ABSTRAK

Indra Mahdalena, NIM 4163311025 (2022). Analisis Kemampuan Komunikasi Matematis Mahasiswa Universitas Negeri Medan dengan Penerapan Model *Problem Based Learning* Pada Kalkulus Integral.

Penelitian ini bertujuan untuk mengetahui pemahaman kemampuan komunikasi matematis mahasiswa Universitas Negeri Medan pada mata kuliah kalkulus integral, dan untuk mengetahui hal-hal yang menyebabkan mahasiswa mengalami kesulitan dalam kemampuan komunikasi matematis pada mata kuliah kalkulus integral. Penelitian ini merupakan penelitian kualitatif dengan pendekatan deskriptif. Subjek penelitian ini adalah mahasiswa jurusan pendidikan matematika kelas Dik B Universitas Negeri Medan. Ada 49 mahasiswa yang mengikuti tes tertulis dan enam mahasiswa yang diwawancarai. Objek penelitian ini adalah kemampuan komunikasi matematis mahasiswa dengan model *Problem Based Learning.* Penelitian ini menggunakan tiga metode pengumpulan data yaitu tes, wawancara, dan angket. Tahapan yang digunakan pada penelitian ini yaitu (1) reduksi data (2) penyajian data, dan (3) penarikan kesimpulan. Berdasarkan analisis data tingkat kemampuan komunikasi matematis dari 49 mahasiswa dengan kemampuan komunikasi matematis ‘sangat rendah’ sebanyak 24,49%, kemampuan komunikasi matematis ‘rendah’ sebanyak 16,33%, kemampuan komunikasi matematis ‘sedang’ sebanyak 26,53%, kemampuan komunikasi matematis ‘tinggi’ sebanyak 24,49%, dan kemampuan komunikasi matematis ‘sangat tinggi’ sebanyak 8,16%. Analisis kesulitan kemampuan komunikasi matematis penelitian ini yaitu kesulitan mahasiswa dalam menggambarkan kurva dengan benar dan kesalahan perhitungan di akhir jawaban.

Kata kunci : Kemampuan Komunikasi Matematis, *Problem Based Learning*, Kalkulus Integral

ABSTRACT

Indra Mahdalena, NIM 4163311025 (2022). Analysis of Mathematical Communication Skills of Medan State University Students With The Application of Problem Based Learning Models in Integral Calculus.

This study aims to determine the understanding of mathematical communication skills of Medan State University students in the integral Calculus course, and to determine the things that cause students to have difficulty in mathematical communication skills in the integral Calculus course. This research is a qualitative research with descriptive approach. The subject of this study is a student of mathematics education class Dik B Medan State University. There were 49 students who took the written test and six students who were interviewed. The object of this study is the mathematical communication skills of students with Problem-Based Learning model. This study used three methods of data collection, namely tests, interviews, and questionnaires. Stages used in this study are (1) data reduction (2) presentation of data, and (3) conclusion. Based on data analysis of the level of mathematical communication skills of 49 students with mathematical communication skills 'very low' as much as 24.49%, mathematical communication skills 'low' as much as 16.33%, mathematical communication skills 'medium' as much as 26.53%, mathematical communication skills 'high' as much as 24.49%, and mathematical communication skills 'very high' as much as 8.16%. Analysis of the difficulty of mathematical communication skills of this study is the difficulty of students in describing the curve correctly and calculation errors at the end of the answer.

Keywords : Mathematical Communication Skills, Problem Based Learning, Integral Calculus