

TECHNOLOGY EMBEDDED SCIENTIFIC INQUIRY (TESI) MODELS BASED ON SOCIO SCIENTIFIC ISSUES (SSI) TO IMPROVE DIGITAL COMPETENCY AND ENVIRONMENT CHEMICAL LITERACY (ECL) CHEMISTRY PRESERVICE TEACHER

by Erfan Priyambodo

ABSTRACT

In this global era, chemistry teachers are at the forefront of chemistry education and learning. Chemistry teachers must continue to strive for mastery of competence and ability to innovate in learning to make them professional teachers. Integration of ICT in chemistry learning can be done through the application of Technology-embedded Scientific Inquiry (TESI) models where the model is expected to facilitate the pillars of the science process, namely (1) scientific conceptualization (2) scientific investigation , and (3) scientific communication. ICT integration in chemistry learning must be balanced with good teacher/prospective teacher digital competence. The aspect of scientific literacy, where the focus of measurement is on environmental chemistry, is hereinafter referred to as Environmental Chemical Literacy (ECL) which can be interpreted as an individual's ability to apply green chemistry concepts to include awareness and concern for the environment and seek solutions to problems related to the environment when this and in the future. For this reason, it is necessary to equip prospective chemistry teachers who have good ECL skills so that when they enter the world of work they can transfer their knowledge to create generations who are aware and care about the environment around them. This study produced an alternative learning model, namely the SSI-based TESI model. This model, along with its supporting tools, have been developed and applied in actual learning to improve digital and ECL competence of prospective teacher students.

Kata Kunci: *TESI, environmental chemical literacy, digital competence*