

## ABSTRAK

**Vinsensia S. P. Manik, NIM 4153341052 (2015). Analisis Kemampuan Berpikir Kritis Siswa Pada Materi Sistem Pencernaan Manusia Dengan Implementasi Pendekatan STEM Di Kelas XI SMA Negeri 2 Bandar T.P. 2019/2020.**

Penelitian ini bertujuan untuk mendeskripsikan implementasi pendekatan STEM dalam pembelajaran pada materi sistem pencernaan manusia. Selain itu penelitian ini juga bertujuan untuk menganalisis kemampuan berpikir kritis siswa pada materi sistem pencernaan manusia. Penelitian ini dilaksanakan di SMA Negeri 2 Bandar dengan jenis penelitian deskriptif kualitatif. Sampel yang digunakan berjumlah 32 orang siswa. Penelitian dilakukan dalam 3 kali pertemuan pembelajaran. Pertemuan pertama diimplementasikan pendekatan STEM aspek *science*, pada pertemuan kedua diimplementasikan aspek teknologi, dan pada pertemuan ketiga diimplementasikan aspek *engineering* dan *mathematics*. Diakhir proses pembelajaran diberikan tes kemampuan berpikir kritis berupa soal uraian. Data yang diperoleh terlebih dahulu ditabulasi kemudian dianalisis dengan uji normalitas, uji *one way anova*, dan uji *post hoc*. Dari hasil uji *one way anova* diperoleh nilai signifikansi sebesar  $0.000 < 0.05$  menunjukkan bahwa kemampuan berpikir kritis pada tiap indikator berbeda signifikan. Hasil penelitian menunjukkan bahwa pendekatan STEM diimplementasikan dengan menerapkan *science*, *technology*, *engineering*, dan *mathematics* dalam proses pembelajaran materi sistem pencernaan manusia. Submateri organ-organ pencernaan dan zat-zat makanan dibelajarkan aspek *science*. Submateri proses pencernaan mekanik dan kimia dibelajarkan aspek *technology*. Dan submateri gangguan pada organ-organ sistem pencernaan manusia dibelajarkan melalui aspek *mathematics* dan *engineering*. Rata-rata kemampuan berpikir kritis siswa SMA Negeri 2 Bandar yang dibelajarkan menggunakan pendekatan STEM tergolong baik (71.65). Kemampuan berpikir kritis siswa pada indikator mengidentifikasi asumsi tergolong sangat baik (85.1), indikator membuat dan menentukan tindakan tergolong baik (71.8). Lalu indikator bertanya dan menjawab pertanyaan tergolong rendah (59.1), mengobservasi dan mempertimbangkan hasil observasi tergolong baik (73.3) dan indikator menentukan tindakan tergolong kurang baik (53.1).

**Kata Kunci:** STEM, berpikir kritis, sistem pencernaan manusia

## ABSTRACT

**Vinsensia S. P. Manik, NIM. 4153341052 (2015). The Analysis Of Student's Critical Thinking Skills On The Material Of The Human Digestive System With The Implementation Of The STEM Approach In Class XI SMA Negeri 2 Bandar.**

This study aims to describe the implementation of the STEM approach in learning material on the human digestive system. In addition, this study also aims to analyze students' critical thinking skills in the material of the human digestive system. This research was conducted at SMA Negeri 2 Bandar with a qualitative descriptive research type. The sample used was 32 students. The research was conducted in 3 learning meetings. The first meeting implemented a science aspect STEM approach, at the second meeting a technology aspect was implemented, and at the third meeting the engineering and mathematics aspects were implemented. At the end of the learning process, a critical thinking ability test is given in the form of description questions. The data obtained were tabulated first and then analyzed by normality test, one way ANOVA test, and post hoc test. From the one way ANOVA test results obtained a significance value of  $0.000 < 0.05$ , indicating that the critical thinking ability on each indicator is significantly different. The results showed that the STEM approach was implemented by applying science, technology, engineering, and mathematics in the learning process of the human digestive system. Submaterials of the digestive organs and food substances are taught the aspects of science. The technology aspects of mechanical and chemical digestion processes are taught. And sub-material disorders in the organs of the human digestive system are taught through mathematics and engineering aspects. The average critical thinking ability of SMA Negeri 2 Bandar students who were taught using the STEM approach was classified as good (71.65). Students' critical thinking skills on the indicators of identifying assumptions are very good (85.1), indicators of making and determining actions are classified as good (71.8). Then the indicators of asking and answering questions are low (59.1), observing and considering the results of the observations are classified as good (73.3) and the indicators determining the action are classified as poor (53.1).

Keywords : STEM, critical thinking, human digestive system.