

ABSTRACT

AAN SITI NURHALIMAH, 2024. ***THE CORRELATION OF SELF-DIRECTED LEARNING, COGNITIVE LOAD AND SCIENTIFIC LITERACY SKILL OF STUDENTS ON BIOLOGICAL LEARNING*** (*Correlational Study in X Class of 8 Senior High School Tasikmalaya Academic Year 2023/2024*). Thesis, Department of Biology Education, Faculty of Teacher Training and Education, Siliwangi University.

Scientific literacy is the most important goal of science education. Meanwhile, the complexity of the material in biology triggers students' cognitive load. The efforts that can be made to empower students are self-directed learning. This study aims to determine the relationship between self-directed learning and cognitive load on students' scientific literacy skills in biology learning. The research method used is correlation. The research was conducted at SMA Negeri 8 Tasikmalaya in November 2023-March 2024. The population of the study was all class X SMA Negeri 8 Tasikmalaya with a sample taken as many as 163 students using quota sampling technique. The instruments used in data collection were self-directed learning questionnaire with 23 statements, cognitive load with 8 statements, and scientific literacy skill test with 13 questions. Data analysis used bivariate and multivariate correlation tests. The results showed that (i) there is a positive correlation between self-directed learning and scientific literacy skills obtaining a value of $R=0.5242$ and $R^2=0.294$ with a moderate correlation level; (ii) there is a negative correlation between cognitive load and scientific literacy skills obtaining a value of $R=0.522$ and $R^2=0.272$ with a moderate correlation level; (iii) there is a correlation between self-directed learning and cognitive load on scientific literacy skills obtaining a value of $R=0,690$ and $R^2=0,476$ with a high correlation level. It can be concluded that there is a correlation between self-directed learning and cognitive load on the scientific literacy skills of students in biology learning in class X SMA Negeri 8 Tasikmalaya Academic Year 2023/2024.

Key word: self-directed learning, cognitive load, and scientific literacy skill.