

# THE APPLICATION OF DIFFERENTIATED LEARNING MODEL IN INCREASING STUDENTS' INTEREST IN LEARNING

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## Abstract

The formulation of this research problem is whether there is an influence of the differentiated learning model on the independent curriculum in PAI subjects on the learning interests of students at SMAN 9 Takengon and how much the average value difference is before and after the differentiation learning model. The purpose of this research is to determine the influence of the differentiated learning model on the independent course in PAI subjects on the learning interests of students at SMAN 9 Takengon and to find out how much the average value difference is before and after the differentiation learning model. Types of quantitative research, experimental approaches. The entire population of this study class X numbered 95 students, the sample of class X-I research numbered 28 students and the control class X-2 amounted to 39 students. data collection using questionnaires, data analysis techniques include prerequisite tests, and hypothesis tests using independent t-tests. The results of the study that there is a significant influence between the influence of the use of a differentiated learning model on the independent curriculum in PAI subjects on the learning interest of SMAN 9 Takengon students. this is based on the significant results of the independent t-test produced by 0.000 sig, < 0.05 so that Ha is accepted and Ho is rejected. The difference in the average grade of the experimental class of 76.57 and the average grade of the control class of 63.07 can be concluded that the interest in learning in students who get a better differentiated learning model.

## Abstrak

Rumusan masalah dalam penelitian ini adalah apakah terdapat pengaruh model pembelajaran berdiferensiasi pada kurikulum merdeka dalam mata pelajaran PAI terhadap minat belajar siswa di SMAN 9 Takengon dan seberapa besar perbedaan nilai rata-rata sebelum dan sesudah penerapan model pembelajaran berdiferensiasi. Tujuan dari penelitian ini adalah untuk mengetahui pengaruh model pembelajaran berdiferensiasi pada kurikulum merdeka dalam mata pelajaran PAI terhadap minat belajar siswa di SMAN 9 Takengon serta untuk mengetahui seberapa besar perbedaan nilai rata-rata sebelum dan sesudah penerapan model pembelajaran berdiferensiasi. Jenis penelitian ini adalah penelitian kuantitatif dengan pendekatan eksperimen. Populasi dalam penelitian ini adalah seluruh siswa kelas X yang berjumlah 95 siswa, dengan sampel penelitian terdiri dari kelas eksperimen X-1 sebanyak 28 siswa dan kelas kontrol X-2 sebanyak 39 siswa. Pengumpulan data dilakukan menggunakan angket, dan teknik analisis data meliputi uji prasyarat dan uji hipotesis menggunakan uji t independen. Hasil penelitian menunjukkan bahwa terdapat pengaruh yang signifikan antara penggunaan model pembelajaran berdiferensiasi pada kurikulum merdeka dalam mata pelajaran PAI terhadap minat belajar siswa SMAN 9 Takengon. Hal ini didasarkan pada hasil signifikan uji t independen sebesar 0,000 < 0,05 sehingga Ha diterima dan Ho ditolak. Perbedaan nilai rata-rata kelas eksperimen sebesar 76,57 dan kelas kontrol sebesar 63,07 menunjukkan bahwa minat belajar siswa yang mendapatkan model pembelajaran berdiferensiasi lebih baik.

## INTRODUCTION

The success of the learning process can be driven by several factors including learning interest. Interest in learning is defined as a sense of interest shown by students in carrying out learning activities, both at home (Andriani 2020), at school, and in the community. The higher the student's interest in learning a subject (Rahayu et al. 2022), usually it will be more interesting and more concentrated to follow and learn the lesson and make the learning environment run effectively and efficiently (Chaerunisa et al. 2024). Learning interest in addition to allowing the

concentration of the mind, will also cause excitement in learning efforts, the success of students in understanding subjects is highly dependent on their interests, given the importance of learning interest in learning, it is appropriate and students should have a high interest in learning.

High student learning interest is influenced by several factors, one of which is the learning model used by the teacher in learning (Kokotsaki, Menzies, and Wiggins 2016), the teacher is required to be able to meet the needs of each student, deliver material creatively, innovate in managing the class (Purani and Putra 2022), create a pleasant learning environment, student involvement / student participation in learning, the accuracy of the learning model applied by the teacher and not using a boring and conventional learning model. The role of the teacher is very important to foster student interest in learning, one of which is by teaching in a fun way and providing constructive motivation and choosing the right learning model.

Meanwhile, the low interest in student learning at school is influenced by several factors which are reciprocal to the factors that influence the high interest in student learning, one of which is that there are still some teachers who use boring and conventional learning models that can make students' interest in learning low. Marti'in revealed that the lack of student interest in learning at SMAN 5 Pontianak was at a percentage of 85% which was in the high category, it was caused by the curriculum and the learning model used was still classified as monotonous and conventional. Low student learning interest can be observed by student behavior during learning activities such as not being active in class, not answering questions made by the teacher related to the material that has been delivered and not doing the assignments given by the teacher.

Based on interviews conducted with one of the PAI subject teachers in the learning process, he has applied various learning methods including lecture, discussion, question and answer, and small group methods, and applied a variety of learning models, but the learning model applied does not appear to have improved significantly, especially in students' interest in learning. Researchers also found other problems by interviewing students even though the teacher used a varied learning model students still had low interest in learning because every time they entered the desires and learning styles of each student were not fulfilled.

Researchers found a learning model to solve the problems and constraints experienced by teachers and students in terms of learning interest, namely by using a differentiated learning model. Differentiated learning is a series of reasonable decisions made by teachers that are oriented towards student needs, adjustments to the interests of learning tendencies, student readiness in order to achieve increased interest and learning outcomes. For Schöllhorn, differentiated learning is a motor learning model grafted on the meaning of movement variability and rooted in the dynamic systems theory of human movement. Differentiated education is in line with the philosophy of learning thinking for Ki Hajar Dewantara, if self-learning learning is a process in which people take the initiative, with or without the encouragement of others, in diagnosing their learning needs, formulating goals, recognizing human energy sources and modules for learning, sorting and practicing suitable educational strategies, and evaluating the results of their learning.

Seeing the symptoms above, so that researchers are interested in wanting to know in depth and will conduct research with the title The Effect of Differentiated Learning Models on the Merdeka Curriculum in PAI Subjects on Student Learning Interest at SMAN 9 Takengon. the formulation of problems in this study are: 1). Is there an influence of differentiated learning

models on the independent curriculum in PAI subjects on the learning interest of class X students at SMAN 9 Takengon? 2). How big is the difference in the average value before and after the differentiated learning model on the independent curriculum in PAI subjects on the interest in learning class X students at SMAN 9 Takengon.

## METHOD

This type of research is quantitative (Firdaus et al. 2024). The approach used in this research is experimentation. The experimental approach is to determine the effect of independent variables (treatment/treatment) on dependent variables (results) under controlled conditions. The experimental approach was chosen because it provides more accurate results than other approaches and can be accounted for because researchers have good control over what is being studied (Silveira et al. 2019). The form of true-experimental designs researchers use is post-test control only design because researchers take two groups randomly used for research, namely the experimental group and the control group, both groups are not pre-tested but only post-tested (Hidayat and Nizar 2021).

The place of research is SMAN 9 Takengon, which is located in SP 4 Rajawali Village, Ketol District, Central Aceh Regency, Aceh Province. The research time was from June to July 2024. The data in this study were obtained from the results of distributing questionnaires containing questions and statements about differentiated learning models in the independent curriculum in PAI subjects on the learning interest of students of SMAN 9 Takengon. The population in this study were all class X students totaling 95 students at SMAN 9 Takengon. Sampling in the study used a type of simple random sampling because sampling in this study provides equal opportunities for each member of the population to be selected as a member of the sample. The sample in this study was class X-1 which amounted to 25 students as an experimental group.

Validity test using expert judgment then validity test using pearson product moment method. using instrument reliability testing with Cronbach alpha technique. The data analysis technique consists of prerequisite tests and hypothesis tests, the prerequisite test used is the normality test using the Kolmogorov-smirnov analysis technique. Hypothesis testing using the t-test, namely the independent sample t-test which is a test of two unpaired samples.

## RESULT AND DISCUSSION

### RESULT

#### Data Normality Testing

Normality testing is carried out to help the accuracy of hypothesis testing. In this study, the Kolmogorov Smirnov formula was used with the help of SPSS version 26, with the criteria that if the significant value (sig) > 0.05 then the data is normally distributed.

Table 1. Data Normality Test Results

Class	<i>Uji Kolmogorov-Smirnov</i>	<i>Sig.</i>
Experiment	0.210	0.200
Control	0.150	0.096

Based on the table above, it can be seen that normality testing on reading interest data in experimental and control classes respectively produces Kolmogorov Smirnov statistics of 0.210 and 0.150 with a significance of 0.200 and 0.96. It can be seen that the normality test in the

experimental class and control class produced a significant  $\alpha 0.05$  so that the data in the experimental class and control class were declared normally distributed.

### Testing Data Homogeneity

Data homogeneity testing aims to determine whether the data has a homogeneous variety or not. Data homogeneity testing is carried out using the Levene Test assisted by SPSS version 26, with the criteria if the sig value  $> 0.5$  then the data is declared homogeneous.

Table 2. Homogeneity Test Results

Output Value	Levene Statistic	Nilai Sig.
	3.692	0,066

Data homogeneity testing aims to determine whether the data has a homogeneous variety or not. Data homogeneity testing is carried out using the Levene Test assisted by SPSS version 26, with the criteria if the sig value  $> 0.5$  then the data is declared homogeneous.

### Hypothesis Testing

Independent t-test states if the sig value  $\leq 0.05$  then  $H_0$  is rejected, so it can be stated that there is a significant difference in reading interest in students who get the library's flagship program and students who do not get the library's flagship program. The results of t-independent data testing are assisted by SPSS version 26, with the test criteria stating that if the sig value  $\leq 0.05$  then  $H_0$  is rejected.

Tabel 3. Independent T Test Results

Class	Average Learning Interest	T Test Results	Sig.
Experiment	76,57	5.118	0.000
Control	63,07		

Based on the test results listed in the table, it can be seen that the resulting significance is 0.000. This means  $<$  the level of significance 0.05 so that  $H_0$  is rejected. Thus it can be stated that there is a significant difference in learning interest in students who get a redirected learning model and students who do not get a redirected learning model. So it can be concluded that there is an effect of the redirected learning model on students' interest in learning.

Based on the table in the average learning interest column above, the average value of learning interest in students who get a differentiated learning model in the experimental class is 76.57 when compared to the control class that does not get a differentiated learning model, the experimental class is higher because the average learning interest in control class students who do not get a differentiated learning model is 63.07. It can be concluded that learning interest in students who get a differentiated learning model is better than learning interest in students who do not get a differentiated learning model.

### DISCUSSION

In the discussion of research results, the findings obtained from the results of the analysis of research data on the influence and how much influence the differentiated learning model on the independent curriculum in PAI subjects has on the learning interest of students of SMAN 9 Takengon. The following description describes students' interest in learning by using a differentiated learning model, and without a differentiated learning model. The following

discussion is based on the results of a questionnaire totaling 20 items, using a Likert scale using alternative answers in the form of: (SS) Strongly Agree, (S) Agree, (KS) Disagree, (TS) Disagree, (STS) Strongly Disagree.

This research was conducted to find answers to the problem formulation through the distribution of questionnaires. Researchers analyzed whether there was an effect of differentiated learning models on the independent curriculum in PAI subjects on student interest in learning at SMAN 9 Takengon and how much the difference in average scores before and after the existence of differentiated learning models on the independent curriculum in PAI subjects on student interest in learning at SMAN 9 Takengon. Based on the results of the study, the following answers were found: From the results of the t-test proves that it has a significant value The results of hypothesis testing show that  $H_a$  is accepted and  $H_o$  is rejected, this is based on the resulting significant value of  $0.000 < 0.05$ , it can be concluded that the differentiated learning model has an effect on learning interest. So, there is an effect of differentiated learning model on the independent curriculum in PAI subjects on students' interest in learning at SMAN 9 Takengon.

The results of data analysis on student interest in learning without a differentiated learning model are categorized as low (Journal *et al.* 2023). This is because in the learning process, students look bored when giving material because it is only dominated by the teacher, thus affecting their interest in learning. Learning in the old way that is less interesting has an impact on student interest in learning. The results of students' interest in learning by using a differentiated learning model can be categorized as high. In this process, students are very enthusiastic, students feel happy because the teacher is able to meet the needs of each individual student, they learn in the way they like. This can be seen in the results of hypothesis testing the significance value (sig) generated is 0.000. This means that if the significance value (sig)  $< 0.05$ , then  $H_o$  is rejected. Thus it can be stated that there is a significant difference in learning interest in students who get differentiated learning models and students who do not get differentiated learning models. So it can be concluded that there is an effect of differentiated learning model on students' interest in learning.

In this process, it can be seen that what affects students' interest in learning on external factors in the school aspect is the teacher's teaching model and learning media that must be varied. This is in accordance with Slameto's statement that the factors that influence learning interest in school aspects are learning models, interactions between teachers and students when learning takes place, curriculum (Goossens *et al.* 2016), teacher-student relationships, student-student relationships, school discipline usually affects students and learning media that must be varied.

This study also found that the differentiated learning model is effectively used in learning, where students really enjoy learning, so they do not feel bored because the teacher provides opportunities for students to learn according to their individual needs and what they like. This is in accordance with Mumpuniarti's statement that differentiated learning is a teaching and learning process where students can learn subject matter according to their abilities, likes, and needs so that they are not frustrated and feel like failures in their learning experience.

The average value before the differentiated learning model in the independent curriculum in PAI subjects on student learning interest at SMAN 9 Takengon is in the control class of 63.07. While the average value after the differentiated learning model on the independent curriculum in PAI subjects on student interest in learning at SMAN 9 Takengon is in the experimental class of 76.57. Based on the difference in average scores, it can be concluded that learning interest in



students who get a differentiated learning model is better because students do not feel bored anymore, are not sleepy, and students concentrate while learning because students learn the way they want, when compared to learning interest in students who do not get a differentiated learning model, this can be seen when learning students feel bored. Besides all that, the role of the teacher is also very important in increasing students' interest in learning, because in differentiated learning the teacher remains a facilitator for students as helping students identify student interests, providing guidance and challenging students according to student interests.

This research is in line with research conducted by Mariana Surbakti with the title of the effect of differentiated learning strategies on students' interest and learning outcomes, this study concluded with the results of the study that students' interest in learning during the learning process by using differentiated learning strategies with the total average included in the very high category of 81.25. Furthermore, in line with research conducted by Lilis Lisnawati on the role of teachers in the application of differentiated learning to foster student interest in sociology, this research was conducted at SMAN 2 Pandeglag, the research findings show that (1). Teachers apply a variety of customized learning strategies, such as grouping students based on their abilities, providing a variety of learning resources, and providing project assignments that are relevant to student interests. (2) Teachers act as facilitators, helping students identify their interests, providing guidance, and challenging students according to their individual ability levels. (3) The result of implementing differentiated learning is students who are more engaged in the learning process because they feel that the learning material is relevant to their personal interests and experiences.

## CONCLUSION

The magnitude of the average value before the differentiated learning model on the independent curriculum in PAI subjects on student learning interest at SMAN 9 Takengon, namely in the control class of 63.07. While the average value after the differentiated learning model on the independent curriculum in PAI subjects on student interest in learning at SMAN 9 Takengon, namely in the experimental class of 76.57. There is an influence of the differentiated learning model on the independent curriculum in PAI subjects on student interest in learning at SMAN 9 Takengon, this can be seen in the results of hypothesis testing the significance value (sig) produced is 0.000. This means that if the significance value (sig) < 0.05, so  $H_0$  is rejected and  $H_a$  is accepted. Based on the difference in mean scores and testing the results of t-independent concluded that interest in learning in students who get differentiated learning model is better than interest in learning in students who do not get differentiated learning model.

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