ABSTRAK

WINDA SARIFAH SIHOTANG, NIM. 8136174033. Kemampuan Literasi Sains Siswa Kelas X SMA Negeri di Medan dan Mahasiswa Jurusan Biologi Universitas Negeri Medan Berdasarkan Kerangka PISA Tahun 2006 Pada Konten Pengetahuan Biologi, 2015

Penelitian ini bertujuan untuk mengetahui : (1) kemampuan literasi sains siswa dan mahasiswa; (2) pengaruh *gender* terhadap literasi sains; hubungan antara (3) latar belakang pendidikan formal orang tua (4) intensitas belajar sains; (5) dan pembelajaran sains di sekolah; dengan literasi sains. Penelitian ini dilakukan di SMA Negeri di Medan dengan jumlah sampel 269 yang diambil dengan teknik *purposive sampling.* Instrumen penelitian berupa tes literasi sains siswa dan angket faktor-faktor yang berhubungan dengan literasi sains siswa yang yang disusun berdasarkan skala Likert. Jenis penelitian ini adalah penelitian deskriptif yang bersifat korelasional. Teknik analisis data deskriptif persentase dan regresi pada taraf $\alpha = 0,05$. Hasil penelitian ini diperoleh bahwa : (1) Rata-rata literasi sains siswa berdasarkan PISA pada konten pengetahuan biologi adalah 60.88 ± 12.27. Adapun kemampuan mengidentifikasi permasalahan ilmiah, menjelaskan fenomena secara ilmiah dan menggunakan bukti-bukti ilmiah diperoleh rata-ratanya secara berturut-turut yaitu 64,79 ± 15,76; 64,02 ± 14,18; dan 53,04 ± 15,83; (2) pengaruh *gender* hanya menunjukkan sedikit perbedaan terhadap literasi sains ($F = 0,738$; $P = 0,391$) dan t hitung 0,018; (3) terdapat hubungan yang signifikan antara latar belakang pendidikan orang tua dengan literasi sains siswa ($R = 0,345$; $F = 26,606$; $P = 0,000$) dan mahasiswa ($R = 0,740$; $F = 82,104$; $P = 0,000$); (4) terdapat hubungan positif yang signifikan antara intensitas belajar sains siswa dengan literasi sains siswa ($R = 0,853$; $F = 527,840$; $P = 0,000$) dan pada mahasiswa ($R = 0,605$; $F = 39,207$; $P = 0,000$); (5) terdapat hubungan positif yang signifikan antara pembelajaran sains di sekolah dengan literasi sains siswa ($R = 0,874$; $F = 637,537$; $P = 0,000$) dan pada mahasiswa ($R = 0,940$; $F = 512,374$; $P = 0,000$); (6) Terdapat hubungan positif yang signifikan antara latar belakang pendidikan formal orang tua, intensitas belajar sains dan pembelajaran sains di sekolah dengan literasi sains siswa secara bersama-sama pada siswa kelas X SMA Negeri se-Kota Medan ($R = 0,877$; $F = 216,180$; $P = 0,000$) dan pada mahasiswa ($R = 0,952$; $F = 210,754$; $P = 0,000$). Hasil penelitian ini mengimplikasikan bahwa perlu dilakukan upaya peningkatan kualitas pembelajaran sains di sekolah, peran orang tua dalam mendidik siswa di rumah guna meningkatkan intensitas belajarnya dan membangun budaya belajar yang baik berkontribusi dalam mempengaruhi literasi sains siswa di SMA Negeri Medan serta mahasiswa Jurusan Biologi Universitas Negeri Medan.

Kata Kunci : Literasi Sains, Konten Biologi, Pengaruh *Gender* Terhadap Literasi Sains, Latar Belakang Pendidikan Orang Tua, Intensitas Belajar, Pembelajaran Sains.

ABSTRACT

Winda Sarifah Sihotang, NIM. 8136174033. Scientific Literacy Profile of Senior High School's Student Grade X in Medan and Student's of Biology in State University of Medan Based on PISA Framework 2006 in Knowledge of Biology Content. Thesis. Medan : Postgraduate Program State University of Medan, 2015.

This research aimed to determine : (1) science literacy of students Senior High School and Students of Biology in Medan; (2) the effect of gender in literacy; (3) the correlations of parent's education background and student science literacy ; (4) the correlations of students science learning intensity and student science literacy; (5) the correlation of science learning at school and student science literacy; (6) the correlation of parent's education background, students science learning intensity and science learning at school and student science literacy. This research was conducted at senior high school in Medan and students of biologi inState University of Medan. The sample of this research were 269 was taken by purposive sampling technique. The instruments of this research were tests of student science literacy nd quesionare of it relevant factors arranged based on scale of Likert. This research were correlational descriptive. The technique of data analysis were percentage descriptive an regression on $\alpha = 0,05$ significance level. The results of this research were : (1) the average score of whole respondents to PISA items for biology content (literacy) is 60.88 ± 12.27. The PISA competencies are composed of identifying scientific issue, explain phenomena scientifically and using scientivic evidence. The score attained for each competency are 64,79 ± 15,76; 64,02 ± 14,18; and 53,04 ± 15,83 respectively (2) the effect of gender in literacy showed the least difference ($F = 0,738$; $P = 0,391$; $t = 0,018$); (3) there is the significant positive correlation between parent's education background and student science literacy ($R = 0,345$; $F = 26,606$; $P = 0,000$) and for Student's of Biology ($R = 0,740$; $F = 82,104$; $P = 0,000$); (4) there is a significant positive correlation the students science learning intensity and student science literacy siswa ($R = 0,853$; $F = 527,840$; $P = 0,000$) and for Student's of Biology ($R = 0,605$; $F = 39,207$; $P = 0,000$); (5) there is the significant positive correlation between science learning at school and student science literacy ($R = 0,874$; $F = 637,537$; $P = 0,000$) and for Student's of Biology ($R = 0,940$; $F = 512,374$; $P = 0,000$); (6) there is the significant positive correlation between the correlation of parent's education background, students science learning intensity and science learning at school and student science literacy ($R = 0,877$; $F = 216,180$; $P = 0,000$) and for Student's of Biology ($R = 0,952$; $F = 210,754$; $P = 0,000$). These result imployeit is necessary to improve the quality of science learning at schools, the role of parents in educating the students at home in order to increase students learning intensity and to build the good learning culture that contribute in affecting students scientific literacy of State Senior High School Grade X in Medan and Student of Biology in State University of Medan.

Keywords : Science Literacy, Biology Content, The Effect of Gender in Science Literacy, Parent's Education Background, Science Learning Intensity, and Learning Science at School.