THE COMPARISON STUDY OF LEARNING OUTCOMES ON PHYSICS SUBJECTS BETWEEN BOARDING AND NON BOARDING STUDENTS FOR CLASS XI MAN 2 KOTA PALU

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ABSTRAK

Penelitian ini bertujuan untuk mengetahui perbandingan hasil belajar mata pelajaran fisika antara siswa yang tinggal di asrama dan siswa yang tinggal di luar asrama pada MAN 2 Kota Palu.

Metode penelitian yang digunakan adalah metode kuantitatif dan jenis penelitian nya yaitu statistik inferensial. Populasi dalam penelitian ini adalah peserta didik kelas XI MAN 2 Kota Palu, sedangkan sampel penelitian ini menggunakan teknik *purposive sampling* karena jumlahnya yang tidak seimbang maka siswa asrama diambil seluruhnya, sementara siswa berasrama diambil sampel secara *random sampling* yaitu dengan cara undian. Jadi, sampel penelitian ini sebanyak 70 orang, yakni terdiri dari 35 siswa berasrama dan 35 siswa non asrama. Teknik pengumpulan data dengan menggunakan dokumentasi dan wawancara. Analisis data yang digunakan adalah uji normalitas, uji homogenitas dan uji hipotesis.

Berdasarkan analisis data dan perhitungan, diperoleh pengujian hipotesis pada analisis data didapat Ho dan Ha ditolak, yaitu ternyata t_{hitung} kurang dari t α; db atau 0,003894 < 1,66757. Dengan demikian tidak terdapat perbedaan yang signifikan antara hasil belajar siswa yang tinggal di asrama dan siswa yang tinggal di luar asrama pada mata pelajaran fisika di MAN 2 Kota Palu dari segi kognitif. Dengan kata lain tinggal di asrama tidak memberi pengaruh kemampuan kognitif siswa dalam penguasaan materi fisika.

Kata kunci: Perbandingan berasrama dengan non asrama, hasil belajar siswa pada mata pelajaran fisika

ABSTRACT

This study aims to find out the comparison of physics subject learning outcomes between students who live in boarding and students who live outside the boarding in MAN 2 Kota Palu.

The research method used is a quantitative method and its type of research is inferential statistics. The population in this study was a student of class XI MAN 2 Kota Palu, while this study sample used purposive sampling techniques because the number was not balanced so that the boarding students were taken entirely, while boarding students were randomly sampled by lottery. So, this study sample was 70 people, consisting of 35 boarding students and 35 non-boarding students. Data collection techniques using documentation and interviews. The data analysis used is the normality test, the homogeneity test and the hypothesis test.

Based on data analysis and calculations, hypothesis testing on data analysis obtained by Ho and Ha was rejected, which turned out to t_{count} *less than t α; db or 0.003894 < 1.66757. Thus there is no significant difference between the learning outcomes of students who live in boarding and students who live outside the boarding on physics subjects in MAN 2 Kota Palu in terms of cognitive. In other words, living in a boarding does not affect students' cognitive abilities in mastering physical materials.*

Keywords: *Comparison of boarding with non-boarding, student learning outcomes on physics subjects.*

INTRODUCTION

Comparison or comparative is to express the similarity or difference of something with something else in the form of a description (Depdikbud 1998:414). What is meant in this study is a comparison of the results of learning physics subjects between students who live in boarding and those who live outside the boarding in MAN 2 Kota Palu.

Physics is a systematically arranged collection of knowledge, which in its use is generally limited to the symptoms of nature. The nature of physics should be reflected in the purpose of physics education and the teaching strategies used (Siagian Henok 2012: 43).

Boarding students are students who live in boarding, which are residential buildings for a group of people for a while, consisting of a number of rooms and led by a boarding head, which requires students to comply with the rules and follow regular educational activities from morning to noon then continued with educational activities with special values in the afternoon and evening (Irfan Setiawan 2013: 1). While non-boarding students are students who live with their parents at home, who get affection, attention and supervision directly from their parents at home.

Mulyasa, learning outcomes are students' overall learning achievements that are indicators of competence and degrees of behavior change concerned. While according to Winkel learning outcomes are changes that cause humans to change in attitudes and behavior. Learning outcomes are a teacher activity related to decision making about the achievement of competencies or learning outcomes of learners who follow the learning process from this process obtained an overview of the ability of learners in achieving a number of basic competency and competency standards (Kunandar 2013: 65).

Learning outcomes can be shown through the grades given by teachers from the number of fields of study that have been studied by students (Nana Sudjana 2005: 19). Various research results show that learning outcomes have a positive correlation with learning habits. Habits are a way of acting obtained through repeated learning, which eventually becomes sedentary and automatic (Djaali 2014:127-128).

In the process of achieving learning outcomes, it is influenced by various factors, including internal factors, external factors and learning approach factors, which can be physiological factors, psychological factors, environmental factors, instrument factors and also student learning methods.

External factors in the form of an educational environment indicate the situation and conditions that surround and have an influence on personal development. The educational environment is divided into two:

1. The surrounding environment, which is all good circumstances in the form of objects, people, and events or events around students.
2. Educational centers, which are places of human organizations and groups designed as a means of education (Hery Nur Aly 1999: 209).

The environment as the basis of teaching is a conditional factor that affects individual behavior and is an important learning factor (Oemar Hamalik 2014: 196). The learning

environment can control regulations and discipline enforcement on an ongoing basis with regulations that must be obeyed and punishment for perpetrators who violate it. Indirectly this method fosters the values of teaching priorities and life skills exercises to be applied in everyday life.

The environment is part of the learning factors and part of the student's life, in the environment students interact, get along with fellow friends and with the teacher as a guide. The environment is also an external factor of the student in the learning process. Muhibbin Shah in his book "Educational Psychology with a new approach "divides the environment into two kinds":

1. Social environment
   Educational interaction is influenced by personal characteristics and social patterns between the people involved in the interaction both students, as well as teachers and other parties (Nana Syaodih Sukmadinata 2014: 5)
2. Non-Social Environment

Factors that include non-social environments are school buildings, residential homes, learning tools, weather conditions and study time used by students.

From the initial data, it was obtained that students who live in boarding schools are better than students who live outside the boarding, taking into account that boarding students receive more guidance and teaching from boarding coaches, although it does not rule out the possibility that students who live outside the boarding will succeed in learning thanks to parental guidance, exercises obtained from the outside and the possibility of following tutoring. Based on this, the author formulated the problem in this study as follows: "Is there a significant difference in the learning outcomes of physics subjects between boarding students and non-boarding in class XI MAN 2 Kota Palu students".

In order to carry out research to obtain results of a scientific nature, the reasons for choosing the title are:

1. Because they want to know the comparison of learning outcomes between boarding students and non-boarding students in class XI MAN 2 Kota Palu.
2. Because internal and external factors also affect learning outcomes, so students who are boarding with non-boarding may have differences, so to eliminate doubts need to be done research.

The research method used in this research is quantitative methods that are systematic scientific research on parts and phenomena and their relationships (Wikipedia: 2016). The data obtained is to find comparisons of learning outcomes between boarding students and non-boarding students in physics subjects from raport grades.

Based on the theories that have been described, then analyzed critically and systematically, resulting in synthesis about the relationship of the variables, then used to formulate hypotheses (Sugiono 2010: 91).

Based on the way the data is processed, this study uses inferential statistics (induction) which is a series of techniques used to study, assess, draw conclusions based on data obtained from samples to describe the characteristics or characteristics of a population (Syofian Siregar 2016: 2).

Sampling techniques in this study are carried out *purposive sampling*, which is a sampling technique with certain considerations

(Nanang Martono 2012: 76). The sample is a member of the population selected by certain procedures, so it is expected to represent the population (Sugiyono 2017: 117). The author determines the sample of class XI with the consideration that class XI has received guidance in the boarding for one year. The sample in this study was students in class XI, consisting of 35 boarding students and 35 non-boarding students.

Data collection is a very important step, because the data collected will be used for solving problems that are being researched to test the hypothesis that has been formulated. This study used two methods of data collection:

1. Documentation, (Suharsimi Arikunto 2013: 274). Documentation is used to obtain data on the learning outcomes of students of class XI MAN 2 Kota Palu directly from physics subjects derived from student raport scores.
2. Interview, (Syofian Siregar 2013: 130). In its implementation, the author will use measurable free interviews, who will be respondents to this study, namely community leaders, several student guardians, as well as boarding and non-boarding students to get data on opinions related to boarding madrasah.

Research instruments are tools selected and used by researchers in their activities to collect data so that the activity becomes systematic. The instruments used in this study are:

1. Documentation is used to find out the learning outcomes of boarding and non-boarding students from raport grades in physics subjects for one semester.
2. Interview or interview that is used to find out the opinion of respondents about education in the boarding.

Homogeneity test is the test of the same variances of two or more distributions. Homogeneity tests are performed to find out whether the data in variable X and variable Y are homogeneous or not. For data analysis, the author uses *parametric statistics*, since the scale of the data is intervals. *Parametric statistics* use the technique of comparing different tests (t-tests) of free samples. But first in the population homogeneity test with the F test.

The data normality test aims to test the normality of data on each research variable. To identify normal distribution data, namely by looking at the value of *2-tailed significance*, that is, if each variable has a value greater than 0.05 then it can be concluded that the research variable is normal distribution. As for the normality test using the *lilliefors* test.

After the homogeneity test and normality test, it is continued with the hypothesis test using a different test (t-test). With the following hypothesis criteria:

1. to $\geq t_{table}$, meaning Ha accepted and Ho rejected.
2. to $\leq t_{table}$, then Ho is accepted and Ha is rejected.

DISCUSSION

The learning outcomes of students living in boarding and students living outside boarding on Physics subjects based on the raport grades of class XI MAN 2 Kota Palu odd semester of the 2021/2022 school year, can be seen as follows:

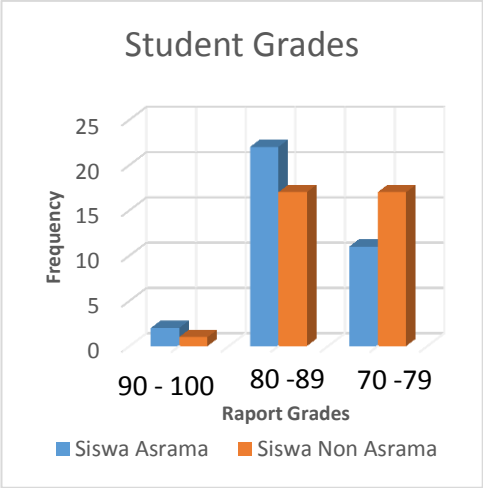

Figure 1. The results of student raport scores on physics subjects between students living in boarding and non-boarding.

From the data obtained the average value of raport physics maple students who live in boarding 80.29, while the average value of raport students living outside the boarding 78.86.

From the bar diagrams, it can be seen that the grades (90 - 100) with excellent criteria, more achieved by boarding students than non-boarding students. For grades (80 - 89) with good criteria, more achieved by boarding students than non-boarding students. For grades (70 - 79) with criteria quite more achieved by non-boarding students than boarding students. For values (≤ 69) with less criteria both are absent.g Get that value. Categories are very good, good, enough and less based on KKM score criteria

Analysis prerequisite testing is used to perform formulated hypothesis tests. The prerequisites in question are the normality test and the homogeneity test. Based on the above exposure, the grades of students living in boarding and students who live outside the boarding are hypothesized using different test comparison techniques (t-test), T test free sample (independent sample test).

Based on the results of the normality test in students living in boarding, $L_{counted}$ less than L_{table} or 0.14483 < 0.15662. While the results of the normality test in students living in boarding can be seen L_{count} less than L_{table} or 0.14014 < 0.15662. Thus Ho was accepted and H1 was rejected. In other words, the samples in this study came from a normally distributed population.

Based on the results of the homogeneity test, with $\alpha = 0.05$ then F_{count} is less than $F_{\alpha.v1\ v2}$ or 1.07 < 1.69. Then it can be said that the variants of both groups are homogeneous.

After the normality and homogeneity test, it is followed by a different test using the t-test. Based on the results of the hypothesis test (test t), with $\alpha = 0.05$, t_{count} less than $t_{\alpha;\ db}$ or 0.003894 < 1.66757, then Ho is accepted. So there is no significant difference between the physics learning outcomes of boarding students and non-boarding in class XI MAN 2 Kota Palu students.

Based on the results of the hypothesis test, it is not in accordance with the theory of Muhibbin Shah, which states that learning outcomes are influenced by several factors including external factors that come from outside the student such as the state of the surrounding environment (Muhibbin Shah 2011: 129). Furthermore, the theory from Nana Syaodih Sukmadinata states that lack of facilities, infrastructure and physical facilities will hinder the educational process, and hinder the achievement of maximum results.

From the results of interviews conducted to community leaders and student guardians regarding their opinions about the boarding madrasah system, they think madrasah with dormitory systems are relatively good on the grounds that madrasah apply clear and strict rules and boundaries intended for students living in dormitories.

There are many advantages found in boarding madrasah. With a boarding madrassa system, a student not only learns cognitively, but also affectively and psychomotorly. Boarding madrasah are a model of schools that have higher demands when compared to regular madrasah. These demands can have a positive and negative impact on the lives of students (Irfan Setiawan 2013: 2). Here are some of the advantages of madrasah that implement a dormitory system:

1. Teaching independence.
2. Teaching tolerance.
3. Developing self-potential.
4. Living more regularly.
5. Conducive environment. (Kompasiana: 2022).

In addition to these advantages, education with a dormitory system has shortcomings, including:

1. Lack of parental affection.
2. Restrictions on the right to socialize (Irfan Setiawan 2013: 9)
3. Expensive costs.

Education in the dormitory as exemplified in MAN 2 Kota Palu, exactly the same education carried out in pesantren. The only difference is in the location of the policy. If in the boarding school all the students live in the dormitory, while in MAN 2 Kota Palu, there are students who do not live in the dormitory but live with their parents. Dormitory education in MAN 2 Kota Palu applies the principles of education in line with pesantren traditions, such as congregational prayers, spiritual greetings after morning prayers filled by dormitory supervisors, tadarus (learning the Qur'an) with qiro'ati methods, qur'an tahfidzul programs, islamic studies teaching carried out with a system of halaqah muhadhoroh (speech training Indonesian, Arabic and English) and guidance back for general subjects studied in madrasahs in the morning. The entire educational process is directed at the formation of the student's religious personal and their provision while in the community.

Programs in dormitories can integrate knowledge of real-life skill values and practices within the dormitory. If the learning of physics in the form of theory and practice is applied by students and guided by the assigned teacher, then the results will be more optimal. Then, it does not rule out the possibility of students who live outside the dormitory or live with their parents also get guidance, direction and control from parents to improve the learning outcomes of Physics subjects.

From this study there are still many limitations, including this study only examines cognitive value alone and each student has different abilities. It is likely that students have good cognitive grades on physics subjects, but in other fields are ordinary and vice versa. Students excel in the natural sciences but do not excel in the social sciences. Each student has different learning advantages and interests in each subject. As well as success in learning is also influenced by factors that exist in students such as interests, talents, motivation, and

cognitive abilities such as imitation, deciphering and cleverness.

CONCLUSION

Based on the results of research and analysis of data that has been done regarding the comparison of physics subject learning results between boarding students and non-dormitories in MAN 2 Kota Palu " can be concluded that by using comparison tests and using t-test tests from the results of student raport scores in physics subjects, the results are stated that there is no significant difference between students living in dormitories and students who live outside the dormitory. Expressed with Ho received based on the results of calculations of t_{count} of less than $t_{\alpha;\ db}$ or 0.003894 < 1.66757. From the results of interviews that have been conducted, it was found that learning outcomes are more influenced by factors that come from within students such as interest factors, talents, intelligence, cognitive abilities such as remembering and thinking.

For further research, researchers expect to continue this study not only in terms of cognitive, but can research in terms of affective and psychomotor students.

REFERENCES

Depdikbud RI. (1998). Kamus Besar Bahasa Indonesia. Jakarta: Balai Pustaka.

Djaali. (2014). Psikologi Pendidikan. Jakarta: Bumi Aksara.

Henok, Siagian, & Irwan, Susanto. (2012). Pengaruh Strategi Pembelajaran *Genius Learning* terhadap hasil belajar Fisika Siswa. Medan: Universitas Negeri Medan.

Hery Noer Aly. (1999). Ilmu Pendidikan Islam. Ciputat: PT. Logos Wacana Ilmu.

Irfan Setiawan. (2013). Pembinaan dan Pengembangan Peserta Didik pada Institusi Pendidikan Berasrama. Yogyakarta: Smart Writing.

Kunandar. (2013). Penilaian Autentik Penilaian Hasil Belajar Peserta Didik Berdasarkan Kurikulum 2013. Jakarta: Rajawali Pers.

Muhibbin Syah. (2011). Psikologi Pendidikan dengan Pendekatan Baru. Bandung: PT Remaja Rosdakarya.

Nanang Martono. (2012). Metode Penelitian Kuantitatif. Jakarta: Rajawali Pers.

Nana Saodih Sumadinata. (2011). Landasan Psikologi Proses Pendidikan. Bandung: Rosda Karya.

Nana Sudjana. (2005). Penilaian hasil belajar mengajar. Bandung: PT. Remaja Rosdakarya.

Oemar Hamalik. (2014). Proses Belajar Mengajar. Jakarta: PT Bumi Aksara.

Sugiono. (2010). Metode Penelitian Pendidikan (Penelitian Kualitatif, Kuantitatif dan R & D). Bandung: Alfabeta.

Suharsimi Arikunto. (2013). Dasar-dasar Evaluasi Pendidikan. Jakarta: Bumi Aksara.

Syofian Siregar. (2016). Statistik Deskriptif untuk Penelitian. Jakarta: Rajawali Pers.