

ABSTRAK

NANDANG NUGRAHA ABDULLAH. 2023. **Analisis Proses Berpikir Radian Matematis Peserta Didik Ditinjau dari *Self-Renewal Capacity***. Program Studi Magister Pendidikan Matematika. Program Pascasarjana. Universitas Siliwangi.

Penelitian ini bertujuan untuk mendeskripsikan proses berpikir radian matematis peserta didik pada materi garis dan sudut yang ditinjau dari *self-renewal capacity* pada kategori tinggi, sedang dan rendah. Penelitian ini merupakan penelitian kualitatif dengan metode penelitian yaitu metode eksplorasi. Teknik pengumpulan data berupa tes, dan wawancara. Peserta didik yang dijadikan subjek merupakan 3 orang peserta didik berdasarkan hasil pengkategorian *self-renewal capacity* kategori tinggi, sedang dan rendah. Subjek penelitian ini merupakan peserta didik kelas VII K SMP Negeri 2 Kota Tasikmalaya. Hasil penelitian menunjukkan bahwa subjek dengan *self-renewal capacity* dengan kategori tinggi mampu menyelesaikan semua soal yang disajikan dengan langkah dan hasil yang tepat, sehingga subjek kategori tinggi mampu mencapai keempat proses radian matematis, yaitu proses kelancaran (*fluency*), proses keluwesan (*flexibility*), proses keaslian (*originality*) dan proses elaborasi (*elaboration*). Subjek dengan *self-renewal capacity* dengan kategori sedang pada proses kelancaran (*fluency*) mampu mengidentifikasi aspek penting yang terdapat pada soal secara lengkap dan jelas. Pada proses keluwesan (*flexibility*) subjek kategori sedang mampu menerapkan strategi untuk menemukan solusi matematika. Pada proses keaslian (*originality*) dan proses elaborasi (*elaboration*) mampu memberikan berbagai ragam penyelesaian masalah. Subjek dengan *self-renewal capacity* dengan kategori rendah pada proses kelancaran (*fluency*) mampu mengidentifikasi aspek penting pada soal dan menuliskannya namun tidak secara lengkap. Kemudian subjek kategori rendah pada proses keluwesan (*flexibility*) dan keaslian (*originality*) hanya mampu mencapai langkah merancang dan menerapkan strategi untuk menemukan solusi matematika tetapi tidak menemukan hasil yang tepat dari soal yang disajikan. Pada proses elaborasi (*elaboration*) subjek kategori rendah mampu menjelaskan hasil yang didapat hanya secara tulisan, adapun subjek kategori sedang mampu menjelaskan hasil yang didapat dalam bentuk tulisan dan diperjelas kembali secara lisan meskipun tidak terlalu jelas.

Kata kunci: Garis dan Sudut, Radian Matematis, *Self-renewal capacity*

ABSTRACT

NANDANG NUGRAHA ABDULLAH. 2023. *Analysis of students' Mathematical Radiant Thinking Processes Viewed from Self-Renewal Capacity*. Mathematics Education Master's Study Program. Graduate program. Siliwangi University.

This research aims to describe students' mathematical radiant thinking processes on line and angle material in terms of self-renewal capacity in the high, medium and low categories. This research is qualitative research with a research method, namely the exploration method. Data collection techniques include tests and interviews. The students who were used as subjects were 3 students based on the results of categorizing self-renewal capacity in high, medium and low categories. The subjects of this research were students in class VII K of SMP Negeri 2 Tasikmalaya City. The results of the research show that subjects with self-renewal capacity in the high category are able to solve all the questions presented with the right steps and results, so that subjects in the high category are able to achieve the four mathematical radiant processes, namely the fluency process, the flexibility process, authenticity process and elaboration process. Subjects with self-renewal capacity in the medium category in the fluency process were able to identify the important aspects contained in the questions completely and clearly. In the flexibility process, moderate category subjects are able to apply strategies to find mathematical solutions. The originality process and the elaboration process are able to provide a variety of problem solutions. Subjects with low self-renewal capacity in the fluency process were able to identify important aspects of the questions and write them down, but not completely. Then subjects in the low category in the process of flexibility (flexibility) and originality (originality) were only able to reach the steps of designing and implementing strategies to find mathematical solutions but did not find the right results from the problems presented. In the elaboration process, low category subjects were able to explain the results obtained only in writing, while medium category subjects were able to explain the results obtained in written form and explained again orally, although not very clearly.

Keywords: Lines and Angles, Mathematical radiant, Self-renewal capacity