

ABSTRAK

Wulan Ana Suwasti. 2018. *Pengaruh Nilai Mata Kuliah Logika Dan Teori Himpunan Terhadap Pemahaman Mahasiswa Dalam Mata Kuliah Pengantar Aljabar Abstrak*. Skripsi. Program Studi Pendidikan Matematika, Jurusan Pendidikan Matematika dan Ilmu Pengetahuan Alam, Fakultas Keguruan dan Ilmu Pendidikan, Universitas Sanata Dharma, Yogyakarta.

Penelitian ini bertujuan untuk mengetahui pengaruh dan hubungan antara nilai mata kuliah Logika dan Teori Himpunan terhadap pemahaman mahasiswa dalam mata kuliah Pengantar Aljabar Abstrak. Berdasarkan hasil observasi awal, masih banyak ditemui mahasiswa Prodi Pendidikan Matematika Universitas Sanata Dharma yang mengalami kesulitan dalam mempelajari Pengantar Aljabar Abstrak. Hal ini terlihat dari persentase nilai kurang dari 68 yang diperoleh mahasiswa pada UTS 1 sebesar 58%. Salah satu penyebabnya adalah materi Logika dan Teori Himpunan yang menjadi prasyarat Pengantar Aljabar Abstrak kurang dikuasai.

Jenis penelitian yang digunakan adalah metode penelitian asosiatif dengan pendekatan kuantitatif. Penelitian dilaksanakan dari tanggal 22 Februari 2017 sampai dengan 24 Mei 2017. Sampel dalam penelitian ini adalah mahasiswa Prodi Pendidikan Matematika FKIP Universitas Sanata Dharma Yogyakarta yang menempuh mata kuliah Pengantar Aljabar Abstrak kelas B pada tahun akademik 2016/2017 semester genap, yakni sebanyak 53 mahasiswa. Data yang dikumpulkan berupa nilai mata kuliah Logika, nilai mata kuliah Teori Himpunan, dan nilai mahasiswa dalam mata kuliah Pengantar Aljabar Abstrak yang diperoleh dari bagian sekretariat JPMIPA dan dosen. Metode pengumpulan data menggunakan metode dokumentasi, observasi, dan kepustakaan. Sedangkan untuk mengolah data dilakukan dengan analisis regresi berganda dan analisis korelasi berganda. Untuk menguji hipotesis menggunakan statistik Uji-F.

Hasil penelitian menunjukkan bahwa (1) berdasarkan perhitungan uji statistik diperoleh nilai $F_0 = 4,114 > \text{nilai } F_{tabel} = 3,18$, maka H_0 ditolak. Artinya, ada pengaruh nilai mata kuliah Logika dan Teori Himpunan terhadap pemahaman mahasiswa dalam mata kuliah Pengantar Aljabar Abstrak. (2) Berdasarkan perhitungan uji statistik diperoleh nilai $F_0 = 4,114 > \text{nilai } F_{tabel} = 3,18$, maka H_0 ditolak. Artinya, ada hubungan nilai mata kuliah Logika dan Teori Himpunan terhadap pemahaman mahasiswa dalam mata kuliah Pengantar Aljabar Abstrak. Berdasarkan hasil hitung koefisien korelasi berganda yaitu 0,376 dan kriteria penilaian koefisien nilai tersebut masuk pada kriteria rendah atau lemah tapi pasti. Artinya bahwa antara nilai mata kuliah Logika dan nilai mata kuliah Teori Himpunan terdapat hubungan positif dan rendah atau lemah tapi pasti terhadap pemahaman mahasiswa dalam mata kuliah Pengantar Aljabar Abstrak.

Kata Kunci : Nilai Mata Kuliah Logika dan Teori Himpunan, Pengantar Aljabar Abstrak, Pengaruh.

ABSTRACT

Wulan Ana Suwasti. 2018. *The Influence of the Score of Logic Course and Set Theory Towards Understanding of the Student in Introduction to Abstract Algebra Course. Thesis. Mathematics Education Study Program, Mathematics and Science Education Department, Faculty of Teacher Training and Education, Sanata Dharma University, Yogyakarta.*

This research aims to determine the influence and relationship between Logic course and Set Theory towards understanding of the student in Introduction to Abstract Algebra course. Based on the preliminary observation, there are still many students of the Study Program of Mathematics Education in Sanata Dharma University who have difficulty in learning Introduction to Abstract Algebra. It can be seen on the percentage of the score that less than 68 that they achieve on first Mid Term Test as 58%. One of the causes is the Logic and Set Theory as the precondition of Introduction to Abstract Algebra is less mastered.

The type of the research used is associative research method with quantitative approach. The research was conducted from February 22 to May 24, 2017. The sample of the research is the students of Mathematics Education Study Program of Teacher Training and Education Faculty of Sanata Dharma University Yogyakarta who take course of Introduction to Abstract Algebra of B class on academic year of 2016/2017 on even semester, in the number of 53 students. Data gathered as the score of Logic course, Set Theory course, and Introduction to Abstract Algebra course which is obtained from the secretariat of JPMIPA and lecturers. The method of data collecting used documentation, observation, and literature. To process the data is conducted through multiple regression analysis and multiple correlation analysis. To test the hypothesis F-Test statistics is used.

The result of the research showed that (1) based on the calculation of statistical tests obtained value $F_0 = 4,114 > \text{value } F_{\text{tabel}} = 3,18$, then H_0 rejected. This means that there is the influence of the score of Logic course and Set Theory towards understanding of the student in Introduction to Algebra Abstract course. (2) Based on the calculation of statistical tests obtained value $F_0 = 4,114 > \text{value } F_{\text{tabel}} = 3,18$, then H_0 rejected. This means that there is relationship of score of Logic course and Set Theory towards understanding of the student in Introduction to Algebra Abstract course. Based on the results of multiple correlation coefficient calculation is 0,376 and coefficient scoring criteria this value belongs to low or weak but sure criteria. This means that between the score of Logic course and Set Theory there is positive and low or weak but sure relationship towards understanding of the student in Introduction to Abstract Algebra course.

Keywords: *Influence, Introduction to Abstract Algebra, Score of Logic Course and Set Theory.*