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The Impact of Learning Models for Explicit Instruction on Student Learning Outcomes in Vocational High School 2 Banda Aceh

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Abstract

The Explicit Instruction learning model is a learning model that positions the teacher as a facilitator and organizer in the learning process. This research aims to see the effect of the explicit instruction learning model in improving student learning outcomes in the Basic Passive Electronic Components subject. This research uses a quantitative type method with an experimental approach (one group pretest-posttest design) using pre-test and post-test question sheet instruments. The research subjects consisted of 25 students of class X Electronics Engineering at SMKN 2 Banda Aceh. The research results showed that the application of the explicit instruction learning model had an effect on the learning outcomes of students at SMK N 2 Banda Aceh as evidenced by the post-test results which increased by 44 points. This shows a positive change in student learning outcomes. Based on the research results, it can be concluded that the application of the explicit instruction learning model has an effect and can improve student learning outcomes at SMK N 2 Banda Aceh.

Keywords*: Learning Modules, Explicit Instruction Model, Electrical Power Installations.*

Abstrak

Model pembelajaran Explicit instruction merupakan model pembelajaran yang memposisikan guru sebagai fasilitator dan organisator dalam proses pembelajaran. Penelitian ini bertujuan untuk melihat pengaruh model pembelajaran eksplisit instruction dalam meningkatkan hasil belajar siswa pada mata pelajaran Materi Dasar Komponen Elektronika Pasif. Penelitian ini menggunakan metode tipe kuantitatif dengan pendekatan eksperimen (one group pretest-posttest design) dengan menggunakan instrumen lembar soal pre-test dan post-test. Subjek penelitian terdiri dari 25 siswa kelas X Teknik Elektronika SMKN 2 Banda Aceh. Hasil penelitian menunjukkan bahwa penerapan model pembelajaran eksplisit instruction berpengaruh terhadap hasil belajar siswa SMK N 2 Banda Aceh dibuktikan dengan hasil post-test yang mengalami peningkatan 44 poin. Hal ini menunjukkan adanya perubahan positif pada hasil belajar siswa. Berdasarkan hasil penelitian dapat disimpulkan bahwa penerapan model pembelajaran eksplisit instruction berpengaruh dan dapat meningkatkan hasil belajar siswa di SMK N 2 Banda Aceh.

Kata kunci*: Modul Pembelajaran, Model Instruksi Eksplisit, Instalasi Tenaga Listrik.*

Introduction

Through a process of studying and teaching in or out of the classroom, education is a way to develop knowledge, student capacities, skills, behavior, and virtuous behavior [1]. Within the framework of education, the instructor guides the learner toward mastering the fundamentals of the subject matter until the learning objective (cognitive aspect), the

changes in attitude (affective aspect), and the changes in abilities (psychomotor aspect) are met [2]. Based on preliminary observations made at SMK N 2 Banda Aceh, it is learned that students lack motivation to learn, ask questions, and solve problems. This is likely due to their lack of understanding of the teacher's lesson plans, which will affect the students' learning objectives [3],[4]. One of the most important factors in this situation is that the teachers' use of a monotonous learning style does not encourage students to respond to the teachings they are taught. In this research, researcher using the Explicit Instruction learning model which is one of the direct learning models [5]. Due to Siegfried Eugelmann's assertion that using the Explicit Instruction model has improved student learning outcomes regardless of their economic background, this learning model is used at the Electronic Engineering Expertise Program, particularly in basic major subjects [6],[7]. By using this strategy, the instructor can help the students reach their goals of building confidence more quickly [8].

Explicit Instruction Learning Model is a learning model that also called by direct learning and able to involve the creativity and activeness of the students and position the teacher as catalyst, namely the organizer of the learning process that starts from planning, implementing particularly in gathering questions, giving guidance to evaluate [9]. Students may feel more comfortable asking questions about subjects they are unfamiliar with as a result. Learning outcomes are all that students accomplish or acquire as a result of their efforts and reflections [10]. They are expressed as fundamental knowledge, proficiency, and life skills that are found in various facets of life and are represented to each individual through the use of quantitative assessments of cognitive, affective, and psychomotor aspects.

Method

This type of research is quantitative research. In this type of quantitative research using an experimental method approach. Experimental research refers to validation or testing [11]. In conducting research, researcher use an experimental approach with the design of the one group pretest-posttest design, that means applying it to only one study group [12]. In its application, there are pre-test questions before being given treatment, then followed by giving treatment, and then given post-test questions so that results can be known more accurately, because they can be compared exclusively with conditions before treatment.

This research was conducted in teaching and learning process at SMK Negeri 2 Banda Aceh in the Electronics Engineering Expertise Program in Vocational Basic Subjects for Passive Electronic Component Sub-Material. There were 965 students enrolled in the Banda Aceh 2 Vocational High School who made up the research population. In the meantime, 25 Class X students from SMK Negeri 2 Banda Aceh's Electronics Engineering Expertise Program served as the research's samples. Test questions were the instrument utilized in this study to collect data (pre-test and post-test). The examination of test outcomes is the data analysis method employed in this study to gauge how well students comprehend the subject being taught during the teaching and learning process.

Results and Discussion

a. The Results of Study

The present study examines the impact of the explicit instruction learning model on student learning outcomes at SMK Negeri 2 Banda Aceh. Specifically, the study compares the pre-test results obtained prior to treatment with the post-test results obtained following the implementation of the explicit instruction learning model. Homogeneity test is used to show two or more groups of sample data that have been taken from populations that have the same variance. In other words, the homogeneity test is carried out to determine whether the data that set under research has the same characteristics or not. Homogeneity test was carried out using SPSS Release 25.0. In this study, data were collected using pre-test and post-test instruments that using the explicit instruction learning model. The data obtained were analyzed using the Kurtosis formula. The normality tes proved that the pre-test normality value is 0.902 and the post-test normality value is 0.662. Therefore, the pre-test and post-test values can be declared to be normally distributed because the values 0.902 and 0.662 > 0.05.

The F test was used in this study's hypothesis testing. The F test was employed in this study's hypothesis testing to look for variations in group means. The computed F value is the F test's final outcome. Given that the sig value is 0.001 <0.05 and the F count is 14.873 > f table 4.03, it is possible to deduce that H_0 is rejected and Ha is approved. Accordingly, the research's hypothesis, which was tested, indicates that students' learning results at SMK N 2 Banda Aceh are influenced by the explicit instruction learning model. Using the ANOVA test, determine the impact of the learning model based on how the study problem was formulated, which called for examining how the explicit instruction learning model affected student outcomes. The results of the effect test using the ANOVA test using the SPSS Release 25.0 application can be seen in the following table:

Table 1. ANOVA Test Results

Pretest_Postest					
	Sum of Squares	df	Mean Square	ANOVA	Sig.
Between Groups	20767,220	1	20767,220	225,968	0,000
Within Groups	4411,360	48	91,903		
Total	25178,580	49			

Based on the table above shows that the significance value obtained is 0.000 <0.05. So thus, it shows that there is an influence on student learning outcomes after implementing the explicit instruction learning model at SMK N 2 Banda Aceh.

b. Discussion

The goal of this study was to address the problem statement, which asked how to affect how explicit instruction learning models are implemented in relation to student learning outcomes. Pre- and post-test results for the students can be used to determine the effectiveness of the explicit instruction model's teaching and learning process [13]. The purpose of the pre-test questions is to gauge students' initial proficiency in Vocational Basic subjects on Passive Electronics sub-material before the material is presented. Pre-

test results include students who received an average score of 44, including a bad category. The fact that none of the 25 students who took the pre-test were able to obtain a KKM score of 75 further illustrates the students' lack of material mastery or their preliminary understanding of the subject's sub-material, passive electronics. Furthermore, after being given material by implementing the explicit instruction learning model to Vocational Basic subjects, it had a positive effect or in other words experienced a significant increase in mastery and understanding of the subject matter, this can be seen from the value of the post-test results of students which have a value an average of 85 is categorized as very good and the scale of improvement is 41% and all 25 students have achieved the KKM score. Based on the data obtained that all 25 students have passed the KKM score (75), this means that the explicit instruction learning model can improve student learning outcomes.

From the test results it can be seen that the use of explicit instruction learning models for students has increased learning outcomes effectively. The results of this study prove that the accepted hypothesis is Ha which states that there is an influence on the application of the explicit instruction learning model on student learning outcomes. The research has similar finding with research, the learning outcomes of 31 students showed that the maximum score obtained was 96 and the minimum score obtained was 68 and the average value was 81.81 [14]. The results and conclusions are that there is a significant and positive influence on the Explicit Instruction learning model on Learning Outcomes of Digital Simulation Class X Teknik Komputer dan Jaringan (TKJ) at SMK Negeri 1 Bungo. The advantage of this study is applying the control class (which was not given treatment) as a reference in comparing learning outcomes with the experimental class (which was given treatment), making it easier to see and compare research results. Meanwhile the weakness in this study was in the sampling, namely random sampling so there was no explanation why study group A was used as the control class, as well as in study group B. Meanwhile, all students with a total of 25 people have achieved KKM scores after applying the explicit instruction learning model so that the learning model can become a reference and guidelines for implementation in schools. There were some shortcomings to this study, too, including the use of a single research instrument—a test sheet—instead of employing others, like surveys, to gather data on students' reactions to the explicit instruction learning paradigm.

The Conclusion

The research findings and subsequent discussion support the conclusion that the explicit instruction learning model influences and potentially enhances student learning outcomes at SMK N 2 Banda Aceh, particularly in Vocational Basic subjects involving passive electronic sub-material. Based on each student's pre- and post-test results, these results were determined. The pre-test score of the students before being given the explicit instruction learning model obtained an average value of 44. Then after being given treatment, namely applying the explicit instruction learning model, the average value was 85 with a percentage increase of 41%. This proves that the application of the explicit instruction learning model has an effect on improving student learning outcomes.

References

[1] S. Sagala, *Konsep dan Makna Pembelajaran, Untuk Membantu Memecahkan Problematika Belajar Mengajar*. Bandung: Alfabeta, 2010.

[2] S. S. Ikhsan Rizki, Marzuki Marzuki, "Penerapan Model Pembelajaran Problem Based Learning untuk meningkatkan keaktifan siswa Kelas XI Pada Mata Pelajaran Perekayasaan Sistem Radio dan Televisi di SMK Muhammadiyah 1 Banda Aceh," *Circuit J. Ilm. Pendidik. Tek. Elektro*, vol. 3, no. 1, pp. 19–28, 2019.

[3] Nurvitriawati, *Pengaruh Model Explicit Instruction Terhadap Hasil Belajar Bahasa Indonesia Membaca Konsep Denah Pada Murid Kelas IV SD Inpres Bertingkat Kecamatan Somba Opu Kabupaten Gowa*. Makassar. Universitas Muhammadiyah Makassar, 2018.

[4] S. M. Sibagariang, A. Hasibuan, and P. J. Silaban, "Penerapan Model Pembelajaran Explicit Instruction untuk Meningkatkan Hasil Belajar Siswa Sekolah Dasar," *J. Basicedu*, vol. 5, no. 4, pp. 2189–2198, 2021, doi: 10.31004/basicedu.v5i4.586.

[5] D. Kustawan, *Analisis Hasil Belajar, Program Perbaikan dan Pengayaan Peserta Didik Berkebutuhan Khusus*. Jakarta. Luxima Metro Media, 2018.

[6] R. A. A. Sani, K. Aziz, I. Tanjung, Ratna, and H. Siswanto, *Evaluasi Proses dan Penilaian Hasil Belajar*. Bandung: Remaja Rosdakarya, 2020.

[7] T. Y. Silalahi, "Penerapan Model Pembelajaran Explicit Instruction Untuk Meningkatkan Hasil Belajar Siswa Kelas X AK SMK," *ArRahman Medan*, vol. 64, 2018, doi: http://repository.umsu.ac.id/handle/123456789/2576.

[8] G. Gasong, *Belajar dan Pembelajaran*. Yogyakarta: Deepublish, 2018.

[9] D. N. Amalia, "Pengaruh Model Pembelajaran Explicit Instruction terhadap Keaktifan dan Hasil Belajar Siswa Mata Pelajaran Desain Media Interaktif di SMK Bagimu Negeriku Semarang Tahun 2019, Skripsi, Semarang," *Skripsi, Univ. Negeri Semarang*, 2019.

[10] P. Frida, "Penerapan Model Pembelajaran Explicit Instruction untuk Meningkatkan Hasil Belajar Peserta Didik di SMKN 1 OKU," *LenteraPedagogi,1(2),123–128*, vol. 1, no. 2, pp. 123–128, 2018, [Online]. Available: http://journal.unbara.ac.id/index.php/

[11] J. M. Ruane, *Pengambilan Sampel; Kelompok Informatif*. Bandung: Nusamedia, 2021.

[12] T. Alhamid and B. Anufia, *Resume Pengumpulan Data*. Sorong: Sekolah Tinggi Agama Islam Negeri Sorong, 2019.

[13] T. Wijaya, *Panduan Praktis Menyusun Silabus, RPP, dan Penilaian Hasil Belajar*. Yogyakarta: Noktah, 2019.

[14] A. S. Wahab, Akhmad, and Junaedi, "Penyajian Data Dalam Tabel Distribusi Frekuensi Dan Aplikasinya Pada Ilmu Pendidikan'," *Educ. Learn. J.*, vol. 2, no. 1, 2021.