The Effect of Differentiation Learning to Increase Learning Motivation of Students in Elementary Schools

Amir Pada[1], Nasaruddin[2], Lutfi B[3]
[1,2,3] Departement of Elementary School Education FIP UNM
E-Mail: amirpada@gmail.com, nasaruddin@unm.co.id, lutfi.b@unm.ac,id

Keywords	Abstract
Differentiation learning, Motivation learning, Conventional Learning	This research was conducted aiming to determine the effect of differentiating learning on increasing student motivation. The research design used was a pretest-posttest control-group. Data was collected using a learning motivation questionnaire with a Likert measurement scale. Data were analyzed using the Independent-sample t-test and the Assumption Test which included the Normality Test and Homogeneity Test. Data were processed and analyzed using SPSS with a significance level of 5%. the results of the study concluded that there was a significant influence between differentiated learning on increasing student learning motivation, and it was also known that the increase in learning motivation of students who received differentiated learning was greater than that of students who received conventional learning with an increase of 14.143.

1 Introduction

The benchmark for a reliable and qualified teacher is when he can carry out his duties properly as evidenced by his capacity and consistency to support and contribute to improving the learning system. In an effort to improve this teaching system, teachers try to increase student motivation and interest in learning material by utilizing various opportunities both media, learning assets and skills possessed by coaches as a source of learning information. The sources of information obtained are interesting and liked by students, so their intellectual abilities will also experience changes(Sanjaya, 2022). The results of interviews at SDN 84 Kota Parepare show that learning conditions are still lacking, especially in the aspect of increasing learning motivation. So that effective learning is needed to be able to increase learning motivation, (Marlina, 2020) differentiated learning is an adjustment to interests, learning preferences, student readiness to achieve increased awareness, motivation and student learning outcomes to become independent learners, and create a pleasant relationship between students and teachers.

Differentiated learning has the following characteristics: Learning that focuses on concepts, has a different approach, students become active learners and have different processes. So that differentiation learning still pays attention to social and cultural suitability in various aspects of students' social and cultural life, age and uniqueness attached to him, (Faiz et al., 2022) and can be used as a reference for selecting learning strategies.

Differentiated learning is an effort to improve the teaching system. This aims to support improving the quality of education, through quality learning patterns. The quality of this education can be improved by going through a learning process that utilizes various learning media and tools (Pesona, 2018). This is because the learning process is a real activity that cannot be separated from the life of an individual in meeting needs or in achieving a goal.

Teachers as teaching staff have an important role in improving the quality of learning. In the learning process the teacher is a facilitator and motivator to explore all the potential possessed by children (Aulina, 2018). The teacher has a role as a learning marketing leader. Appropriate personality based on pedagogy that prioritizes skills when understanding each student's characteristics and being able to develop competencies that make students understand the material they teach (Muhtar et al., 2022). So the teacher must have a variety of media strategies and models in the learning process so that students are more motivated in learning.

To create professional individual teachers, the ability to interact well with students and have qualified pedagogical abilities is the hope of every teacher. This pedagogical ability includes skills in building an interesting atmosphere in a learning process. This is not spared from the use of learning models and media aimed at increasing student motivation. The existence of learning motivation must be strived to exist within the students, and if there are obstacles it is also sought to be minimized. So that the results to be achieved as a result of learning can be obtained optimally (Fadlilah, 2020).

The use of media and learning models often has an impact on student learning motivation as indicated by student reactions and responses to less active learning. In the learning process especially in elementary schools it is generally carried out passively, where the teacher reveals material using the lecture method while students only listen, as a result students quickly feel bored & bored (Suhartoyo et al., 2020). Therefore, the Minister of Education and Culture issued a learning concept called "Freedom to Learn". This concept according to (Puspitasari & Walujo, 2020) allows students to freely express their own thoughts and innovations. However, in its implementation, sometimes there are obstacles due to the diverse and different thinking of students, requiring teachers to be more sensitive to issues of diversity. Each student has their own ways, ideas and thoughts to develop. For this reason, teachers need to understand the type of referenced learning. According to American Psychiatric Association. (2019) there are 4 differentiation 1. Content differentiation, 2. Process differentiation and 3 Product differentiation, to be taken into consideration when this is needed in selecting appropriate learning methods and models. To overcome this, (Sapriya, 2009) suggests that teachers can implement differentiation learning. This model allows each child to learn according to their own needs. Differentiated learning is learning that provides opportunities to gain concepts, process ideas, and increase interest from the diversity of students in the class (Andini, 2016).

By focusing on the individual learning needs of students, and freeing students to think and innovate, it is hoped that students will be more interested and enthusiastic in carrying out the learning process, (Booth-LaForce & Kerns, 2009) explains that teachers need to pay attention to differentiating learning indicators such as: feeling happy, skills assessment being good and learning outcomes increasing or good. Therefore, the steps for differentiating learning must be a reference, namely: a. Determine learning objectives. b. Mapping student learning needs (learning readiness, interest, learning profile). c. Creating strategies and assessment tools that will be used in the learning process and d. Determine learning activities. so this research needs to be done to know the effect of differentiating learning on increasing student motivation.

2 Research Methods

The sample in the study was divided into two classes, namely the experimental class and the control class which were carried out randomly. The treatment in each class is different, where in the experimental class differentiation learning is carried out while in the control class conventional learning is carried out. Prior to learning, students are given a learning motivation questionnaire with a Likert measurement scale to determine student learning motivation at the beginning of learning. Then at the end of the lesson the same thing will be done to compare student learning motivation after and before learning. The research design used was a pretest-posttest control-group as shown in Table 1.

Table 1. Design of Research

Class	Pre-Test	Treatment	Post-Test

Experiment	O_1	X_1	O_2
Control	O1	X_2	O_2

Note:
O_1 : Pre-Test
O_2 : Post-Test
X_1 : Using differentiation learning
X_2 : Using conventional learning

To find out whether there is an increase in learning motivation between the experimental and control classes it is analyzed using the Independent Test-sample t-test. The assumption test that must be fulfilled is the Normality Test (Kolmogorov-Smirnov) and Homogeneity Test. Data were processed and analyzed using SPSS with a significance level of 5%. The research hypothesis is as follows.
H_0 :There is no significant effect between differentiated learning on increasing student motivation
H_a : There is a significant influence between differentiation learning on increasing student motivation

3   Results and Discussions

After obtaining data from the pretest and posttest results of students in the experimental class and control class, then the data obtained is analyzed to obtain information to support research needs. Analysis of the data uses several methods. The results of the descriptive analysis of the data that have been obtained are as follows:

Table 2. Descriptive Analysis

	N	Minimum	Maximum	Mean	Std. Deviation
Pre-test Experiment	28	51,00	84,00	67,2143	11,09674
Pre-test control	28	50,00	83,00	65,3929	9,28695
Post-test Experiment	28	60,00	98,00	77,1071	11,48054
Post-test control	28	61,00	99,00	79,5357	11,62208
Valid N (listwise)	28				

From the results of the analysis above, it was found that the average value for the Pretest in the Experiment class was 67.2143 and for the Control Class was 65.3929. Then for the Posttest average value for the Experiment class is 77.1071 and for the control class is 79.5357. After performing a descriptive statistical analysis on the data, a normality test was then carried out and it was found that all data were normally distributed because the significance value exceeded the value $\alpha = 0.05$ and the results can be seen in the following table:

Table 3. Data Normality Test

Class	Statistic	df	Sig.	Conclusion
Pre-test Experiment	0,158	28	0,071	Normal
Pre-test control	0,113	28	0,20[*]	Normal
Post-test Experiment	0,131	28	0,20[*]	Normal
Post-test control	0,104	28	0,20[*]	Normal

The results of the analysis of the normality test above show that the data in the experimental class and control class are normally distributed, this can be seen by looking at the significance value in each class, that is, the pretest

for the experimental class is 0.71 and the control class is 0.20 respectively(Esti & Irul, 2017). Then the significance value for the Posttest experimental class and control class is 0.20. From the results obtained it is known that the significance value is greater than $\alpha = 0.05$ so that the decision is obtained that the data is normally distributed. After carrying out the Normality test and obtaining all data normally distributed, then a homogeneity test is then carried out, the results of which can be seen in the following table:

Table 4. Data Homogeneity Test

		Levene Statistic	df1	df2	Sig.	Conclusions
Pretest	Based on Mean	3.266	1	54	0.076	Homogeneous
Posttest	Based on Mean	0.007	1	54	0.936	Homogeneous

The table above shows the significance value of the homogeneity test on the pretest and posttest data, where the significance value for the pretest data is 0.076 and the posttest significance value is 0.936. From the results obtained, it can be seen that the significance value is greater than $\alpha = 0.05$ so that it is known that the data. Then to find out the differences in the samples and the influence of the variables, an Independent sample T-test was carried out, where the results of the analysis can be seen as follows:

Table 5. *Independent-sample t-test*

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Experiment	Equal variances assumed	2.796	0.100	-5.030	54	0.000	-14.14286	2.81146
Control	Equal variances assumed	0.004	0.949	-3.279	54	0.002	-9.89286	3.01745

It can be seen, the table shows the significance values of the Experiment and Control, which are 0.000 and 0.002 respectively where the value is smaller than $\alpha = 0.05$ so that Ho is rejected and Ha is accepted. So it can be seen that there is a significant difference between the pretest scores and posttest scores. So it can be seen that Differentiated Learning has an influence on increasing student motivation. This is also evidenced by the average difference between pretest scores and posttest scores. The average level of learning motivation in the experimental class at the pretest was 67.2143 and at the posttest was 77.1071 where there was an increase of 9.893. Then the average level of learning motivation in the control class at the pretest was 65.393 while the posttest was 79.536 which showed a significant difference. The level of learning motivation in the control class increased by 14.143. The increase in student learning motivation proves that there is an influence between differentiating learning on increasing student learning motivation in public elementary school 84, Parepare City.

4 Conclusion

Based on the results of the research that has been done, it can be concluded that there is a significant influence between differentiating learning on increasing student motivation. It can also be seen that the increase in learning motivation of students who receive differentiated learning is greater than those who receive conventional learning

with an increase of 14.143. As for developing and increasing student learning motivation, suggestions were put forward namely, the need for further development of differentiated learning in order to improve the quality of education and the need for further research on matters related to differentiated learning on aspects that have not been studied.

References

Andini, D. W. (2016). Differentiated instruction: solusi pembelajaran dalam keberagaman siswa di kelas inklusif. *Trihayu: Jurnal Pendidikan Ke-SD-An*, *2*(3).

Aulina, C. N. (2018). Penerapan Metode Whole Brain Teaching dalam Meningkatkan Motivasi Belajar Anak Usia Dini. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, *2*(1), 1–12.

Booth-LaForce, C., & Kerns, K. A. (2009). *Child-parent attachment relationships, Peer relationships, and peer-group functioning.*

Esti, T., & Irul, H. (2017). *Statistik Parametrik untuk Penelitian Kesehatan*. Online),(https://files. osf. io/v1/resources/deuxv/providers/osfstorage ….

Fadlilah, A. N. (2020). Strategi menghidupkan motivasi belajar anak usia dini selama pandemi covid-19 melalui publikasi. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, *5*(1), 373–384.

Faiz, A., Pratama, A., & Kurniawaty, I. (2022). Pembelajaran Berdiferensiasi dalam Program Guru Penggerak pada Modul 2.1. *Jurnal Basicedu*, *6*(2), 2846–2853.

Marlina, M. (2020). *Strategi Pembelajaran Berdiferensiasi di Sekolah Inklusif*.

Muhtar, Z., Iriantara, Y., Handayani, S., Wahyudin, W., & Yudianti, M. (2022). Standardization of Islamic Education in Religious Value Education Orientation. *JMKSP (Jurnal Manajemen, Kepemimpinan, Dan Supervisi Pendidikan)*, *7*(1), 188–199.

Pesona, R. R. (2018). *Penerapan Model Pembelajaran Berbasis Masalah dengan Strategi Pembelajaran Diferensiasi pada Peserta Didik Kelas VIII*. FE.

Puspitasari, V., & Walujo, D. A. (2020). Pengembangan Perangkat Pembelajaran Dengan Model Diferensiasi Menggunakan Book Creator Untuk Pembelajaran Bipa Di Kelas Yang Memiliki Kemampuan Beragam. *Jurnal Education and Development*, *8*(4), 310.

Sanjaya, P. A. (2022). Pengembangan Pembelajaran Sejarah Berdiferensiasi Menggunakan E-Module Berbasis Book Creator. *Prodiksema*, *1*(1), 52–60.

Sapriya, S. (2009). Pendidikan IPS konsep dan pembelajaran. *Remaja Rosdakarya*.

Suhartoyo, E., Wailissa, S. A., Jalarwati, S., Samsia, S., Wati, S., Qomariah, N., Dayanti, E., Maulani, I., Mukhlish, I., & Azhari, M. H. R. (2020). Pembelajaran kontekstual dalam mewujudkan merdeka belajar. *Jurnal Pembelajaran Pemberdayaan Masyarakat (JP2M)*, *1*(3), 161–164.