

## ABSTRACT

**Rizky Agassy Sihombing, IDN 4193151029 (2019). Development of E-book STEM-based on Human Digestive System Material to Improve Scientific Literacy Skill.**

The research was conducted on students' low scientific literacy skills in Indonesia based on PISA, PUSMENDIK data and the lack of STEM-based teaching materials that measure students' scientific literacy. Researcher develop teaching material in the form of interactive E-book that can be used on all devices with feasible, effective, and practical to improve scientific literacy skills on human digestive system material. The research method used is R&D with the ADDIE from Branch. Subjects in this study was students of classes VIII-1 and VIII-3 from SMP Swasta Bina Satria Medan. Samples was taken by purposive sampling. The instruments used are tests that experts and non-tests have validated. Test instruments was given to 60 students, and assessment was given to 4 experts (1 expert in media, learning design, material, and linguist), three students in one-to-one evaluation, 15 students' in small group evaluation, 30 students in field test, 30 students' in implementation, and two science teachers. The results showed that resulting validation from a media expert with  $\bar{x} = 98.3$ , a material expert with  $\bar{x} = 83.3$ , a learning design expert with  $\bar{x} = 95.3$ , and a linguist expert with  $\bar{x} = 85$ , then an E-book STEM-based was declared feasible and effective in assisting the learning process and improving scientific literacy skills, 90% of students scored  $\geq$  KKM and the average N-Gain was 0.75 (high). In addition, the E-book STEM-based was stated very practical with  $\bar{x} = 88$  and very effective with  $\bar{x} = 97$  for teachers and students to use in learning.

**Keywords:** E-book, STEM, Scientific Literacy, ADDIE, Feasible, Effective, Practical