

Student Motivation and School Facilities as Determinants towards Student Learning Outcome

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Abstract—Student learning outcome is affected by many factors namely student motivation and school facilities. This article discusses findings regarding the influence of student motivation and school facilities towards student learning outcome in Archival Subject in Bina Wisata Lembang Vocational High School. Research was conducted using survey method and the data collection for the study was done by distributing questionnaire to 82 respondents from the first year students of Office Administration Expertise Program. Findings revealed that positive and significant effect of student motivation and school facilities towards student learning outcome can be identified simultaneously as well as partially. The article states the importance of both variables to improve student learning outcome.

Keywords—student motivation; school facilities; student learning outcome

I. INTRODUCTION

Teaching and learning process are seen in education. This teaching and learning process demonstrate a comprehensive range of activities. To determine the success of education in an educational institution, the value of learning is used as a benchmark. Education in a successful formal education institution will reveal an above average learning outcomes compared to non-formal education institutions that have not met the standards set by the government.

The learning outcome is essentially a reflection of the learning effort. Each learning process will expect students to get good results. However, the outcomes obtained by students are not always as expected. To measure the outcomes, a standard of whether or not the learning outcomes are sufficient (Minimum Mastery Criteria or *KKM*) has been established as a benchmark of the success of the learning process. Such case happens in Bina Wisata Lembang Vocational High School especially on Archival Subject which is shown in the following table:

TABLE I. FINAL EXAMINATION AVERAGE SCORE OF ARCHIVAL SUBJECT OF CLASS X BATCH 2011 TO 2015 IN BINA WISATA LEMBANG VOCATIONAL HIGH SCHOOL

School Year	Number of Students	Minimum Mastery Criteria (KKM)	Details of Archival Subject Scores below Minimum Mastery Criteria (KKM)	
			< Minimum Mastery Criteria (KKM)	Percentage (%)
2011-2012	24	75	9	37,50
2012-2013	33		6	18,15
2013-2014	75		5	15,15
2014-2015	77		26	33,76
2015-2016	79		33	41,77

Source: Vice Principal in charge of Curriculum in Bina Wisata Lembang Vocational High School

The table shows that the number of students who did not pass the final exam on the subject of archival studies in 2011-2012 is as many as 9 people with the percentage of 37.50%, in 2012-2013 the data shows a decrease in the percentage of students who did not pass which is 6 people with the percentage of 18.15%. Then in 2013-2014, there is another decrease which is that there are 5 people who did not pass the exam with a percentage of 15.15%. However, in 2014-2015, the data shows an increase in the percentage of non-graduates, i.e. as many as 26 people did not pass the exam with a percentage of 33.75%. Then, in 2015-2016, there is a significant increase that as many as 33 students failed the exam with the percentage of 41.77%. From the table above, it can be seen that the percentage of final examination on Archival Subject which shows the lowest percentage of students who scored below the minimum criteria (KKM) occurred in 2013-2014 with the percentage of 15.15% that is only 5 people did not pass the final exam, while the percentage of the highest non-graduates occurred in 2015-2016 with the percentage amounted to 41.77%, i.e. as many as 33 people failed the final exam.

Motivation has an important role in the learning process because motivation is a drive for a person to learn and achieve an optimal result. Students who are talented but not motivated will not achieve optimal outcomes in learning. Motivation can be a determinant in achieving goals and that the greater the motivation the greater the success [1]. Someone who has a great motivation will work, become persistent, resilient, and keen to read a book in order to be able to improve his or her performance and learning outcomes.

In addition to student motivation, school facilities can also reinforce the success of student learning outcomes. School facilities are one of the instrumental factors that come from the outside of the student that affect student learning outcomes in school. The facilities are very important in the learning process to support learning activities. Moreover, the facilities can also improve the delivery of subject material in class.

Based on the results of observations and interviews, it is indicated that the availability of student learning facilities in following the Archival Subject. Subsequently, the school facilities in Bina Wisata Lembang Vocational High School can be seen in Table 2 as follows:

TABLE II. SCHOOL FACILITIES AT BINA WISATA LEMBANG VOCATIONAL HIGH SCHOOL IN 2017

No	Facilities	Quantity		Number of Student	Information
		Operable	Out of Order		
1	Principal Office	1	0	220	Sufficient
2	Vice Principal Office	1	0		Sufficient
3	Administration Office	1	0		Sufficient
4	Front Office	1	0		Sufficient
5	Classroom	4	0		Class X study at noon
6	Medical Room	1	0		Sufficient
7	Staff Room	1	0		Sufficient
8	Library	1	0		Sizes 4m×5m (not enough space) Insufficient
9	Office Management Laboratory	2	0		Not well managed
10	Language Laboratory	0	0		Not available
11	Computer Room	2	0		Insufficient
12	Mosque	1	0		Sufficient
13	Ruang Kesenian	1	0		Sufficient
14	Desk and Chair	144	6		Sufficient
15	Black Board	4	0		Sufficient
16	White Board	4	0		Sufficient
17	Projector	5	0		Insufficient
18	Class Cabinet	4	1		Sufficient
19	Filing Cabinet	4	0		Insufficient
20	Computer	55	5		Insufficient
21	Staff's Computer	3	0		Sufficient
22	School Field	1	0		Sufficient
23	Parking Space	1	0		Sufficient
24	Canteen	1	0		Sufficient
25	Teacher's Lavatory	3	0		Sufficient
26	Student's Lavatory	4	0		Sufficient
27	Principal Office	1	0		Sufficient
28	Vice Principal Office	1	0		Sufficient
29	Administration Office	1	0		Sufficient

Source: Bina Wisata Lembang Vocational High School

Based on the data, it can be seen that the school facilities at Bina Wisata Lembang Vocational High School still have not fulfilled the needs of students. The library space sizes 4m × 5m or 20 m² which is inadequate and does not meet the standards based on the Ministerial Regulation no. 40 Year 2008 on Standard Infrastructure Facilities of Vocational High School. The minimum width of library space is 96 m², while the library

space at Bina Wisata Lembang Vocational High School is 76 m².

In addition, the Office Administration Laboratory at Bina Wisata Lembang Vocational High School is not adequate which results in the no knowledge of the number of archival equipment's owned due to the equipment's are not stored in place or lost, whereas according to the ratio of archival equipment in Ministerial Regulations No. 40 Year 2008 is 1 set of archival equipment for minimum 8 students.

In addition, Bina Wisata Lembang Vocational High School does not have Language Laboratory. It is not in accordance with Ministerial Regulations No.40 of 2008 on Standard Infrastructure Facilities in Vocational High School about the completeness of infrastructure and facilities of general learning groups. One of the general learning facilities that should be owned by Vocational High School of Office Administration Expertise Program is a Language Laboratory Room with minimum ratio of 3 m² / student with the minimum large of 64 m² and width of 8m.

Computer Room at Bina Wisata Lembang Vocational High School consists of 2 computer rooms. In one room, there are 30 computers. However, there are 5 damaged computers in one of the two rooms. The number of computers in each room is not sufficient with the number of students of office administration. Class 1 consists of 40 students and class 2 consists of 42 students. Therefore, one computer is used by 1 student (1 computer / 1 student) and there is also one computer by 2 students (1 computer / 2 students), this is not in accordance with the ratio of computer laboratory facilities according to Ministerial Regulation no. 40 of 2008 which is 1 unit / student. In addition, facilities that support the learning process in Bina Wisata Lembang Vocational High School such as the filing cabinet that amounts to 4 pieces is not enough to store all the archives owned. And the projector owned is not sufficient because it only amounts to 5 pieces which must be used by turns.

Based on the data obtained above, the authors have conducted research with the aim to determine the effect of student motivation and school facilities on student learning outcomes in Bina Wisata Lembang Vocational High School. This study is done considering Archival Subject is one of the productive subjects that must be mastered by the students of Office Administration Expertise Program because it will be necessary to support their work in the future. In addition, the subject will have an impact on the achievement of educational goals. Current research presents some concepts underlying quantitative research that has been done by the author covering theories related to student motivation, school facilities, and student learning outcomes. Furthermore, the exposure related to how this research is done: what method and the instrument used, data analysis, discussion of findings and conclusions and suggestions made based on the results of the study will be presented.

II. LITERATURE REVIEW

Concepts related to the problems in this study need to be discussed comprehensively. These concepts include student motivation, school facilities, and student learning outcomes.

A. Student Motivation

Motivation to learn is an internal and external impetus for students who are learning to change behavior, generally with some supporting indicators or elements [2]. Motivation is distinguished by intrinsic and extrinsic motivation. Intrinsic motivation comes from within the students while extrinsic motivation comes from outside

Muhibbin Shah points out that "the lack or absence of both internal and external, will lead to a lack of enthusiasm for students in the process of learning the lesson materials both at school and at home [3]."

Motivation serves as a drive for business and achievement. With a consistent effort and especially motivation, a person will be able to produce good learning outcomes. The intensity of one's motivation will determine the level of achievement of learning outcomes [4].

With the motivation to learn emerging in students, the learning activities will be refined which eventually will affect the student learning outcomes. Sadirman purports that "learning outcomes will be optimal if there is motivation, the more appropriate the motivation is given, the more the lessons will be learned [4]."

Measurements of students' motivation variable in this study include eight indicators as follows: 1) Duration of activity, 2) Frequency of activity, 3) Persistence, 4) Firmness, tenacity and ability to face obstacles and difficulties, 5) Devotion and sacrifice, 6) Level of aspiration, 7) Degree of qualification or product (output) achieved in learning, 8) Direction of attitude toward the target of activity [5].

B. School Facilities

School facilities are one of the extrinsic factors that influence the learning outcomes. According to Gie "facilities are requirements that include circumstances surrounding the place of learning and the physical condition of students. Learning facilities include classrooms, whiteboards, stationery, desk chairs, overhead projectors, lighting, textbooks and other equipments [6]".

Tu'u discloses that learning facilities usually support learning achievements, but if the completeness of the learning facilities as a means of supporting learning in school is adequate, the opposite can be an obstacle if the completeness of learning facilities in schools is inadequate [7]. Schools should provide learning facilities in accordance with the needs and development of students in order to grow and develop their skills based on the talents and abilities as a student.

Learning process in schools equipped with adequate facilities are expected to help smoothening the learning process so as to improve the learning outcomes. This is because the completeness of learning facilities owned by students would make them happier, more diligent and eager in learning. Good facilities result in students with high learning zest. Moreover, the zest of learning will make the students achieve satisfactory learning outcomes. The explanation is in line with research conducted by Yuliani and Sucihatningsih which suggests that

learning facilities have a direct effect on student learning outcomes [8].

Measurement of school facility variables in this study include six indicators as follows: 1) Structuring school buildings, 2) Quantity and quality of classrooms, 3) Functioning of Library 4) Functioning of Classroom Facilities and Laboratories 5) Availability of textbooks , 6) Optimization of media/tools [9].

C. Student Learning Outcome

Learning is an important process for the change of human behavior including everything that is thought and done [10]. Through learning, improvements in various matters including life interests are possible [11]. Changes that occur in individuals both in the aspects of cognitive, affective and psychomotor are not obtained directly. However, efforts need to be made by individuals to achieve change and self-improvement. Learning is a conscious effort of the individual to achieve the goal of self-improvement or self-transformation through exercises, repetitions, and changes which occur by non-accidental events [12].

Learning outcomes are the abilities or skills possessed by students after undergoing the experience of the learning process. Learning outcomes are characterized by changes in behavior. This change occurs as a result of learning which enables changes in affective aspects, emotional aspects, and learning outcome aspects to be characterized by changes in the ability to think [9]. These changes include gaining knowledge and comprehension which was impossible prior to changes in behavior [13]. Thus, learning outcomes are the abilities that students have after implementing the process of learning activities.

Measurement of student learning outcomes variable in this research is the score of the final first semester in Archival Subject. From the explanation of the above concepts, it can be concluded that the student motivation and school facilities either partially or simultaneously have an effect on the students' learning outcomes, as shown in the following diagram:

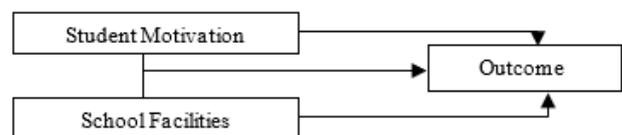


Fig. 1. Theoretical framework.

Based on the diagram, three hypotheses can be formulated as follows:

- Hypothesis 1: There is a direct relationship between student motivation and learning outcomes of the Archival Subject.
- Hypothesis 2: There is a direct relationship between school facilities and student learning outcomes of the Archival Subject.

- Hypothesis 3: There is a direct relationship between student motivation and school facilities which affects student learning outcomes of the Archival Subject.

III. RESEARCH METHODS

This study aims to determine the overview of the level of student motivation, school facilities, and student learning outcomes. This study employed survey method using questionnaire as data collection techniques with 82 respondents of students Class X Office Administration Expertise Program. There are 2 parts in the questionnaire tested to respondents. The first part is intended to measure student motivation as many as 18 items which are conveyed through eight indicators namely the duration of activities, frequency of activities, persistency, firmness, tenacity and ability to face obstacles and difficulties, devotion and sacrifice, and level of aspiration, level of qualification or product (output) achieved in learning, direction of attitude towards the target activities. The second part is aimed to measure school facilities which include many as 18 items elaborated through six indicators namely arrangement of school buildings, quantity and quality of classroom, the functioning of library, the functioning of classroom facilities and laboratory, availability of textbooks, and optimization of media/equipments. In quantitative research conducted by the author, statistical analysis technique used in data processing is a descriptive analysis technique and inferential analysis technique. Descriptive statistical analysis is used to find out the description of the views of respondents about student motivation and school facilities presented in the form of average scores. The inferential statistical analysis is used to see the impact of student motivation and school facilities on the learning outcomes and test the hypotheses tested using simple regression, multiple regression, and hypothesis testing.

IV. RESULTS

The results are obtained from data processing based on respondents' responses to the research instrument. The processing of data was assisted by Microsoft Excel 2013 software application.

A. Findings of Descriptive Statistics Analysis

1) *Student motivation*: Student motivation is measured through 8 indicators: 1) Duration of activity, 2) Frequency of activity, 3) Persistence, 4) Resilience, tenacity and ability to face obstacles and difficulties, 5) Devotion and sacrifice, 6) The Level of aspiration, 7) The level of qualification or product (output) achieved in learning, 8) Direction of his or her attitude toward the objectives of the activity [5]. From the results of data processing on the research instrument of student motivation, an average score of 3.85 are in the advance category. The following table presents the description of student motivation to each indicator.

TABLE III. RESPONDENTS' RESPONSE RECAPITULATION TO X₁ (STUDENT MOTIVATION)

No	Indicator	Question Item	Indicator Average	Interpretation
1	Duration of activity	1,2	3,63	Advance
2	Frequency of activity	3,4	3,43	Advance
3	Persistence	5	3,38	Medium
4	Devotion and sacrifice to achieve goals	6,7	4,23	Advance
5	Resilience, tenacity and ability to face obstacles and difficulties to achieve goals	8,9,10	3,49	Advance
6	The level of aspiration targeted in the activity	11,12	4,16	Advance
7	The level of qualification or product (output) achieved in learning	13,14,15	4,26	Advance
8	Direction of his or her attitude toward the objectives of the activity	16,17,18	4,06	Advance
<i>Average</i>			3,85	Advance

Source: Data Processing Results

From table 3 above, it is shown that the highest score of student motivation is at the indicator level of qualification or product (output) achieved in learning that is equal to 4.26. It shows that students are eager to learn to get good grades which pay off their hard work that will make them feel proud. While the lowest score is in the indicator of the persistency in the activity that is 3.38 which means that many students still do not prepare before the test.

2) *School facilities*: School facilities are measured through 6 indicators: 1) Arrangement of school buildings, 2) Quantity and quality of classrooms, 3) The Functioning of Library 4) The Functioning of Classroom Facilities and Laboratories, 5) Availability of textbooks, 6) Optimization of media/equipments [9]. From the results of data processing on school facilities research instruments, an average score of 3.44 is in the advance category. The following table presents description of school facilities on each indicator.

TABLE IV. RESPONDENTS' RESPONSE RECAPITULATION TO X₂ (SCHOOL FACILITIES)

No	Indicator	Question Item	Indicator Average	Interpretation
1	Arrangement of school buildings	1, 2	3,73	Advance
2	Quality of classrooms	3, 4, 5	3,43	Advance
3	The Functioning of Library	6, 7	2,82	Medium
4	The Functioning of Classroom Facilities and Laboratories	8, 9, 10, 11, 12, 13 and 14	3,58	Advance
5	Availability of textbooks	15, 16	2,70	Medium
6	Optimization of media / equipments	17, 18	4,37	Extremely Advance
<i>Average</i>			3,44	Advance

Source: Data Processing Results

From table 4 above, it is demonstrated that the highest scores of school facilities are in the indicator of Media/Equipments Optimization that is equal to 4.37. This is because LCD Projectors available at school encourage students to work well and be motivated in learning. While the lowest score is on the indicator of the availability of textbooks that is 2.70 which means that only some students who have archival books and Archival Student Workbook (LKS).

3) *Student learning outcome*: Results of data processing report on student learning outcomes in the first semester of the Archival Subject batch 2017/2018 Class X of Office Administration Expertise Program show that student learning outcomes are still not optimal which mean that there are still some students who have not reached the Minimum Mastery Criteria (KKM). KKM on Archival Subject is 75 whereas students who have not passed the KKM score are 16 students from the total of 82 respondents.

The highest score of students on the Archival Student is 90.00 while the lowest score is 56.30 whereas the overall average is 78.35. Moreover, if we connect these findings to the interpretation of the descriptive score, then we will have a conclusion that the student learning outcomes are in the range 77.0-83,8 that is in the advance category.

Therefore, it can be concluded that the average value of the final grade of Class X in the first semester of the Archival Subject in Bina Wisata Lembang Vocational High School is high.

B. Inferential Statistics Analysis

1) *Student motivation as a determinant of student learning outcome*: From the results of a simple regression analysis which aimed to see the effect of student motivation variable on learning outcomes, it is obtained regression equation $\hat{Y} = 6403,8567 + 0.3670 (X)$. The sign (+) in front of the 0.3670 indicates that the relationship between the independent variable (student motivation) and the dependent variable (student learning outcomes) is in one way direction. If the variable of student motivation increases, then student learning outcome variable will also increase vice versa.

Based on the calculation results, there obtained the values of $T_{\text{calculate}}$ of 6.4773 and T_{table} (0.05; 82-2-1) of -1.6644. Thus, the value of $T_{\text{calculate}}$ is more than T_{table} value or $T_{\text{calculate}} > T_{\text{table}}$ value (6,4773 > -1,6644). Consequently, H0 is rejected and H1 is accepted. Therefore, it can be concluded that "There is a positive influence between Student Motivation with Student Learning Outcomes in Grade X of Archival Subject of Office Administration Expertise Program at Bina Wisata Lembang Vocational High School".

The coefficient value of determination of student motivation variable and student learning achievement variable is 34%. That is, in the partial way, student motivation to learn has an influence on learning outcomes by 34% while the rest of 66% is influenced by other factors which affect student learning outcomes.

2) *School facilities as a determinant of student learning outcome*: From the results of a simple regression analysis

which was done to study the effect of school facility variables on student learning outcomes, the regression equation $\hat{Y} = -381,1894 + 0.5474 (X)$ was obtained. The sign (+) in front of the number 0,5474 shows the relationship between the independent variables (school facilities) and the dependent variable (student learning outcome) goes in one direction. If the variable of school facilities increases, then the student learning outcome will also increase as well as vice versa.

Based on the calculation results, value obtained includes $T_{\text{calculate}}$ of 5.8868 and T_{table} (0.05; 82-2-1) of -1.6644. Thus, the value of $T_{\text{calculate}}$ is more than T_{table} or $T_{\text{calculate}} > T_{\text{table}}$ (5,8868 > -1,6644). Consequently, H0 is rejected and H1 is accepted. Therefore, it can be concluded that "There is a positive influence between the School Facilities and Student Learning Outcomes Grade X of Archival Subject in Office Administration Expertise Program at Bina Wisata Lembang Vocational High School".

The coefficient value of determination of school facilities variable and student learning outcome variable is 30%. That is, in partial manner, the school facilities have an influence on the putcomes of learning by 30% whereas the rest of 70% is influenced by other factors that affect student learning outcomes.

3) *Student motivation and school facilities as determinants of student learning outcome*: The multiple regression equation for the hypothesis of the influence of student motivation and school facilities on student learning outcomes is $\hat{Y} = 37.4696 + 0.3670X1 + 0.3770 X2$. The positive sign (+) shows the relationship between the independent variable and the dependent variable goes in one direction which means any increase or decrease in one variable will be followed by an increase or decrease in the other variable. In other words, the higher the level of student motivation and school facilities, the higher the Student Learning Outcome, vice versa.

Based on the data processing, it can be obtained $F_{\text{calculate}}$ of 102.9682 and F_{table} (0,05; 82-2-1) = 0,0513. Thus, $F_{\text{calculate}} > F_{\text{table}}$ (102.9682 > 0.0513) which means that H0 is rejected and H1 is accepted. Therefore, it can be concluded that "There is a positive influence between Student Motivation and School Facilities on Student Learning Outcome in Grade X of Archival Subject in Office Administration Expertise Program at Bina Wisata Lembang Vocational High School".

The coefficient of determination of variables of student motivation and school facilities and student learning outcome variable is 41%. That is, in simultaneous manner, the student motivation and school facilities have an influence on learning outcomes by 41% while the rest of 59% are influenced by other factors that affect student learning outcomes.

V. CONCLUSION

Student learning motivation is in the advance category measured by eight indicators including:

- Duration of activities
- Frequency of activities

- Persistence on activities
- Firmness, tenacity and ability in facing obstacles and difficulties
- Devotion and sacrifice
- The level of aspiration
- The level of qualification or product (output) achieved in learning
- Direction of attitude toward the target of activity

Indicator of the level of qualification or product (output) achieved in learning has the highest percentage rate while the persistency indicator on the activity has the lowest percentage rate.

Student learning facilities are in the advance category measured by six indicators including:

- Arrangement of school buildings
- Quantity and quality of classroom
- The Functioning of Library
- The Functioning of Classroom Facilities and Laboratories
- Availability of textbooks
- Optimization of media / equipments

Media / equipments optimization indicator has the highest percentage rate while the indicator of textbook availability has the lowest percentage rate.

Based on the results of the calculation, it is found that student motivation and school facilities have a positive and

significant effect on the learning outcomes of Grade X Students of the Archival Subject at Bina Wisata Lembang Vocational High School which simultaneously have a strong influence. Thus, if the student motivation and school facilities increase, then student learning outcomes will also display an improvement, vice versa. Thus, the student motivation and school facilities should be maintained in order to improve student learning outcomes.

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