ABSTRAK

PENERAPAN *FLIPPED LEARNING* PADA PEMBELAJARAN KIMIA UNSUR UNTUK MENINGKATKAN PEMAHAMAN KONSEP PESERTA DIDIK

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Banyaknya konsep dalam kimia unsur menyebabkan guru kesulitan mengelola pembelajaran dan peserta didik juga kesulitan dalam memahami konsep yang diberikan. Salah satu solusi yang dapat ditawarkan adalah penerapan model *flipped learning* yang lebih fleksibel dan menarik. Penelitian ini bertujuan untuk: (1) mengetahui penerapan model *flipped learning* dalam meningkatkan pemahaman konsep peserta didik pada materi kimia unsur dan (2) mengetahui ketercapaian indikator pemahaman konsep kimia unsur peserta didik selama penerapan *flipped learning*. Jenis penelitian ini adalah penelitian kuantitatif dengan desain *quasi experiment*: *one group pretest posttest design*. Instrumen penelitian yang digunakan ialah lembar wawancara, lembar validasi, RPP, video pembelajaran, LKPD, butir soal *pretest dan posttest*, butir soal dalam LKPD, lembar observasi serta lembar angket respon peserta didik. Sampel penelitian ini berjumlah 36 orang peserta didik kelas XII MIPA 1. Data penelitian dianalisis menggunakan Statistik Aiken, SPSS 25.0, model *Rasch* melalui aplikasi Winstep, dan deskriptif. Hasil penelitian menunjukkan bahwa: (1) model *flipped learning* mampu meningkatkan pemahaman konsep peserta didik yang terbukti melalui hasil uji hipotesis menggunakan Uji *Paired Sample t-Test* dengan nilai signifikansi (2-*tailed*) sebesar 0,001 yang lebih kecil dari α (0,05). Selain itu, didukung pula dengan hasil analisis *N-Gain* sebesar 0,8 yang termasuk kriteria tinggi dan (2) rata-rata persentase ketercapaian pemahaman konsep kimia unsur selama penerapan *flipped learning* pada indikator menafsirkan, memberikan contoh, meringkas dan membandingkan sebesar 100 %, indikator mengklasifikasi sebesar 83 %, dan indikator menjelaskan sebesar 66 %. Di samping itu, hasil observasi selama pembelajaran kimia unsur mencapai rata-rata persentase sebesar 69 % yang termasuk kriteria tinggi dan respon peserta didik memiliki rata-rata persentase sebesar 82 % yang termasuk kriteria baik. Model *flipped learning* dapat digunakan untuk mendukung peningkatan pemahaman konsep peserta didik selama pembelajaran kimia unsur.

Kata kunci: *Flipped Learning,* Pemahaman Konsep, Kimia Unsur

ABSTRACT

IMPLEMENTATION OF FLIPPED LEARNING ON THE TOPIC OF CHEMICAL ELEMENTS TO IMPROVE STUDENTS' CONCEPTUAL UNDERSTANDING

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Many concepts in chemical elements causes teachers to have difficulty managing learning and students also have difficulty understanding the concepts given. One solution that can be offered is implementation of flipped learning model that is more flexible and attractive. This research aims to: (1) know the implementation of flipped learning model in improving students' conceptual understanding of chemical elements and (2) know the achievement of indicators of students'conceptual understanding on chemical elements during implementation of flipped learning. This study is quantitative research with quasi-experimental design: one group pretest-posttest design. Research instruments used were interview sheet, validation sheets, lesson plans, learning videos, students' worksheet, pretest and posttest questions, questions in students' worksheet, observation sheet, and students' response questionnaire. The sample of this study amounted to 36 students of XII MIPA 1 class. Research data were analyzed using Aiken statistic, SPSS 25.0, Rasch model through Winstep application, and descriptive. The results showed that: (1) flipped learning model was able to improve students' conceptual understanding which was proven through the result of hypothesis testing using the Paired Sample t-Test with significance value (2-tailed) of 0.001 which was smaller than α (0.05). In addition, it was also supported by the result of N-Gain analysis of 0.8 which included high criteria and (2) average percentage of achievement of students' conceptual understanding on chemical elements during implementation of flipped learning on interpreting, providing examples, summarizing and comparing indicators were 100%, classifying indicator was 83%, and explaining indicator was 66%. Besides that, the result of observation during flipped learning on chemical elements reached average percentage of 69% which included high criteria and students' responses had average percentage of 82% which included good criteria. The flipped learning model can be used to support enhancement of students' conceptual understanding on chemical elements learning.

***Keywords**: Flipped Learning, Conceptual Understanding, Chemical Elements*