SARI

Widyastuti, A. 2020. Analisis Pendekatan STEM Berbasis *E-learning* Terhadap Tingkat Kemampuan Berpikir Kreatif Matematis Siswa. Skripsi. Program Studi Pendidikan Matematika, Universitas Islam Sultan Agung. Pembimbing I Nila Ubaidah M.Pd., Pembimbing II Dyana Wijayanti, M.Pd., Ph.D.

Kata Kunci : Pendekatan STEM, *E-learning*, Kemampuan Berpikir Kreatif Matematis

Pendekatan STEM berbasis *e-learning*merupakan strategi pembelajaran yang mencakup *sains*, *technology*, *engineering* dan *matemathics*menjadi satu kesatuan dan pelaksanaannya menggunakan pembelajaran elektronik.Melalui pembelajaran STEM siswa tidak hanya belajar berhitung namun dapat mengaktualisasikan diri dalam kehidupan sehari-hari sehingga mengasah kemampuan berpikir kreatif matematis. Penelitian ini bertujuan untuk mengetahui pendekatan STEM berbasis *e-learning* terhadap tingkat kemampuan berpikir kreatif matematis siswa materi garis dan sudut.

Metode penelitian yang digunakan ialah deskriptif kualitatif. Penelitian dilaksanakan di kelas VII A SMP Negeri 1 Pucakwangi yang terdiri dari 28 siswa. Subjek penelitian ditentukan menggunakan teknik *purposive sampling*. Teknik pengumpulan data berupa tes tertulis, angket dan wawancara. Tes tertulis dan wawancara digunakan untuk mengetahui tingkat kemampuan berpikir kreatif matematis siswa dalam pembelajaran pendekatan STEM berbasis *e-learning*, dan angket digunakan untuk mengetahui respon siswa terhadap pembelajaran pendekatan STEM.

Hasil penelitian menyatakan bahwa pendekatan STEM berbasis *e-learning*ialah strategi pembelajaran yang mampu mengubah *teacher centeredlearning* menjadi *student centeredleraning*. Siswa dapat mengikuti pembelajaran dengan baik, interaktif sehingga berjalan efektif. Pendekatan STEM mampu meningkatkan kemampuan berpikir kreatif matematis siswa secara optimal. Tingkat kemampuan berpikir kreatif matematis dikelompokkan menjadi 3 yaitu tinggi, sedang dan rendah berdasarkan proses dan nilai tes tertulis. Dari 28 siswa hasil *pre-test* menunjukkan 1 siswa (3,6%) berkategori tinggi, 7 siswa (25%) sedang, dan 20 siswa (71,4%) rendah. Sedangkan hasil *post-test* menujukkan bahwa 7 siswa (25%) berkategori tinggi, 19 siswa (67,9%) sedang, dan 2 siswa (7,1%) termasuk kategori rendah. Hal ini menunjukkan bahwa terjadi peningkatan yang signifikan dari kategori rendah meningkat pada kategori sedang dan tinggi.

ABSTRACT

Widyastuti, A. 2020. Analysis of E-learning based STEM Approach to Students Mathematical Creative Thinking Ability Levels. Thesis. Mathematics Education Program, Sultan Agung Islamic University. Advisor I Nila Ubaidah M.Pd., Advisor II Dyana Wijayanti, M.Pd., Ph.D.

Keywords: STEM approach, E-learning, Mathematical Creative Thinking Ability

The e-learning based STEM approach is learning strategy that includes science, technology, engineering and mathematics into one unit and its implementation used electronic learning. Through STEM learning, students not only learn to count but can actualize themselves in everyday life so that they hone their mathematical creative thinking skills.This study aims to determine the e-learning based STEM approach to the level of mathematical creative thinking skills of students on lines and angles.

The study method used descriptive qualitative. The study was conducted in class VII A SMP Negeri 1 Pucakwangi consisted of 28 students. The research subject used was a purposive sampling technique. The techniques for data collections used were written tests, questionnaires, and interviews. Written tests and interviews were used to determine the level of students' mathematical creative thinking skills in this approach. The questionnaires were used to find out that the STEM approach learning.

The results of the study indicate that the e-learning based STEM approach is a learning strategy that can change teacher centered learning to student centered learning. Students can follow the learning well, interactive, so that it runs effective. The e-learning based STEM approach can optimally improve students' mathematical creative thinking skills.The level of mathematical creative thinking skills grouped into 3, namely; high, medium, and low based on processes; indicators; and written test scores. Of the 28 students theresults *pre-test* showed 1 student (3.6%) was categorized as high, 7 students (25%) were moderate, and 20 students (71.4%) were low. While the results of the *post-test* showed that 7 students (25%) were in the high category, 19 students (67.9%) were moderate, and 2 students (7.1%) were in the low category. This shows that there is a significant increase from the low category to the medium and high categories.