
The Implementation of Direct Learning by Using Handout toward Students Achievement in Biology Subject at Class VII-1 of Junior High School Rokan IV Koto in Academic Year 2014/2015

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ABSTRACT

The purpose of this research is to find out the students' achievement in Biology subject at class VII-1 of Junior High School Rokan IV Koto, RokanHulu Regency in academic year of 2014/2015 through the implementation of direct learning by using handout which was conducted in January to July 2015. The design of this research is Classroom Action Research (CAR). The subjects of the research are 24 students including 9 males and 15 females. This research has 2 cycles including 6 meetings at cycle I and 4 meetings at cycle II. Parameter measured is the students' learning achievement in comprehension and mastery which are obtained through quiz in each meeting and block exams in each cycle. Data is analyzed descriptively. The analysis from the implementation of direct learning shows students' comprehension increased by 19,77% before CAR (63,38%), after CAR of cycle I (83,15%), and increased by 4,49% after cycle II (87,64%). Students' mastery before CAR (50%) increased to 83,33% after Cycle I and at cycle II, it increased by 12,5% to be 95,83%. KI score before CAR was 91,66% increasing by 8,34% after cycle I of CAR (100%) and after cycle II (100%). In conclusion, the implementation of direct learning by using handout can improve students' achievement in Biology subject at the Class VII-1 of Junior High School Rokan IV Koto in academic year 2014/2015.

Keywords: *Direct Learning, Handout.*

Introduction

Education is one of intentional activities of students' input to achieve desired results according to set purposes (Purwanto, 2011:18). Arikunto in Purwanto (2011:35) said that the purpose of education is the change of behaviours desired to emerge after learning. Learning is a changing process within students' selfthrough interaction with environment to obtain the changes in cognitive, affective and psychomotor aspects (Purwanto, 2011:43).

In the learning process, there several factors which determine achievement, such as approaches, methods, materials provided by teacher, school infrastructures, like using of assisting tools and media, and good classroom management, as well as students' enthusiasm and interest in learning process.

According to the finding in observation and interview with teacher of IPA (En: Natural Science) at VII-1 class in SMPN (En: State Junior High School) 2 Rokan IV Koto, the problems in biology are (a) the teacher mostly

uses lecture method in instructional process, (b) the limitation of assisting tools provided by school is characterized by that students do not have text books, workbooks and only obtain information through teacher, (c) students' learning achievement is still under KKM (Minimum Completeness Criteria) which is 67, with classical completeness of 50%.

The research limitation is on the Standard of Competence (SK) 6.) Understanding about biodiversity, Basic Competence (KD) 6.1.)Identifying characteristics of organism, Basic Competence (KD) 6.2.)Identifying organism according to their characteristics.

This research purposes to find out the students' achievement in Biology at VII-1 Class in SMPN 2 Rokan IV Koto in academic year 2014/2015 through the implementation of direct learning by using handout.

Methodology

This research was conducted at VII-1 Class in SMPN 2 Rokan IV Koto in academic year 2014/2015 on January to July 2015. The data were collected on March to April with research schedule. The subjects of this research are 24 students of Biology course at VII-1 Class in SMPN 2 Rokan IV Koto including 9 males and 15 females who are heterogeneous in achievement. The determination of the subject is based on the students' academic achievement which is lower than other VII classes.

This research is designed as Classroom Action Research (CAR). Kunandar (2011:45) said "The classroom action research is the action research conducted by improving the quality of classroom instructional practice. The main purpose is to resolve the real problems existing in the classroom and to improve the teachers' real activities in development of

their profession. Besides, the classroom action research is a series of steps consisting of four steps; those are (1) planning, (2) action, (3) observation, (4) reflection (Kurt Lewin in Kunandar, 2011:42).

The research procedure consists of preparation step which includes deciding research class, deciding learning period, deciding the materials, deciding learning tools (Syllabus, lesson plan, student guide books, quiz and its answer key, test sheets for first cycle including 6 meeting with socialization and second cycles including 4 meetings), determining individual score obtain from previously daily tests, putting students into groups, preparing teaching media those are handouts and implementation step. There are two parts in data collection techniques those are teaching tools and data collection instrument.

There are two types of the instrument, those are written test and performance assessment. The written test is assessed through learning work sheets taken from written quizzes, home works, and block exams. The practical work assessment is used as the source of scientific work assessment. It was taken from portfolios score (students worksheets (LKPD) and observation report) as well as performance score (discussion, presentation, and observation). The data obtained are analyzed by using descriptive technique. The data processed are knowledge of understanding and concept (PPK) and scientific work (KI).

Results and Discussion

Data analysis of the Cycle I Research Findings

The mean score of knowledge of understanding and concept (PPK) at cycle I is obtained from mean score of homework multiplied by 20% plus quiz mean score

multiplied by 40% and plus block exam score multiplied by 40%. After applying formula for analysing the result of *PPK*, it is obtained that the means score of *PPK* at cycle I is 83,15%. The students' achievement in *PPK* can be viewed as follows:

Table 1. The Students' Achievement, Individual Completeness, and Classical Completeness at Cycle I *PPK* Score

No.	Score	Category	Cycle I	
			Numbers of Students	Percentage (%)
1	91-100	Very Good	8	33.33
2	79-90	Good	8	33.33
3	67-78	Enough	4	16.66
4	< 67	Less	4	16.66
Number of Students			24	100
Classroom Mean				83.15
Category		Good		
Individual Completeness			20	
Classical Completeness				83.33 (Incomplete)

Table 1 shows that students' achievement at *PPK* score of the cycle 1 in material of organism characteristics, with the highest number of students by 8 (33,33%), is categorized as very good and with the lowest number of students by 4 (16,66%) is categorized as less. The mean of the achievement at *PPK* score of the cycle 1 is 83,15% which is categorized as good. The individual completeness is 20 students and the classical completeness is 83.33% (incomplete) so it can be stated that classically, the students of VII-1 class at Cycle I are not complete at *PPK* score because it is under 85% of students

incomplete from total students. Thus, the classical completeness of students at *PPK* of cycle I is not achieved yet.

Data Analysis of Students' Individual Completeness and Classical Completeness at Scientific Work (KI) of Cycle I

Students' Scientific Work (KI) score is obtained from practical work and portfolio. The practical work score is from observation and presentation. The portfolio score is from students worksheets (LKPD) at meeting I, II, III, observation report 2 and 3.

Table 2. The Students' Individual Score at KI score of Cycle I

No	Individual Completeness	Number of Students
1	Complete	24
2	Incomplete	0
Total		24
Classroom Mean		84.46
Classical Completeness		100%

The table above shows that the students' individual completeness at KI score of biology subject of Cycle I at VII-1 class of SMPN 2 Rokan IV Koto is 100% with 24 students who are individually complete and classroom mean by 84.46%. According to four times of observation, the inappropriate plans are:

- 1) In this cycle, the instructional process was not yet effective because some students cheated one another at quiz session.
- 2) The students were not accustomed to present discussion so they did not look active in presentation.

- 3) The students were not accustomed to do observation independently so the researcher had to demonstrate the way to do it.
- 4) The students' *PPK* achievement before CAR was 63,38% which is categorized as less and after the implementation of direct learning method at cycle I, it increased by 19,77% to be 83.15%. the classical completeness before CAR is 50% of 24 students, and after CAR at cycle I, it increased by 33,33 % to be 83,33%.
- 5) The students who respond the discussion either who asked, answered or who did presentation still waited to be told by the researcher.

According to the problems above, the efforts of improvement are necessary to be arranged to be conducted in cycle II. The planning for further actions is as follows:

- 1) The researcher motivated the students to be honest in working on given tasks.
- 2) The researcher accustomed the students to be confident to present discussion so the presentation became active and ran well.
- 3) The researcher suggested to each group member in order to collaborate in answering and doing the given students' worksheets(LKPD).
- 4) The treatment was continued at cycle II because there had been problems in cycle I so the instructional process had not ran well yet.

Analysis of the Knowledge of Understanding and Concept (PPK) Achievement at Cycle II

The mean of *PPK* at cycle II is obtained from homework score multiplied by 20%. It was

added to quiz mean score multiplied by 40%, added to block exam score multiplied by 40%. After analyzed by using *PPK* score formula, it was accepted that *PPK* mean at cycle II is 87,64%. The students' achievement in *PPK* is as following table:

Table3.The Students' Achievement, Individual Completeness, and Classical Completeness at Cycle II *PPK* Score

No.	Score	Category	Cycle II	
			Numbers of Students	Percentage (%)
1	91-100	Very Good	9	37.5
2	79-90	Good	11	45.83
3	67-78	Enough	3	12.5
4	< 67	Less	1	4.16
Number of Students			24	100
Classroom Mean			87.64	
Category		Good		
Individual Completeness			23	
Classical Completeness				95.83 (Complete)

Table 3 shows that the students' achievement at *PPK* of the CAR in cycle II for biodiversity material, with the highest number of students by 9 (37,5%), is categorized as very good, and with lowest number of students by 1 (4,16%) is categorized as less. The mean of the achievement at *PPK* score of the cycle II after CAR IS 87,64% which is categorized as good, the individual completeness and the classical completeness of 23 students is 95,83% (complete).

Tabel 4.The Comparison of The Students' Achievement, Individual Completeness, and Classical Completeness at *PPK* Score of Cycle I Toward Cycle II

No.	Score	Category	Achievement	
			Cycle I	Cycle II

1	91-100	Very Good	8 (33.33%)	9 (37.5%)
2	79-90	Good	8 (33.33%)	11 (45.83%)
3	67-78	Enough	4 (16.66%)	3 (12.5%)
4	< 67	Less	4 (16.66%)	1 (4.16%)
Number of Students			24	
Classroom Mean			83.15	87.64
Category			20	23
Individual Completeness			83.33% (Incomplete)	95.83% (Complete)

The table above shows that there is improvement in students' achievement at *PPK* score of cycle I toward cycle II. The students' achievement at *PPK* of cycle I is 83,15% meanwhile at cycle II is 87,64%. Thus, there is improvement in students' achievement at *PPK* score by 4,49%. At individual completeness of the students' *PPK* score in cycle I of 24 students, 20 students are complete and 4 students are incomplete meanwhile in cycle II, 23 students are complete and 1 student is incomplete. At classical completeness of the students' *PPK* score in cycle I is 83,33% (incomplete) meanwhile in cycle II, it is 95,83 (complete). There is improvement in the classical completeness of cycle I and II by 12,5% as the following figure:

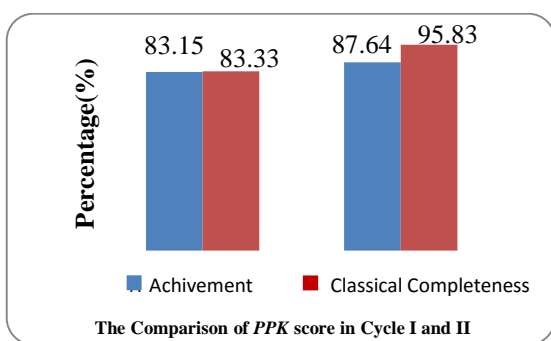


Figure 1. Comparison of students' achievement and classical completeness at cycle I and II

Data Analysis of Individual and Classical Completeness for Scientific Work (KI) Score

Students *KI* score in cycle II is obtained from practical work and portfolio. The practical work score is from discussion, presentation score and field observation score. The portfolio score is from students worksheets (LKPD).

Table 5. The Students' Individual Completeness at *KI* Score in Cycle II

No	Individual Completeness	Number of Students
1	Complete	24
2	Incomplete	0
Total		24
Classroom Mean		87.94
Classical Completeness		100%

The table above shows that the students' individual completeness in *KI* score of Biology Subject at Cycle II of VII-1 Class of SMPN2 Rokan IV Koto IS 100% of 24 students who are complete individually with classroom mean by 87,94.

Table 6. The Comparison of the Students' Individual and Classical Completeness in at *KI* score in cycle I and II

No	Individual Completeness	Cycle I	Cycle II
1	Complete	24	24
2	Incomplete	0	0
Total		24	24
Classroom Mean		84.46	87.94
Classical Completeness		100%	100%

The table above shows that the number of students who are complete in cycle I and II are 24 students. The achievement in cycle I is 84,46 and in cycle II is 87,94 in which there is improvement by 3,48%. The classical completeness at *KI* score before CAR of cycle I is 100% and 100% in cycle II; thus, there is no improvement in the students' classical improvement in cycle I to cycle II as the following figure:

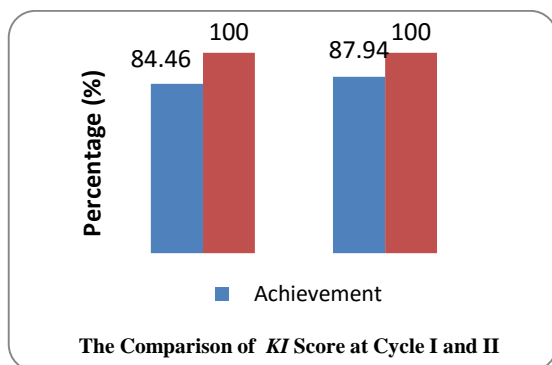


Figure 2. The Comparison of The Students' Classical Completeness at *KI* Score of Cycle I and II

The figure above shows that the implementation of direct learning method by using handout can improve the students' achievement in Biology subject. This improvement can be identified from the students' learning achievement and completeness, either individually or classically, at *PPK* and *KI*. To make it clear can be viewed from the comparison between students' achievement and individual or classical completeness before and after the implication of direct learning method by using handout in cycle I and II as the following table:

No.	Learning Achievement Analysis	Before CAR	After CAR (Cycle I)	After CAR (Cycle II)
1	Achievement in <i>PPK</i>	63.37%	83.15%	87.64%

2	Completeness in <i>PPK</i>	50%	83.33%	95.83%
3	Completeness in <i>KI</i>	91.66%	100%	100%

Conclusion

Through the research findings, it can be concluded that the implementation of direct learning method by using handout can improve the students' learning achievement in Biology subject at class VII-1 of SMPN 2 Rokan IV Koto in academic year 2014/2015.

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