

ABSTRAK

Frisda Destriyana Fitaloka (1212060043) : Pengaruh Model Pembelajaran *Predict–Observe–Explain* (POE) Berbantuan *Question Card* Terhadap Peningkatan Keterampilan Proses Sains Siswa Pada Materi Sistem Pencernaan

Keterampilan proses sains merupakan salah satu kompetensi penting yang harus dikembangkan dalam pembelajaran biologi, khususnya pada materi sistem pencernaan yang menuntut kemampuan berpikir ilmiah dan pemahaman konseptual siswa. Penelitian ini bertujuan untuk menganalisis pengaruh penerapan model pembelajaran *Predict–Observe–Explain* (POE) berbantuan *question card*, menganalisis keterlaksanaan model pembelajaran, menganalisis peningkatan keterampilan proses sains dengan menggunakan model pembelajaran *Predict–Observe–Explain* (POE) berbantuan *question card*, serta mengevaluasi refleksi siswa terhadap pembelajaran tersebut. Metode yang digunakan dalam penelitian ini yaitu metode *quasi experiment* dengan jenis desain *non equivalent control group* menggunakan dua kelas, yaitu kelas XI-5 dan XI-6 dengan subjek penelitian sebanyak 60 siswa. Instrumen berupa soal esai dengan indikator keterampilan proses sains meliputi mengobservasi, berhipotesis, interpretasi, klasifikasi, merancang percobaan, berkomunikasi, dan menerapkan konsep ilmiah, dengan jumlah butir soal sebanyak 20. Analisis data menggunakan uji *independent sample t test* dan uji *n-gain* menunjukkan bahwa model pembelajaran *Predict–Observe–Explain* (POE) berbantuan *question card* memiliki pengaruh positif terhadap peningkatan keterampilan proses sains siswa. Hasil penelitian menunjukkan bahwa keterlaksanaan aktivitas guru dan siswa berada pada kriteria sangat baik pada setiap tahapan pembelajaran. Peningkatan keterampilan proses sains siswa kelas eksperimen sebesar 0,63 dengan kriteria sedang dan kelas reguler sebesar 0,19 dengan kriteria rendah. Uji hipotesis menunjukkan terdapat perbedaan keterampilan proses sains antara siswa kelas eksperimen dan reguler pada materi sistem pencernaan. Temuan ini menunjukkan bahwa integrasi sintaks POE dengan media *question card* mampu memfasilitasi proses prediksi, observasi, dan penjelasan secara lebih terarah sehingga mendorong keterlibatan ilmiah siswa secara aktif. Hasil penelitian ini dapat dijadikan referensi bagi guru biologi di sekolah dalam memilih dan mengimplementasikan model pembelajaran yang efektif untuk meningkatkan keterampilan proses sains siswa secara sistematis dan terukur.

Kata kunci: Keterampilan Proses Sains, *Predict–Observe–Explain* (POE), *Question Card*, Sistem Pencernaan

ABSTRACT

Frisda Destriyana Fitaloka (1212060043) : The Effect of the Predict-Observe-Explain (POE) Learning Model Assisted by Question Cards on Improving Students' Science Process Skills in the Digestive System Material

Science process skills are one of the important competencies that must be developed in biology learning, especially in the digestive system material that requires scientific thinking skills and conceptual understanding of students. This study aims to analyze the effect of implementing the Predict–Observe–Explain (POE) learning model assisted by question cards, analyze the implementation of the learning model, analyze the improvement of science process skills using the Predict–Observe–Explain (POE) learning model assisted by question cards, and evaluate students' reflections on the learning. The method used in this study is a quasi-experimental method with a non-equivalent control group design using two classes, namely class XI-5 and XI-6 with 60 research subjects. The instrument is an essay question with indicators of science process skills including observing, hypothesizing, interpretation, classification, designing experiments, communicating, and applying scientific concepts, with a total of 20 questions. Data analysis using the independent sample t test and n-gain test shows that the Predict–Observe–Explain (POE) learning model assisted by question cards has a positive influence on improving students' science process skills. The results of the study indicate that the implementation of teacher and student activities is in the very good criteria at each stage of learning. The increase in science process skills of experimental class students was 0.63 with a medium criterion and the regular class was 0.19 with a low criterion. Hypothesis testing shows that there is a difference in science process skills between experimental and regular class students on the digestive system material. These findings indicate that the integration of POE syntax with question card media is able to facilitate the process of prediction, observation, and explanation in a more directed manner, thereby encouraging active scientific engagement of students. The results of this study can be used as a reference for biology teachers in schools in selecting and implementing effective learning models to improve students' science process skills systematically and measurably.

Keywords: Science process skills, Predict–Observe–Explain (POE), Question Card, Digesting System