

# The Effectiveness of the Directed – Project Based Learning Model in Improving the Learning Outcomes of Class VIII Students at Junior High School

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## ABSTRACT

This study aimed to test the effectiveness of the Directed – Project Based Learning (DPjBL) Model to improve students' learning outcomes. The research design used was a quasi-experimental form of the non-equivalent control group. The population in this study consisted of class VIII students at SMP N 1 Uram Jaya, Lebong Regency, in the 2017/2018 school year. This study took two classes out of five classes having the same ability known from the pre-test scores, with a sample of 25 students in the experimental class and 25 students in the control class. Data collection techniques included interviews, tests, observation, and documentation. The data analysis was conducted through a t-test. The results of the hypothesis test of students' learning outcomes with calculations using the independent samples t-test formula through the SPSS version 20 program showed that  $t_{count}$  was  $11.637 > t_{table}$  which was 1.677. It means that  $H_0$  was rejected and there was a significant difference. The learning outcomes of students using the Directed – Project Based Learning (DPjBL) Model were better than those using conventional models.

**Keywords:** Learning Model, Directed-Project Based Learning (DPjBL), Language skills.

## 1. INTRODUCTION

One of the English competencies of SMP/MTs (Junior High School) graduates expected to be achieved is having English communication skills reflecting the attitudes of believers who are noble, knowledgeable, confident, and responsible in interacting effectively with the social and natural environment around them [6]. However, most students have not yet learned how to communicate in English to the maximum level. New students can learn, read a text, memorize vocabulary, write word by word, and memorize tenses (grammar). Likewise in terms of innovative ideas at the memory level, they have not been able to use and apply English effectively in daily contextual communication both orally and in writing [1, 7, 12, and 14].

Besides, English teachers are lack knowledge of English learning management so that the English learning process is less effective and thus not many SMP/MTs graduates can communicate in English. This problem is caused by the inadequate process of learning English. In their book [5] view that in the process of learning English, the most significant components are the English teachers' performance and personality, and also facilities supporting English learning, as well as student attitudes towards English learning. Those

components support each other to achieve the maximum goal of English learning.

Researchers conducted interviews and observations on May 12, 2017, in several SMPN schools in Lebong Regency, especially in terms of English learning. The observation results indicated that the learning process emphasized the aspects of language knowledge and understanding the content of discourse. It is also more oriented only to the exam outcomes to be achieved (semester exams, national exams, etc.) but neglects the mastery of both oral and written skill aspects in English. More specifically, English learning places a lot of emphasis on memorizing and transferring knowledge of the language. Therefore, students are rich in theory but lack applications.

Based on the problems described above, it is necessary to apply an interesting, impressive, and meaningful English learning model. Furthermore, through interesting, impressive, and meaningful learning, students no longer consider English as a boring subject so that students' language skills can be improved, and thus their learning achievement in English can increase. By taking into account the conditions of the school, the teachers' and students' abilities, and the students' mental or psychology, the

researchers implemented a project-based learning model guided or abbreviated as DPjBL. According to [9], the DPjBL learning model is a learning method using projects/activities as learning media directed/guided by the teacher. This learning model places students as a learning center (student-centered) where students explore, assess, interpret, synthesize, and receive information to produce various forms of learning outcomes. The teacher functions not only as a facilitator but also as a mentor guiding students in every learning activity so that they do not get out of the theme/topic of discussion and each activity is well-designed and systematic.

In general, the project-based learning model has an inquiry process characterized by the emergence of a guiding question, and then students will be involved in a collaborative project integrating various subjects (materials) in the curriculum. When the questions are answered, students can see the existence of various main elements and principles in a discipline that is being studied directly [8]. Also, PjBL is an in-depth investigation activity on a topic close to the real world, so this will be valuable for students in the future [4].

Many conducted studies showed success in applying project-based learning that improves students' learning outcomes [9], increases students' high-order thinking skills [10], and students' learning attitudes [15].

Meanwhile, directed-teaching is a teaching model where the teacher identifies the objectives, teaching content, and learning activities that will be developed by students. The goal is that students can carry out learning activities but are still guided or directed by the teacher so that student activities do not come out of the learning objectives to be achieved. Therefore, the teacher functions not only as a facilitator but also as a mentor guiding and directing students in every learning activity [2, 11]. Research on the success of improving students' achievement in the learning process using the directed-teaching model has been proven [3, 13], who found an increase in students' achievement by using the active learning method with a directed teaching model.

There are ten steps in implementing this DPjBL model [9], namely Warming Up, which is the modeling stage by the teacher or the material or learning topic. The teacher provides examples of products expected as the final result of learning. The teacher explains the definition and example through essential questions related to the material or learning topic. The second step is Observing, the students' activity in identifying and understanding learning topics and product examples for project activities they will work on.

The third step is getting an Idea (Stating the Problem). In this stage, students enter into groups formed previously and think about ideas or also called

problems that will be the basis for making group project designs later.

The fourth step is Providing Various Solutions, an activity where each student makes his design according to the learning topic, meaning that there will be about four or five designs in one study group. It is intended that students have many design choices to help students in project completion activities later. The fifth step is Designing the Project. Designing The Project is the stage where students focus on developing the chosen design. This case is related to designing the initial product design.

The sixth step is arranging the Implementation. Arranging the Implementation step is the stage of students discussing the division of tasks for group members, creating a timeline and deadlines for project work. The seventh step is the In-Depth Discussion, a stage where students discuss the final design chosen with the group, make final revisions before proceeding to the project work stage. The eighth step is Carrying out the Project; this is the core activity in this model, where students work on projects together with groups to obtain the final product.

The ninth step is Exhibiting the Project Result. Exhibiting The Project Result is the stage where students present or showcase the products of the group project in front of the class. This activity improves speaking and listening skills because during the presentation the students must pay attention to correct pronunciation, correct vocabulary selection, good intonation, and fluency. This activity also can increase self-confidence due to the success in making an invitation card with the correct language structure and properly train students' language skills.

The tenth step is Assessing. Assessing is the final stage of activity in this model where the teacher provides appreciation and suggestions for students' product results, as well as enrichment for further activities. This activity can maximize students' work because the teacher provides suggestions and includes them in the final product they make.

## **2. METHODOLOGY**

This research used a quasi-experimental- design with a nonequivalent control group design. The design in this study consisted of two groups, namely the control group not given treatment, and the experimental group given treatment. The treatment given to the experimental group is by using the DPjBL model. Both groups were given a Pre-Test to determine the students' initial abilities, after which learning was carried out for both groups. Then, both the experimental and control groups were given a Post-Test to determine the effect of the treatment that had been given. The final test results of the two groups were compared (tested for

differences) to show whether there was a difference from the treatment given and to find out the effectiveness of learning with the DPjBL model whether it was better or not than conventional learning models.

Data collection techniques in this study were to provide tests and observations to assess students' language skills. In this case, the researcher provides a multiple-choice written test to determine students' learning outcomes. The type of data used in this research is quantitative data. The data were analyzed using a t-test for testing the hypothesis.

### 3. RESULTS

The effectiveness of students' learning or the improvement of students' learning outcomes with the DPjBL model can be determined through two assessment categories. The first category is the assessment of students' language skills. The second one is the assessment of students' knowledge through multiple-choice test exams. The following are the results of the two assessments:

#### 3.1. Students' Language Skill Outcomes

The DPjBL model could improve students' English language skills because, at every step of the DPjBL model activity, the students were directed to be active both in writing and orally. The students were given space to express their abilities verbally or in writing so that their English language skills increased and this learning model also triggered strong students' self-confidence. The following are the results of students' English skills obtained during four meetings using the students' English skill observation instrument:

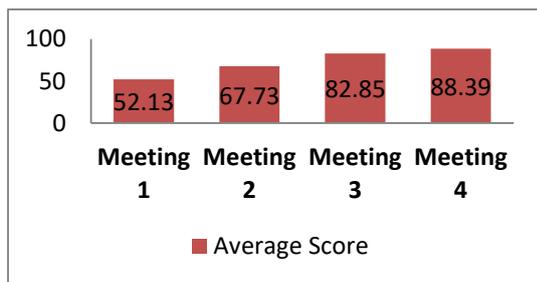


Figure 1 Accumulation of Students' English Skills

The chart above shows that students' language skills increased significantly from the initial to the last meeting. At the first meeting, students were still very stiff and scared; it was difficult to build students' self-confidence. In the second meeting, students began to show confidence and comfort in the learning atmosphere; some students began to dare to respond using English, read aloud, and make products with grammar correct.

In the third meeting, the students were more cheerful and active in learning. They were easy to respond to

teachers' and group friends' questions using English, so learning was more effective. At the last meeting, students had dominated the class with English by using the right words; they got difficulties only in a few pronunciations. Therefore, it can be concluded that by using the DPjBL model, students' language skills could improve rapidly.

#### 3.2. Students' Learning Knowledge Outcomes

The students' learning outcomes were data used to test the hypothesis in this study. A research hypothesis was tested using the t-test to see the impact and effectiveness of learning using the DPjBL model. The following is a description of the students' learning outcomes, namely the Pre-Test and Post-Test scores from the experimental and control classes.

Table 1. Recap of Pre-Test and Post-Test Scores

Data	Classes	
	Experiment	Control
Average score of Pre-Test	42,4	42,8
The highest score of Pre-Test	55	55
The lowest score of Pre-Test	32,5	32,5
Average score of Post-Test	86.6	68.4
The highest score of Post-Test	95	80
The lowest score of Post-Test	75	60

The hypothesis testing steps must go through the normality and homogeneity tests first. Here are the test results:

##### 3.2.1 Normality Test

One-Sample Kolmogorov-Smirnov Test			
		Experiment	Control
N		25	25
Normal Parameters <sup>a,b</sup>	Mean	86,30	66,90
	Std. Deviation	5,868	5,920
Most Extreme Differences	Absolute	,176	,198
	Positive	,148	,198
	Negative	-,176	-,140
Kolmogorov-Smirnov Z		,879	,991
Asymp. Sig. (2-tailed)		,422	,280

The table above shows that the normality test using the one-sample Kolmogorov - Smirnov (KS) obtained sig. 0.422 and 0.280 or greater than  $\alpha = 0, 05$ . The results of the normality test data showed that the data were normally distributed.

3.2.2. Homogeneity Test

Test of Homogeneity of Variances  
Learning Outcomes

Levene Statistic	df1	df2	Sig.
.064	1	48	.801

Based on the results of the homogeneity test using one-way ANOVA, the value of the experimental and control classes was 0.801. This value is greater than  $\alpha = 0.05$  meaning that the data had a homogeneous variant. Because the data were normally distributed and had a homogeneous variant, then hypothesis testing used the Independent-Sample T-Test parametric statistical test.

3.2.3. Hypothesis Test

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Learning Outcomes	Equal variances assumed	.064	.801	11,637	48	.000
	Equal variances not assumed			11,637	47,996	.000

Based on the results of the parametric statistical test, the Independent-Sample T-Test, the  $t_{count}$  value was 10.169 with the degree of freedom (df) of 48 and the sig value. (2-tailed) of 0.000 and the maximum error rate  $\alpha = 0.05$ . The results of these data indicated that the sig. was smaller than  $\alpha$  meaning that there were differences in the learning outcomes of classes using the DPjBL model and those not using the DPjBL model.

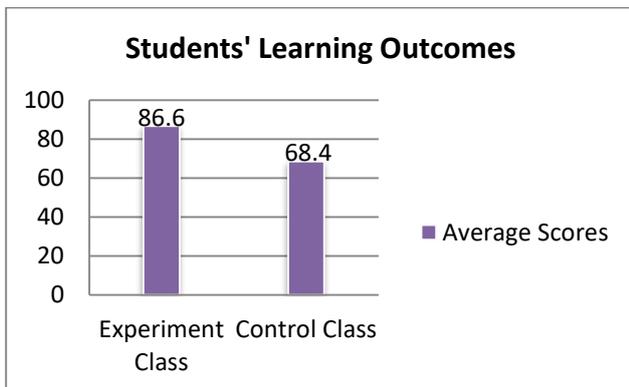


Figure 2. Accumulation of Students' Learning Outcomes on Post-Test

4. CONCLUSION

The effectiveness of the DPjBL model can be seen from two things, namely the values of students' learning activities and students' learning outcomes. The students' learning activities using the DPjBL model increased significantly from the first meeting to the final meeting. For the students' learning outcomes, the experimental class obtained an average score higher than the average score of the control class. This case was also evidenced by the t-test where the values obtained were  $t_{count}$  was  $11.637 > t_{table}$  which was 1.677, then  $H_0$  was rejected which indicated a significant difference, namely the learning outcomes of students using the Directed-Project Based Learning (DPjBL) Model were better than those using the conventional model.

ACKNOWLEDGMENT

Alhamdulillah rabbil'alam, praise and thanks to Allah Subhanallahu Wata'ala for the abundance of His mercy and grace so that the author could complete this research. Many thanks to Prof. Dr. Sufyarma Marsidin, M. Pd, as the Head of the Promoter Team, Dr. Yahya, M. Pd, and Prof. Dr. Hermawati Syarif, M.Hum, as the Co-Promoter who is patient and sincere, and has spent the time to guide, direct, and motivate the author to complete this research. Thanks also to the team of contributors for all their suggestions, criticisms, and input so that this research is more effective and efficient. Without your guidance, all this research could not be completed properly.

REFERENCES

- [1] Agusliana. Pengembangan Materi Pembelajaran Keterampilan Berbicara Bahasa Inggris Di Smp. Tekno-Pedagogi Vol. 4 No. 1 Maret 2014 : 30-41 ISSN 2088-205X
- [2] Audí, N. M., Puig, M. A., & Fonseca-Escudero, D. Active Learning using Digital Technology and Ubiquitous Information in Architectural Construction: PBL as a Vital Methodology for Instructional Design. In Fonseca, D., & Redondo, E. (Ed.), Handbook of Research on Applied E-Learning in Engineering and Architecture Education (pp. 338-367). IGI Global. 2016. <http://doi:10.4018/978-1-4666-8803-2.ch016>
- [3] C. Budi Utami, "Pengaruh Metode Belajar Aktif Model Pengajaran Terarah Dalam Meningkatkan Prestasi Belajar IPS Perjuangan Melawan Penjajah Pada Siswa Kelas V SDN Bringinbendo 2 Kabupaten Sidoarjo", JRP, vol. 4, no. 1, pp. 14-22, Feb. 2019.

- [4] Craig James, M. & Grant, Robert. Manajemen Strategi Sumber-Sumber Daya Perencanaan. (Terjemahan : Sularno Tjiptowardojo). Jakarta : PT. Elex Media Komputindo. 2002:14
- [5] Kellaghan, T & Greaney, V. Using assessment to improve the quality of education. Paris: Imprimerie Alenconnaise. 2001:9
- [6] Kemendikbud. Permendikbud No.54 tentang Standar Kompetensi Lulusan Pendidikan Dasar dan Menengah. Jakarta: Kementerian Pendidikan dan Kebudayaan. 2013.
- [7] Nurhajati, D. PENGEMBANGAN SUPLEMEN BAHAN AJAR BAHASA INGGRIS UNTUK SISWA SMP. Nusantara of Research : Jurnal Hasil-Hasil Penelitian Universitas Nusantara PGRI Kediri (e-Journal), 2(2). Retrieved from <https://ojs.unpkediri.ac.id/index.php/efektor/article/view/170>. 2015
- [8] Patton, Alec.. Work that matters: The teacher's guide to project-based learning. London: Paul Hamlyn Foundation. 2012
- [9] Randi Fananta, Muhammad. Pengembangan Model Pembelajaran Guided Project Based Learning untuk Mengintegrasikan 21st Century Skills Dalam Pembelajaran Sains. STKIP Surya || Gedung SURE Jl. Scientia Boulevard Blok U/7 Gading Serpong, Tangerang 15810 Banten, Indonesia.2013
- [10] Ritonga, Hafisah. Pengaruh Metode Belajar Aktif Model Pengajaran Terarah Dalam Meningkatkan Prestasi Dan Pemahaman Pelajaran PAI Pada Siswa Kelas I SD Negeri 200403 Padangsidempuan Tahun Pelajaran 2016/2017. Jurnal Bimbingan dan Konseling, 3 (1) 2018:Hal 39-46.
- [11] Romodon, Dion.. Rancang Bangun Model Pembelajaran Bahasa Inggris Interaktif Berbasis Multimedia. Among Makarti Vol.6 No.11, Juli 2013
- [12] Sholihatin. Penerapan Active Learning Dengan Model Pengajaran Terarah Dalam Meningkatkan Prestasi Belajar Mata Pelajaran Ips Kelas Ii Mi Sunan Ampel Bangeran. 2011
- [13] Sugirin. Pengembangan Materi Ajar Bahasa Inggris. Diunduh dari <http://staff.uny.ac.id/sites/default/files/pengabdian/drs-sugirin-ma-phd/2011-ppm-pengembangan-materi-ajar-bahasa-Inggris.pdf>. 2011
- [14] Pratiwi, T., Marsidin, S., Syarif, H., & Yahya, Y. Directed – Project Based Learning (DPjBL) as a language learning model to improve students' english achievement. In I. Ifdil, & Z. Ardi (Eds.), Education, Social Sciences and Technology Application in Digital Era (pp. 18 - 23). Padang: Fakultas Ilmu Pendidikan UNP. 2018. <https://doi.org/10.29210/201813>
- [15] Yulianti, Ratna Andriani. Penerapan metode pembelajaran berbasis proyek untuk meningkatkan ketrampilan berbicara tema memaparkan jatidiri pada pembelajaran bahasa Inggris di kelas 7-d Smp negeri 2 bringin tahun pelajaran 2013/2014. Diunduh dari 2013: <https://www.academia.edu/6728848/>.