

## ABSTRACT

Meliza. 2021. "Development of elektronik module chemical equilibrium form based integrated guided inquiry learning (IGI) for Class XI SMA/ MA". Thesis. Padang State University Postgraduate Program.

Chemical equilibrium is a material studied in class XI SMA/MA which consists of theory and practicum, so that teaching materials are needed that can support the characteristics of this material. This study aims to develop a chemical equilibrium e-module based on integrated guided inquiry (IGI) to reveal the level of validity and practicality. In addition, a meta-analysis was also conducted to determine the effect of the guided inquiry learning model. The development of e-modules is carried out through the Plomp development model which consists of 3 stages, namely preliminary research, prototyping phase, and assessment phase. The research instruments used were observation sheets and questionnaires in the form of validity and practicality sheets. As for the meta-analysis research involving 15 reputable international articles. The data obtained from the research instrument were analyzed using the Aiken's V formula, percentage, and effect size. The results of the validation of the contents and constructs of the e-module obtained the average value of Aiken's V of 0.87 and 0.89 so that it can be declared valid. The validity of the e-module media expert obtained an average value of Aiken's V of 0.90, so it can be said to be valid. The results of the practicality of the e-module by the teacher obtained a percentage value of 91.49% in the very practical category and the practicality by the students by 87.84% in the very practical category. For the average effect size, the effect of using guided inquiry models and the use of e-modules on learning outcomes was obtained at 0.75 and 0.78 in the medium category. It is concluded that the product developed in the form of an integrated guided inquiry (IGI) chemical equilibrium e-module is valid and very practical. This is in line with the results of a journal review using guided inquiry learning models and e-modules to improve student learning outcomes

**Keywords:** E-module, chemical equilibrium, integrated guided inquiry (IGI), plomp development model, effect size

## ABSTRAK

Meliza. 2021. Pengembangan e-modul kesetimbangan kimia berbasis *integrated guided inquiry* (IGI) untuk Kelas XI SMA/MA. Tesis. Program Pascasarjana Universitas Negeri Padang.

Kesetimbangan kimia merupakan materi yang dipelajari kelas XI SMA/MA yang terdiri dari teori dan praktikum, sehingga dibutuhkan bahan ajar yang dapat mendukung karakteristik materi ini. Penelitian ini bertujuan untuk mengembangkan e-modul kesetimbangan kimia berbasis *integrated guided inquiry* (IGI) sampai pada mengungkapkan tingkat validitas dan praktikalitas. Selain itu juga dilakukan penelitian meta-analisis untuk menentukan pengaruh model *guided inquiry learning*. Pengembangan e-modul dilakukan melalui model pengembangan Plomp yang terdiri 3 tahap yaitu *preliminary research*, *prototyping phase*, dan *assessment phase*. Instrumen penelitian yang digunakan berupa lembar observasi dan angket dalam bentuk lembar validitas dan praktikalitas. Sedangkan untuk penelitian meta-analisis melibatkan 15 artikel internasional bereputasi. Data yang diperoleh dari instrument penelitian dianalisis dengan menggunakan formula Aiken's V, persentase, dan *effect size*. Hasil validasi isi dan konstruk e-modul diperoleh nilai rata-rata Aiken's V sebesar 0,87 dan 0,89 sehingga dapat dinyatakan valid. Validitas ahli media e-modul diperoleh nilai rata-rata Aiken's V sebesar 0,90 maka dapat dikatakan valid. Hasil praktikalitas e-modul oleh guru diperoleh nilai persentase sebesar 91,49% dengan kategori sangat praktis dan praktikalitas oleh siswa sebesar 87,84% dengan kategori sangat praktis. Untuk nilai rata-rata *effec size* pengaruh penggunaan model *guided inquiry* dan penggunaan e-modul terhadap hasil belajar diperoleh sebesar 0,75 dan 0,78 dengan kategori sedang. Maka disimpulkan produk yang dikembangkan berupa e-modul kesetimbangan kimia berbasis *integrated guided inquiry* (IGI) valid dan sangat praktis. Hal ini sejalan dengan hasil review jurnal penggunaan model *guided inquiry learning* dan e-modul dapat meningkatkan hasil belajar siswa.

**Kata Kunci:** E-modul, kesetimbangan kimia, *integrated guided inquiry* (IGI), model pengembangan Plomp, meta-analisis