ABSTRAK

Retni Lumban Gaol. Kaitan antara Kemampuan Numerik, Keterampilan Proses Sains, dan Pemahaman Konsep terhadap Hasil Belajar Biologi Umum I dan Sikap Mahasiswa FMIPA UNIMED. Tesis. Program Pascasarjana Universitas Negeri Medan (UNIMED). Medan. 2014.

Penelitian ini dilakukan di Kampus Universitas Negeri Medan yang bertujuan untuk mengetahui: (1) hubungan antara kemampuan numerik dengan hasil belajar Biologi Umum I; (2) hubungan antara kemampuan proses sains dengan hasil belajar Biologi Umum I; (3) hubungan antara pemahaman dengan hasil belajar Biologi Umum I; (4) hubungan antara kemampuan numerik, kemampuan proses sains, pemahaman secara bersama-sama dengan hasil belajar Biologi Umum I; (5) hubungan antara kemampuan numerik dengan sikap FMIPA UNIMED; (6) hubungan antara kemampuan proses sains dengan sikap FMIPA.; (7) hubungan antara pemahaman konsep dengan sikap FMIPA; dan (8) hubungan antara kemampuan numerik, kemampuan proses sains, pemahaman secara bersama-sama dengan sikap FMIPA UNIMED. Sampel penelitian ini adalah mahasiswa FMIPA UNIMED semester 2 yang sudah selesai mengambil mata kuliah Biologi Umum I yang diambil dengan *Cluster Sampling* yaitu satu kelas dari setiap jurusan dengan jumlah 4 kelas sebanyak 160 mahasiswa dari populasi 27 kelas mahasiswa FMIPA UNIMED. Instrumen penelitian berupa tes untuk kemampuan numerik, keterampilan proses sains dan pemahaman konsep dan angket untuk sikap. Metode penelitian ini bersifat deskriptif dengan teknik analisis hipotesis teknik analisis jalur pada taraf α 0,05.

Hasil penelitian menunjukkan: (1) terdapat hubungan antara kemampuan numerik dengan hasil belajar Biologi umum I ($r = 0,249$); (2) terdapat hubungan antara keterampilan proses sains dengan hasil belajar Biologi Umum I ($r = 0,150$); (3) terdapat hubungan secara signifikan antara pemahaman konsep dengan hasil belajar Biologi Umum I ($r = 0,303$); (4) terdapat hubungan antara kemampuan numerik, keterampilan proses sains dan pemahaman konsep secara bersama-sama dengan hasil belajar Biologi Umum I ($r = 0,387$); (5) terdapat hubungan antara kemampuan numerik dengan sikap mahasiswa FMIPA UNIMED ($r = 0,034$); (6) terdapat hubungan yang sangat rendah antara keterampilan proses sains dengan sikap mahasiswa FMIPA UNIMED ($r = 0,104$); (7) terdapat hubungan antara pemahaman konsep dengan sikap mahasiswa FMIPA UNIMED ($r = 0,220$); (8) terdapat hubungan secara signifikan antara kemampuan numerik, keterampilan proses sains dan pemahaman konsep secara bersama-sama dengan sikap mahasiswa FMIPA UNIMED ($r = 149$). Hasil penelitian ini mengimplikasikan bahwa tingkat kemampuan numerik, keterampilan proses sains dan pemahaman konsep mempunyai peranan dalam peningkatan hasil belajar dan sikap mahasiswa FMIPA UNIMED akan biologi.

Kata kunci: kemampuan numerik, keterampilan proses sains, pemahaman konsep.

ABSTRACT

Retni Lumban Gaol. **The link between Numerical Ability, Science Process Skills, and Understanding the Concept of Learning Outcomes General Biology I and Attitudes Students Faculty UNIMED. Thesis. Postgraduate Program, State University of Medan (UNIMED), Juli 2014**

This research objectives are: (1) the relationship between numerical ability with learning outcomes General Biology I; (2) the relationship between the ability of science to the process of learning the results of the General Biology I; (3) the relationship between the learning outcomes of understanding with General Biology I; (4) the relationship between numerical ability, the ability of the process of science, understanding together with the results of study General Biology I; (5) the relationship between numerical ability with attitude UNIMED Natural Sciences; (6) the relationship between science process ability with attitude Faculty .; (7) the relationship between the understanding of the concept of Science Faculty attitudes; and (8) the relationship between numerical ability, the ability of the process of science, understanding together with the Faculty UNIMED attitude. The sample was UNIMED FMIPA students who have completed 2 semesters taking courses taken General Biology I with cluster sampling is a class of each department with a number of 4 classes of 160 students from grade 27 student population FMIPA UNIMED. The research instrument is a test for numerical ability, science process skills and understanding of concepts and questionnaire for attitude. This research method is descriptive analysis technique of path analysis techniques hypothesis at level α of 0.05.

The results of this research: (1) there is a relationship between numerical ability with general learning outcomes Biology I (r = 0.249); (2) there is a relationship between science process skills with learning outcomes General Biology I (r = 0.150); (3) there is a significant relationship between the understanding of the concept of the learning outcomes of the General Biology I (r = 0.303); (4) there is a relationship between numerical ability, science process skills and understanding of the concept together with the results of study General Biology I (r = 0.387); (5) there is a relationship between numerical ability with student attitudes FMIPA UNIMED (r = 0.034); (6) there is a very low correlation between science process skills with student attitudes FMIPA UNIMED (r = 0.104); (7) there is a relationship between student understanding of the concept of the Faculty UNIMED attitude (r = 0.220); (8) there is a significant relationship between numerical ability, science process skills and understanding of the concept together with the Faculty UNIMED student attitudes (r = 149). These results imply that the level of numerical skills, science process skills and understanding of concepts has a role in improving student learning outcomes and attitudes Faculty will UNIMED biology.

Keywords: numerical skills, science process skills, understanding of concepts.