

## ABSTRAK

**Fitriani.** Analisis Kemampuan Literasi Sains Biologi Siswa SMA kelas XI IPA Se-Kabupaten Aceh Tamiang. *Tesis*. Program Pascasarjana Universitas Negeri Medan. 2018

Penelitian ini bertujuan untuk mengetahui kemampuan literasi sains biologi siswa SMA kelas XI IPA se- Kabupaten Aceh Tamiang. Metode penelitian digunakan analisis deskripsi survey dengan sampel penelitian berjumlah 301 siswa dari 12 sekolah masing-masing 1 kelas yang ditentukan secara *cluster random sampling*. Data diperoleh dengan menggunakan teknik tes dengan soal pilihan ganda dan soal essay dan juga teknik non tes berupa observasi keterampilan proses sains. Data diolah dan dianalisis dengan cara dihitung persentase kemampuan literasi sains pada masing-masing dimensi dan dilanjutkan dengan uji Mann Whitney U pada taraf signifikan  $\alpha = 0,05$  untuk mengetahui perbedaan literasi sains antara siswa laki-laki dengan siswa perempuan, perbedaan literasi sains antara sekolah negeri dan sekolah swasta serta perbedaan literasi sains berdasarkan wilayah sekolah antara kota dan desa. Hasil penelitian menunjukkan bahwa literasi pada dimensi sains sebagai batang tubuh ilmu pengetahuan diperoleh rata-rata 37,42%, literasi pada dimensi sains sebagai cara untuk menyelidiki rata-rata 55,97%, literasi pada dimensi sains sebagai cara untuk berpikir rata-rata 50,55% dan literasi sains dalam kaitannya dengan lingkungan, teknologi dan masyarakat rata-rata 18,48% sehingga termasuk dalam kategori rendah karena rata-rata nilai diperoleh dibawah 60%. Berdasarkan hasil uji Mann Whitney U diketahui bahwa terdapat perbedaan yang signifikan untuk kemampuan literasi sains berdasarkan gender, status sekolah dan wilayah sekolah pada dimensi sains sebagai batang tubuh. sains sebagai cara untuk menyelidiki, sains sebagai cara untuk berpikir. Pada dimensi sains sebagai kaitannya dengan sains, lingkungan, teknologi dan masyarakat terdapat perbedaan yang signifikan berdasarkan status sekolah, wilayah sekolah tetapi tidak berbeda berdasarkan gender. Dalam hal ini literasi sains siswa perempuan (43,68%) lebih baik dibandingkan dengan siswa laki-laki (38,48%), berdasarkan status sekolah, sekolah negeri (43,47%) lebih baik dibandingkan dengan sekolah swasta (26,89%) dan berdasarkan wilayah sekolah, sekolah di Desa (43,79%) lebih baik dibandingkan dengan sekolah di Kota (37,13%).

Kata kunci : Literasi Sains, Batang Tubuh Pengetahuan, Kemampuan Berpikir, Kemampuan Menyelidiki, salingtemas.

## ABSTRACT

**Fitriani.** An Analysis of Scientific Literacy Skills of Biology for the Eleventh Grade Students in Aceh Tamiang. *Thesis*. Postgraduate Program State University of Medan. 2018

The aim of this study was to find out the scientific literacy skills of Biology for the eleventh grade students in Aceh Tamiang. The method used a survey descriptive analysis with the sample of 301 students from 12 high schools of each 1 class that was determined by cluster random sampling. The data was obtained by giving the tests of multiple choice and essay as well as non tests of the science process skill's observation. The data was processed and analyzed by counting the percentages of science literacy skills in each dimension and subsequently tested by Mann Whitney U on the significance level of 0.05, to find out the differences of scientific literacy skills between male and female students, the differences of scientific literacy skills between public and private schools and also the differences of scientific literacy skills based on the school area between town and village/suburb. The results showed that the scientific literacy for the dimension of science as a body of knowledge was 37,42% in average, scientific literacy for the dimension of science as a way of investigation was 55,97% in average, scientific literacy for the dimension of science as a way of thinking was 50,55% in average and also the scientific literacy for the dimension of the interaction of science, environment, technology and society was 18,48% in average, hence all of them were included in the low category due to the obtained average values were below 60%. Based on the results of Mann Whitney U was clearly known that there were significant differences of the scientific literacy skills on gender, school status and school area for the dimensions of science as a body of knowledge, science as a way of investigation, and science as a way of thinking. There were significant differences of the scientific literacy skills on school status and school area, but not significantly different on gender for the dimension of the interaction of science, environment, technology and society In this case, scientific literacy skills of female students (43,68%) were better than male students (38,48%), based on school status, suggested that public schools (43,47%) were better than private schools (26,89%) and based on school area, suggested that schools in village/suburb (43,79%) were better than schools in town (37,13%).

*Keywords: Scientific Literacy, Body of Knowledge, Way of Thinking, Way of Investigation, Interaction of Science, Environment, Technology and Society*