

**ANALISIS KEMAMPUAN KONEKSI MATEMATIS SISWA PADA BARISAN
DAN DERET DITINJAU DARI *SELF EFFICACY***

TESIS

**Diajukan untuk Memenuhi Salah Satu Syarat Memperoleh
Gelar Magister Pendidikan Matematika**



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ABSTRAK

IRFAN DWI CAHYANTO (2020). **Analisis Kemampuan Koneksi Matematis Siswa pada Barisan dan Deret Ditinjau dari *Self Efficacy***. Tesis. Program Studi Magister Pendidikan Matematika. Pascasarjana Universitas Siliwangi.

Penelitian ini bertujuan untuk menganalisis dan mendeskripsikan kemampuan koneksi matematis serta kesulitan yang dialami siswa waktu menyelesaikan soal koneksi matematis pada materi barisan dan deret ditinjau dari *self efficacy*. Penelitian ini menggunakan metode kualitatif. Pengumpulan data *self efficacy* diperoleh dengan membacakan setiap pernyataan terhadap siswa yang dipilih secara acak kemudian ditanggapinya. Setiap tanggapan siswa mempunyai skor, kemudian skor tiap siswa dihitung dan dikelompokkan berdasarkan kategori *self efficacy*. Dari setiap kategori tersebut, siswa diambil satu persatu secara berurutan dimulai dari yang mendapat skor tertinggi untuk menyelesaikan soal tes kemampuan koneksi matematis dengan *thing a loud* sampai didapatkan siswa yang mengalami kesulitan. Siswa yang mengalami kesulitan diwawancara untuk menggali lebih dalam kesulitan yang dialaminya. Proses tersebut dilakukan sampai didapatkan data jenuh. Dari hasil proses tersebut, dengan teknik *purposive* didapatkan 1 subjek penelitian dari masing-masing kategori *self efficacy*, yaitu siswa yang bisa memberikan informasi paling lengkap berupa kemampuan koneksi matematis dan kesulitan saat menyelesaikan soal tes. Data yang diperoleh diolah, dianalisis dan disajikan ke dalam bentuk deskriptif. Berdasarkan hasil penelitian, pengolahan, analisis data disimpulkan bahwa subjek dari kategori *self efficacy* sangat tinggi (SEST) menguasai kemampuan koneksi matematis antar topik matematika, kemampuan koneksi matematis dengan bidang ilmu lain, dan mempunyai kemampuan mengkoneksikan matematika dengan kehidupan nyata, walau sempat mengalami kesulitan dalam menyelesaikan soal tes tersebut ditandai dengan adanya kesalahan operasi karena kurang teliti. Subjek dari kategori *self efficacy* tinggi (SET) menguasai kemampuan koneksi matematis antar topik matematika, kemampuan koneksi matematis dengan bidang ilmu lain, namun belum mempunyai kemampuan koneksi matematis dengan dunia nyata, hal tersebut ditandai dengan adanya kesalahan prinsip dan kesalahan konsep waktu menyelesaikan tes. Subjek dari kategori *self efficacy* rendah (SER) belum menguasai kemampuan koneksi matematis antar topik matematika, kemampuan koneksi matematis terhadap bidang ilmu lain, dan belum mempunyai kemampuan koneksi matematis dengan kehidupan nyata siswa. Berdasarkan hasil wawancara diperoleh informasi ternyata SER mengalami kesulitan fakta yaitu kesulitan memahami makna soal, kemudian SER tidak percaya diri dan mudah menyerah dalam menghadapi kesulitan yang dialaminya. SER belum menguasai materi barisan geometri.

Kata Kunci : Kesulitan, Kesulitan Siswa, Kemampuan Koneksi Matematis, *Self efficacy*

ABSTRACT

IRFAN DWI CAHYANTO (2020). **Analysis of Students' Mathematical Connection Capabilities on Rows and Rows in Terms of Self Efficacy**. Tesis. Program Studi Magister Pendidikan Matematika. Pascasarjana Universitas Siliwangi.

This study aims to analyze and describe the ability of mathematical connections as well as the difficulties experienced by students when completing mathematical connection problems in row and series material in terms of self efficacy. This study uses a qualitative method. The collection of self-efficacy data is obtained by reading each statement to students who are chosen randomly and then responding. Each student's response has a score, then each student's score is calculated and grouped according to the category of self-efficacy. From each of these categories, students are taken one at a time starting from the one who gets the highest score to solve the mathematical connection ability test problem with thing a loud until it gets students who have difficulty. Students who experience difficulties are interviewed to dig deeper into the difficulties they experience. The process is carried out until saturated data is obtained. From the results of this process, with a purposive technique obtained 1 research subject from each category of self-efficacy, namely students who can provide the most complete information in the form of mathematical connection skills and difficulties when completing test questions. The data obtained is processed, analyzed and presented in descriptive form. Based on the results of research, processing, data analysis concluded that the subject of self efficacy is very high (SEST) mastering the ability of mathematical connections between mathematical topics, the ability of mathematical connections with other fields of science, and has the ability to connect mathematics with real life, even though it had difficulty in completing the test questions were marked by an operation error due to lack of accuracy. The subject of high self efficacy (SET) mastered the ability of mathematical connections between mathematical topics, the ability of mathematical connections with other fields of science, but did not yet have the ability to connect mathematically with the real world, it was marked by the existence of prinsive errors and concept errors when completing the test. The subject of low self efficacy (SER) has not mastered the ability of mathematical connections between mathematical topics, the ability of mathematical connections to other fields of study, and does not yet have the ability to connect mathematically to real life students. Based on the interview results, it was found that SER had difficulty with facts, namely difficulty understanding the meaning of the questions, then SER was not confident and easily gave up in facing the difficulties they experienced. SER has not mastered the material in the geometric sequence.

Keywords: Difficulties, Student Difficulties, Mathematical Connection Abilities, Self efficacy

