

ABSTRAK

PANJI HIDAYAT: Pengembangan Model Pembelajaran *Curiosity of Science for Higher Education* (CurSHE) untuk Meningkatkan Literasi Sains dan Efikasi Diri Mahasiswa. **Disertasi. Yogyakarta: Sekolah Pascasarjana, Universitas Negeri Yogyakarta, 2023.**

Penelitian ini bertujuan untuk (1) menghasilkan Model Pembelajaran *Curiosity of Science for Higher Education* (CurSHE) bagi mahasiswa, (2) mengukur kelayakan model yang dihasilkan tersebut, (3) mengukur keterlaksanaan model pembelajaran tersebut, dan 4) mengukur keefektifan model pembelajaran tersebut dalam meningkatkan literasi sains dan efikasi diri mahasiswa.

Penelitian ini merupakan *research and development* yang mengadopsi model ADDIE (*analysis, design, development, implementation, dan evaluation*). Subjek penelitian untuk tahap analisis adalah dosen IPA PGSD di lima Kelas yang berbeda. Subjek uji coba produk adalah mahasiswa PGSD UAD. Data analisis kebutuhan diambil melalui kuisisioner terbuka. Uji validitas konten dilakukan melalui teknik Delphi pada tujuh dosen ahli dengan menggunakan lembar penilaian. Uji coba kelompok kecil dilakukan pada satu kelas A semester 2 selama 3x pertemuan virtual dan datanya diambil melalui lembar observasi dan kuisisioner terbuka. Pada tahap ini, dosen serumpun memberi masukan secara kualitatif pada keterlaksanaan model CurSHE. Selanjutnya, uji validitas konstruk melalui experimental design pada satu kelas eksperimen dan dua kelas kontrol. Tiga dosen serumpun mengobservasi keterlaksanaan model dan memberi masukan. Teknik analisis data validitas konten menggunakan formula Aiken's V. Data keterlaksanaan dianalisis menggunakan statistik deskriptif. Data validitas konstruk menggunakan *general linear model* dengan Manova untuk mengetahui perbedaan literasi sains pada masing-masing kelas, sedangkan pengaruh model diukur dengan *effect size* dengan *partial eta square*. Sedangkan efikasi diri hasil adaptasi yang dilakukan uji validitas dan reliabilitas.

Hasil penelitian menunjukkan bahwa karakteristik model pembelajaran CurSHE meliputi: (1) sintaks (*curiosity, essential question, planning, monitoring, evaluation, reflection*) yang dikembangkan dari teori curiositas dan model *problem-based learning*, (2) prinsip reaksi (respon dosen terhadap aktivitas mahasiswa), (3) sistem sosial (kerjasama antarmahasiswa selama proses pembelajaran), (4) sistem pendukung (RPS, *guidebook*, modul, LKM, media pembelajaran, soal evaluasi literasi sains), (5) dampak instruksional (literasi sains yang meliputi aspek *logic, reasoning, analysis, evaluation, creation, problem-solving, dan judgment*), dan (6) dampak pengiring (minat belajar IPA dan literasi digital). Menurut ahli, model dan perangkat pembelajaran masuk kategori tinggi dan keterlaksanaannya saat pembelajaran sangat baik sehingga signifikan untuk meningkatkan literasi sains mahasiswa PGSD sebesar 80%, dan efikasi sebesar 91%

Kata Kunci: efikasi diri, curiositas, literasi sains, Model CurSHE, pembelajaran IPA

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PANJI HIDAYAT: Developing a Science Teaching Model of *Curiosity of Science for Higher Education* to Improve Students' Scientific Literacy and Self-Efficacy. **Dissertation. Yogyakarta: Graduate School, Yogyakarta State University, 2023.**

This study aims to (1) develop a Curiosity of Science for Higher Education (CurSHE) teaching model for students, (2) measure the feasibility of the developed model, (3) measure the implementation of the developed model, and 4) measure the effectiveness of the developed model in increasing student scientific literacy and self-efficacy.

This research is research and development which adopts the ADDIE model (analysis, design, development, implementation, and evaluation). The research subjects for the analysis phase are PGSD science lecturers in five different classes. The product trial subjects were UAD PGSD students. Needs analysis data were collected using an open questionnaire. The content validity test was carried out using the Delphi technique on seven expert lecturers using an assessment sheet. Small group trials were conducted in one class A semester 2 for 3x virtual meetings and the data were collected through observation and using an open questionnaire. At this stage, allied lecturers provide qualitative input on the implementation of the CurSHE model. Furthermore, construct validity was tested through experimental design in one experimental class and two control classes. Three allied lecturers observed the implementation of the model and provided input. Content validity data analysis techniques used Aiken's V formula. Implementation data were analyzed using descriptive statistics. Construct data validation used the general linear model with Manova to determine differences in scientific literacy in each class, while the effect of the model was measured by effect size with partial eta square. Meanwhile, the self-efficacy of the adaptation results was tested for validity and reliability.

The results show that the characteristics of the CurSHE teaching model include: (1) syntax (curiosity, essential question, planning, monitoring, evaluation, reflection) which was developed from the theory of curiosity and problem-based learning models, (2) the principle of reaction (lecturer's response to student activities), (3) social systems (cooperation between students during the learning process), (4) support systems (RPS, guidebooks, modules, student worksheet, learning media, scientific literacy evaluation questions), (5) instructional impact (scientific literacy which includes aspects of logic, reasoning, analysis, evaluation, creation, problem-solving, and judgment), and (6) the impact of the accompaniment (interest in learning science and digital literacy). According to experts, teaching models and tools are in the high category and their implementation during teaching processes is very good so they are significant for increasing the scientific literacy of PGSD students by 80% and efficacy by 91%.

Keywords: curiosity, CurSHE model, scientific literacy, science learning, self-efficacy,

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