

ABSTRAK

Devy Eganinta Tarigan, 2010. *Penerapan Metode Inkuiri dengan Pokok Bahasan Aturan Perkalian dan Permutasi pada Siswa Kelas XI IPA 4 SMA Negeri 5 Yogyakarta.* Skripsi. Program Studi Pendidikan Matematika, Jurusan Pendidikan Matematika dan Ilmu Pengetahuan Alam. Fakultas Keguruan dan Ilmu Pendidikan, Universitas Sanata Dharma, Yogyakarta.

Penelitian ini merupakan penelitian kualitatif deskriptif yang bertujuan untuk mengungkapkan: (a) langkah pembelajaran dengan metode inkuiri pada pokok bahasan aturan perkalian dan permutasi, (b) hasil-hasil belajar siswa dalam penerapan metode inkuiri, dan (c) keefektifan penerapan metode inkuiri.

Subjek penelitian adalah siswa kelas XI IPA 4 SMA Negeri 5 Yogyakarta tahun ajaran 2010/2011. Terdapat 35 siswa yang mengikuti proses pembelajaran tetapi hanya 9 siswa yang dipilih sebagai subyek wawancara untuk melihat hasil belajar dari segi kognitif. Data yang digunakan adalah video hasil pembelajaran, rekaman hasil wawancara, dan hasil tes. Metode yang digunakan dalam penelitian ini adalah wawancara dan tes. Instrumen yang digunakan adalah lembar wawancara, tes hasil belajar, dan rancangan pembelajaran.

Hasil-hasil dari penelitian ini yaitu:

1. Pelaksanaan metode inkuiri pada pokok bahasan aturan perkalian dan permutasi sebagian mengadopsi langkah-langkah pemecahan masalah menurut Polya. Langkah-langkah pembelajaran tersebut yaitu mengajukan permasalahan, merencanakan pemecahan masalah, mengumpulkan data, analisis data, dan membuat kesimpulan. Pertemuan I peneliti menerapkan metode inkuiri dalam pokok bahasan aturan perkalian dengan menggunakan LKS. Pertemuan ini diawali dengan penyajian beberapa masalah tentang aturan perkalian. Pertemuan II, peneliti lebih memfokuskan pembelajaran pada pokok bahasan permutasi unsur berbeda. Pada pertemuan II, peneliti mengarahkan siswa untuk kembali mengingat tentang aturan perkalian sehingga siswa mampu menyusun dan menemukan aturan permutasi unsur berbeda. Pertemuan III, siswa belajar tentang permutasi unsur sama. Pada pertemuan III, peneliti menyajikan beberapa masalah tentang permutasi unsur sama dan siswa belajar untuk menyusun permutasi unsur sama. Pada pertemuan IV, peneliti menyajikan beberapa masalah tentang permutasi siklis. Pada pertemuan IV, siswa belajar menyusun aturan permutasi siklis dan menemukan rumus permutasi siklis. Pada setiap pertemuan, peneliti menggunakan LKS dalam kegiatan pembelajaran.
2. Hasil belajar yang diraih oleh siswa dapat dilihat dari proses pembelajaran secara klasikal dan hasil tes siswa. Dari kesembilan subjek penelitian, terdapat 5 siswa yang mampu menyusun dan menerapkan aturan perkalian dan permutasi secara baik. Sedangkan 4 siswa yang lain kurang mampu menyusun dan menerapkan aturan perkalian dan permutasi secara baik. Hasil belajar

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yang terlihat dari proses pembelajaran di kelas yaitu siswa mampu menyusun, menemukan dan menerapkan aturan perkalian dan permutasi.

3. Keefektifan pelaksanaan metode inkuiri dalam penelitian ini terlihat dari perolehan hasil belajar siswa. Perolehan hasil belajar siswa dikatakan tuntas jika siswa mencapai skor di atas 70% dengan kata lain perolehan nilai siswa di atas 70. Sedangkan keefektifan pelaksanaan metode inkuiri dikatakan efektif jika terdapat 70% siswa dalam satu kelas yang telah mencapai skor ketuntasan. Dalam penelitian ini dari 35 siswa terdapat 71% siswa yang telah mencapai skor ketuntasan. Dengan demikian dapat dikatakan bahwa metode inkuiri efektif terhadap hasil belajar siswa pada pokok bahasan aturan perkalian dan permutasi.



ABSTRACT

Devy Eganinta Tarigan, 2010. The Implementation of Inquiry Method on the Topic of Multiplication and Permutation Rules for the Students of Class XI IPA 4 SMA Negeri 5 Yogyakarta. Thesis. Mathematics Education Study Program, Department of Mathematics and Science. Faculty of Teacher Training and Education, Sanata Dharma University, Yogyakarta.

This research is a descriptive qualitative study aimed to disclose: (a) steps used in the inquiry method of learning on the topic of the rules of multiplication and permutation, (b) student learning outcomes in the implementation of the inquiry method, and (c) the effectiveness of the implementation of the inquiry method.

The subjects were students in grade XI IPA 4 of SMA Negeri 5 Yogyakarta in the academic year 2010/2011. There were 35 students who followed the learning process but only 9 students were selected as interview subjects to see the results in terms of cognitive learning. The data used were the result of learning videos, recordings of interviews, and test results. The methods used for collecting data in this study were interview and test. The instruments used were the interview sheet, the test achievement of learning, and the learning design.

The results of this study were as follows:

1. The implementation of inquiry method on the topic of the rules of multiplication and permutation was divided into 4 meetings. Each meeting was held by the stages of the inquiry method of asking problems, plan for problem solving, collecting data, data analysis, and making conclusions. In the first meeting the researcher implemented the method of inquiry on the topic of the rules of multiplication by using worksheets. The meeting began with a presentation of some problems about multiplication rules. Meeting II, the researcher focused more on the topic of learning permutations. With the different elements at the second meeting, the researcher led students to re-remember the rules of multiplication so that students were able to prepare and find the rules of permutations of different elements. Meeting III, students learned about the permutations that contained the same elements. At the third meeting, the researcher presented several problem about elements of the same permutation and students learn to create the permutations with the same elements. At the fourth meeting, researchers presented some problems of cyclic permutations. At the fourth meeting, students learn to formulate rules of cyclic permutations and cyclic permutations to find the general formula. At each meeting, the researcher used the worksheets in the learning activities.
2. Learning outcomes achieved by students can be seen from the learning process in classical and student test results. Of the nine research subjects, there were 5 students who were able to formulate and implement rules of multiplication and permutation as well. While the 4 other students were less able in formulating and implementing rules for both multiplication and permutation. Learning

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outcomes that can be seen from the learning process in the classroom were as follows the students were able to organize, to find and to apply the rules of multiplication and permutation.

3. The effectiveness of the implementation of the inquiry method in this study can be seen from the acquisition of student learning outcomes. Acquisition of student learning outcomes is said to be complete if students achieve a score above 70% In other words, student grades are above 70. While the implementation of the inquiry method is said to be effective if there are 70% of students in a class that have achieved a score at least the same as the minimum score of completeness. In this study from 35 students it is found that 71% of students have achieved a score of completeness. Thus it can be said that the inquiry method of learning is effective for the students on the subject of multiplication and permutation rules.

