ABSTRAK

ESRON P. PURBA. Analisis Kesulitan Proses Berpikir Kreatif Matematis Siswa dalam Penerapan Model Problem Based Learning (PBL). Tesis. Medan: Program Pascasarjana Universitas Negeri Medan, September 2017.

Penelitian ini bertujuan untuk mengetahui: 1) tingkat kemampuan berpikir kreatif matematis siswa yang dibelajarkan menggunakan model *Problem Based Learning* (PBL); 2) deskripsi proses jawaban siswa dalam pembelajaran menggunakan model *Problem Based Learning* (PBL); 3) kesulitan proses berpikir kreatif matematis siswa yang dibelajarkan menggunakan model *Problem Based Learning* (PBL); 4) aktivitas aktif siswa selama proses pembelajaran menggunakan model *Problem Based Learning* (PBL). Penelitian ini merupakan penelitian kualitatif dengan pendekatan deskriptif. Instrumen penelitian ini adalah tes kemampuan berpikir kreatif matematis siswa, lembar observasi aktivitas aktif siswa, lembar observasi kemampuan guru mengelola pembelajaran, dan pedoman wawancara. Perangkat pembelajaran yang disiapkan adalah rencana pelaksanaan pembelajaran (RPP) dan lembar aktivitas siswa (LAS) untuk lima pertemuan. Tes kemampuan berpikir kreatif matematis sudah valid untuk setiap butir soal dan reliabel dengan koefisien reliabilitas sama dengan 0,718. Dari hasil penelitian diperoleh bahwa: tingkat kemampuan berpikir kreatif matematis dari 50 orang siswa dengan kemampuan berpikir kreatif 'sangat rendah' sebanyak 38%, kemampuan berpikir kreatif 'rendah' sebanyak 4%, kemampuan berpikir kreatif 'sedang' sebanyak 42%, kemampuan berpikir kreatif 'tinggi' sebanyak 12%, dan kemampuan berpikir kreatif 'sangat tinggi' sebanyak 4%; pada tahap persiapan, siswa telah mempersiapkan diri untuk memecahkan masalah dengan belajar berpikir, mencari jawaban, bertanya kepada orang, dan sebagainya; pada tahap inkubasi, kegiatan mencari dan menghimpun data/informasi; pada tahap iluminasi, menimbulkan adanya gagasan baru; hingga pada tahap verifikasi/evaluasi, pengerjaan LAS terisi dengan benar serta pembelajaran berjalan dengan lancar; analisis kesulitan proses berpikir kreatif matematis penelitian ini adalah kesulitan dalam menerapkan prinsip dan menyelesaikan masalah verbal bersamaan dengan kekurangmampuan merinci pemecahan masalah yang ditandai dengan adanya kesulitan prinsip dan prosedur yang meliputi ketidakmampuan merencanakan penyelesaian; ketidakmampuan melakukan kegiatan penemuan; ketidakmampuan mengabstraksikan pola-pola, ketidakmampuan mengutarakan artinya dan tidak dapat menerapkan prinsip. Di samping itu juga, adanya ketidakmampuan memberikan banyak ide, ketidakmampuan menyelesaikan masalah dari sudut pandang yang berbeda, ketidakmampuan menyelesaikan masalah dengan cara sendiri, dan ketidakmampuan mengembangkan atau merinci secara detil suatu situasi; keseluruhan prosentase aktivitas aktif siswa sudah berada pada interval toleransi waktu ideal yang ditetapkan sehingga pembelajaran dengan menerapkan model *Problem Based Learning* (PBL) khususnya dalam proses berpikir kreatif matematis memberikan kesempatan kepada siswa untuk mengeksplorasi berbagai macam jawaban maupun cara penyelesaian dengan memperhatikan aspek *fluency*, *flexibility*, *originality*, dan *elaboration*.

Kata Kunci: Proses Berpikir Kreatif Matematis, Model *Problem Based Learning* (PBL)

ABSTRACT

ESRON P. PURBA. Analysis of the Difficulties of the Mathematical Creative Thinking Process in the Application of Problem Based Learning (PBL) Model. Thesis. Medan: Postgraduate Program, State University of Medan, September 2017.

The objectiveness of this study are to find out: (1) the level of students' creative thinking ability mathematically learned using Problem Based Learning (PBL) model; 2) description of student's answer process in learning using Problem Based Learning (PBL) model; 3) the difficulties of students' mathematical creative thinking process that is learned using Problem Based Learning (PBL) model; 4) active activities of students during the learning process using Problem Based Learning (PBL) model. This research is a qualitative research with descriptive approach. The instrument of this research is test of students' mathematical creative thinking ability, observation sheet of student active activity, observation sheet of teacher ability to manage learning, and interview guidance. The learning tools prepared are the lesson plan (RPP) and student activity sheet (LAS) for five meetings. The test of mathematical creative thinking ability is valid for every item and reliabel with reliability coefficient equal to 0,718. From the research result, it was found that: the level of mathematical creative ability of 50 students with 'very low' creative thinking ability as much as 38%, 'low ability' creative thinking as much as 4%, 'moderate' creative thinking ability as much as 42%, 'high' creative thinking as much as 12%, and 'very high' creative thinking ability as much as 4%; at the preparatory stage, students have prepared themselves to solve problems by learning to think, seek answers, ask people, and so on; At the incubation stage, searching and gathering data/information; At the stage of illumination, raises new ideas; Until at the verification/evaluation stage, the LAS work is filled properly and the learning goes smoothly; analysis of the difficulty of the mathematical creative thinking process of this research is the difficulty in applying the principles and solving verbal problems together with the lack of detailed problem solving characterized by the difficulties of principles and procedures including the inability to plan the settlement; Inability to undertake discovery activities; The inability to abstract patterns, the inability to express the meaning and not to apply the principle. In addition, the inability to give many ideas, the inability to solve problems from different perspectives, the inability to solve problems in one's own way, and the inability to develop or detail in a situation; the overall percentage of students' active activity is in the ideal time tolerance interval set so that the learning by applying the model of Problem Based Learning (PBL) especially in the process of mathematical creative thinking provides an opportunity for students to explore various answers and ways of completion with attention to the aspects of fluency, flexibility, originality, and elaboration.

Keywords: Mathematical Creative Thinking Process, Problem Based Learning (PBL)