The table above explains that the distribution of the frequency of learning outcomes variable is skewed right or positively skewed. This is because of a greater average score and median than the mode. Moreover, the table reveals that 13 respondents (10%) are in the moderate category, while 41 respondents (70.78 %) are categorized above average. Those who fall under below average category dominates the total population with 76 respondents (19.22 %).

The score distribution of learning outcomes variable is depicted in the following Figure 1.

Figure 1: Histogram of Learning Outcomes



2. Learning Motivation

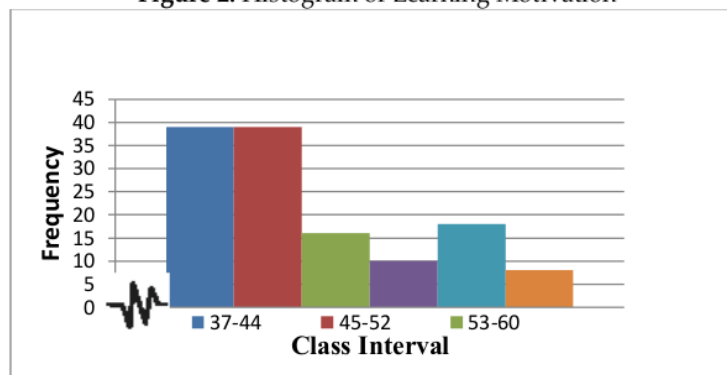
According to the result of statistical data analysis from the research site, the mean score arrives at 72.10 with the median (*me*) and mode (*mo*) at 73.05 and 82.23 respectively. The distribution of the frequency is displayed in the frequency table; the result shows that the minimum score of six classes gets 47 with the maximum score at 94. Furthermore, the range of the score is 47. Table 3 provides the detail of these outcomes.

Table 3: Distribution of the Frequency of Learning Motivation Score

Interval Class	f_i	$f_{\text{relative}} (\%)$	x_i	$f_i \cdot x_i$
37-44	39	30.00	40.5	1579.5
45-52	39	30.00	48.5	1891.5
53-60	16	12.31	56.5	904
61-68	10	7.69	64.5	645
69-76	18	13.85	72.5	1305
77-84	8	6.15	80.5	644
Σ	130	100		6969

The table above explains that the distribution of the frequency of learning motivation variable is skewed right or positively skewed. This is because of a greater average score and median than the mode. In addition, the table reveals that 26 respondents (20%) are in the moderate category, while 78 respondents (60 %) are in the above-average category. Those who fall under below average category involve 26 respondents (20 %). The score distribution of the learning outcomes variable is illustrated in the following figure.

Figure 2. Histogram of Learning Motivation



The linear regression equation of the variable of students' learning outcomes and learning motivation is represented with a regression model Y against X_1 : ($\hat{Y} = a + bx_2$) or $-20.058 + 0.877 x_2$. According to the result of the calculation, the value of F_{count} arrives at 143.97 at the significance level $\alpha = 0.05$. From this result, the value of F_{table} is 3.91, signifying that $F_{\text{count}} = 143.97 > F_{\text{table}} = 3.91$; the regression equation is, therefore,

categorized very significant. The result of the equation also emphasizes that an increase in the variable of students' early knowledge is affected by 0.877 of the value of learning outcomes at a constant of -20.058.

Table 4: ANOVA of Linear Regression Test (Y against X)

Source Var.	JK	Df	RJK	F _{count}	F _{table}	
Total	271312.00	130	2087.01		$\alpha = 0.05$	$\alpha = 0.01$
Coefficient (a)	238139.20	1	238139.20			
Reg (a/b)	17560.26	1	17560.26	143.97	3.91	6.84
Residual (S)	15612.54	128	121.97			
Lack of Fit	6920.54	75	130.58	1.13	1.52	1.87
Error	8692.00	53	115.89			

Description: JK = Total of Square; Df = Degree of Freedom; RJK = Average of Total of Quadrat

The second hypothesis explains that "learning motivation has a direct, positive influence on students' learning outcomes in Basic Concepts of Natural Sciences 2; it is statistically formulated as follows:

$$H_0 : \beta_{y.2} \leq 0$$

$$H_1 : \beta_{y.2} > 0$$

The hypothesis testing shows that $t_{\text{count}} > t_{\text{table}}$, meaning that the H_0 is refuted as the criteria of the rejection of this hypothesis is represented in the result of the testing at a significance level of α (0.05). From the calculation of the above equation 1, the coefficient of the path of exogenous variable, i.e. learning motivation is $P_{y2} = 0.430$, $t_{\text{count}} = 5.49$. The value of t_{table} measures at 1.645, meaning that the coefficient of the path is P_{y2} significant. With that being said, the direct, positive influence of learning motivation on students' learning outcomes in Basic Concepts of Natural Sciences 2 is of significant.

The regression equation

$$\hat{Y} = -20.058 + 0.877X_2$$

clarifies that an increase in the score of learning motivation variable, the students' learning outcomes in the previously mentioned subject is also improved. In other words, the higher the learning motivation, the more the students' learning outcomes increase. Another consideration highlighting the impact of learning motivation on learning outcomes is the value of path coefficient at 0.430, where the value of $t_{\text{count}} = 5.49 > t_{\text{table}} = 1.645$ at the significance level = 0.05. To put it simply, the H_0 is rejected and H_1 is accepted, and, thereby, the path coefficient between the learning motivation and students' learning outcomes in the Basic Concepts of Natural Sciences 2 is significant. This finding also underlines the direct, positive impact of learning motivation on students' learning outcomes in the subject.

On top of that, the finding suggests an ideal teaching-learning process specifically in educational institutions; the learning atmosphere should cultivate motivation in the students to actualize quality learning. Highly-motivated students are likely to enhance their academic performance. This condition will, in turn, help the learners to meet the learning goals because of the encouragement in learning. Encouragement drives the students to perform all-out in a particular subject, accomplishing the subject according to the timeframe and be responsible throughout the course to satisfy their objectives in learning.

3. Conclusions

This research concludes that “learning motivation has a direct, positive influence on students’ learning outcomes in Basic Concepts of Natural Sciences 2. The students’ learning motivation can be improved by enhancing the quality of learning activities which integrate the theoretical knowledge and hands-on experience throughout a particular course or subject. Conceptualizing such a condition can bring a unique experience in learning natural sciences.

Motivation in learning helps the students to process everything the students obtained from the course and to foster their initiative to study. This positive attitude functions to encourage the students of the Department of Elementary Teacher Education to perform all-out in a particular subject, accomplishing the subject according to the timeframe and be responsible throughout the course to satisfy their objectives in learning every subject or course, such as Basic concepts of Natural Sciences 2.

Acknowledgments

We thank the Rector of Universitas Negeri Gorontalo and particularly our colleagues at the Faculty of Education, the dean and the head of the Department of Elementary Teacher Education (bachelor program department) for their supports and recommendation. They significantly contribute to the conduct of this study. We also extend our thanks to the students of the department for their participation and information for this research.

References

- Abdurrahman (2015). Guru IPA sebagai motivator, Media akademi, Yogyakarta.
Dalton S. S. (2017). Pengajaran yang efektif bagi semua pebelajar, Indeks, Jakarta.
Fatona, dkk (2014). Pembelajaran IPA, Ombak, Yogyakarta.
Grafura, Lubis, *et. al* (2016). 100 masalah pembelajaran, Ar-ruzz media, Yogyakarta
Gredler E. M. (2011). Learning and intruction teori dan aplikasi edisi keenam, Kencana prenada media group, Jakarta.
Ifenthaler D. (2011). Multiple Perspectives on Problem Solving and Learning in the Digital Age. Springer. Germany.

- Jihad, Asep, *et. al* (2012). Evaluasi pembelajaran, Multi pressindo, Yogyakarta.
- Jufri W. (2013). Belajar dan pembelajaran IPA, Pustaka reka cipta, Bandung.
- , (2017). Belajar dan pembelajaran IPA, Pustaka reka cipta, Bandung.
- Mairingin P. J. (2017). Statistika pendidikan konsep & penerapannya menggunakan minitab dan Microsoft Excel, Cv. Andi Offset, Yokyakarta.
- Pellegrino J. W. (2006). Rethinking and Redesigning Curriculum, Instruction and assessment: What Contemporary Research and Theory Suggests. National Center
- Roschelle J. (1999). Prior Knowledge, Exploratorium, San Francisco.
- Sagala S., (2010). Konsep dan makna pembelajaran, Alfabeta, Bandung.
- Sanjaya W. (2008). Kurikulum dan pembelajaran Teori dan praktek pengembangan kurikulumcan tingkat satuan pembelajarn, Kencana, Jakarta.
- Sardian (2014). Interaksi & Motivasi Belajar Mengajar, Raja Grafindo Persada, Jakarta
- Santrock J. W. (1999). Lifespan development, McGraw-Hill, Boston.
- Sary E. N. Y. (2015). Psikologi pendidikan, Parama publishing, Yogyakarta.
- Slavin E. R. (2017). Psikologi pendidikan, Indeks, Jakarta barat.
- , (2001). Educational Psychology, McGraw-Hill, Boston.
- Suryabrata S. (1982). Psikologi Belajar, Departemen Pendidikan dan Kebudayaan, Jakarta.
- Susanto A. (2013). Teori belajar dan pembelajaran di sekolah dasar, Kencana, Jakarta.

Creative Commons licensing terms

Author(s) will retain the copyright of their published articles agreeing that a Creative Commons Attribution 4.0 International License (CC BY 4.0) terms will be applied to their work. Under the terms of this license, no permission is required from the author(s) or publisher for members of the community to copy, distribute, transmit or adapt the article content, providing a proper, prominent and unambiguous attribution to the authors in a manner that makes clear that the materials are being reused under permission of a Creative Commons License. Views, opinions and conclusions expressed in this research article are views, opinions and conclusions of the author(s). Open Access Publishing Group and European Journal of Education Studies shall not be responsible or answerable for any loss, damage or liability caused in relation to/arising out of conflicts of interest, copyright violations and inappropriate or inaccurate use of any kind content related or integrated into the research work. All the published works are meeting the Open Access Publishing requirements and can be freely accessed, shared, modified, distributed and used in educational, commercial and non-commercial purposes under a [Creative Commons Attribution 4.0 International License \(CC BY 4.0\)](#).

THE INFLUENCE OF LEARNING MOTIVATION ON BASIC CONCEPTS OF NATURAL SCIENCES 2 LEARNING OUTCOMES

ORIGINALITY REPORT

8%

SIMILARITY INDEX

10%

INTERNET SOURCES

0%

PUBLICATIONS

8%

STUDENT PAPERS

PRIMARY SOURCES

1

Submitted to University of Surrey

Student Paper

8%

Exclude quotes Off

Exclude bibliography On

Exclude matches < 3%