

## ABSTRAK

**Suparwati, Ni Made Ary (2023).** Pengembangan e-LKPD Kimia Berbasis STEM dengan Muatan Etnosains untuk Meningkatkan Model Mental Kimia dan Literasi Kimia.

Tesis, Pendidikan IPA, Program Pascasarjana, Universitas Pendidikan Ganesha. Tesis ini sudah disetujui dan diperiksa oleh Pembimbing I: Dr. Drs. I Wayan Suja, M.Si. dan Pembimbing II: Dr. I Nyoman Tika, M.Si.

Kata-kata kunci: e-LKPD kimia, etnosains, model mental kimia, literasi kimia.

Penelitian ini bertujuan untuk menghasilkan e-LKPD Kimia berbasis STEM dengan muatan etnosains yang valid, praktis, dan efektif untuk meningkatkan model mental kimia dan literasi kimia peserta didik. Penelitian pengembangan ini dilakukan berdasarkan model 4D yang sudah dimodifikasi meliputi tahapan *define* (pendefinisian), *design* (perancangan), *develop* (pengembangan) dan *dissiminate* (penyebarluasan). Subjek penelitian ini adalah E-LKPD Kimia berbasis STEM dengan muatan etnosains. Objek penelitian ini meliputi validitas, kepraktisan, dan keefektifan e-LKPD yang dihasilkan ditinjau dari model mental kimia dan literasi kimia peserta didik. Rerata skor *N-gain* model mental kimia siswa kelas XI IPA sebesar 0,76, termasuk kategori tinggi. Rerata skor *N-gain* literasi kimia siswa kelas XI IPA sebesar 0,64, termasuk kategori sedang. Model mental ilmiah atau model konseptual di kelas XI IPA mengalami kenaikan sebesar 56,18% dari 21,76% menjadi 77,94%. Hasil tersebut menunjukkan e-LKPD berbasis STEM dengan muatan etnosains tergolong valid, praktis, dan efektif untuk meningkatkan model mental kimia dan literasi kimia peserta didik. Implikasi penelitian ini diharapkan dapat membantu guru dalam meningkatkan model mental kimia dan literasi kimia peserta didik melalui penerapan e-LKPD yang dihasilkan.

## ABSTRACT

**Suparwati, Ni Made Ary (2023).** The Development of STEM-based Chemistry e-LKPD with Ethnoscience Content to Improve Chemical Mental Models and Chemical Literacy.

Thesis, Science Education, Post Graduate Program, Universitas Pendidikan Ganesha. This thesis has been supervised and approved by Supervisor I: Dr. Drs. I Wayan Suja, M.Si. and Supervisor II: Dr. I Nyoman Tika, M.Si.

Key words: chemistry e-LKPD, ethnoscience, chemical mental models, chemical literacy.

This study is aimed to produce STEM-based Chemistry e-LKPD with valid, practical, and effective ethnoscience content to improve students' mental models of chemistry and chemical literacy. This development study was carried out based on a modified 4D model including define, design, develop and disseminate stages. The subject of this study was STEM-based Chemistry E-LKPD with ethnoscience content. The objective of this study is the validity, practicality, and effectiveness of the resulting e-LKPD in terms of students' chemical mental models and chemical literacy. The mean N-gain score of the mental chemistry model of class XI IPA students was 0.76, which was included in the high category. The mean N-gain score for chemical literacy in class XI IPA was 0.64, which was included in the medium category. Scientific mental models or conceptual models in class XI IPA increased by 56.18% from 21.76% to 77.94%. These results showed that STEM-based e-LKPD with ethnoscience content was classified as valid, practical, and effective for improving students' mental models of chemistry and chemical literacy. The implications of this study were expected to assist teachers in improving students' chemical mental models and chemical literacy through the implementation of the resulting e-LKPD.