

Analysis of Learning Objectives Flow in Chemistry Class X Kurikulum Merdeka to Achieve Scientific Literacy on Green Chemistry in Sustainable Development

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ABSTRACT

Every curriculum change is ideally welcomed by teachers in implementing it, because it gives more autonomy to teachers in formulating the flow and direction of learning objectives. To arrange the learning objectives flow and teaching materials, the teacher must be guided by several basic documents such as learning outcomes in Kurikulum Merdeka, and content standards of SNP, while also considering the stages of student cognitive development and the level of difficulty of teaching materials, so the teacher can choose the appropriate materials contained in textbooks. However, the reality is the teacher only guides existing textbooks without first analyzing the documents that are the basis for consideration in the preparation of the learning objectives flow. As a result, there are teaching materials that are ideally learned after understanding some of the previous concepts, given at the beginning of learning. Thus cognitive abilities that can be achieved only at the first level, remembering. This is because in the material there are terms that are not well understood by students because they have not been studied before. This qualitative study was conducted using a content analysis design. Data were collected by reviewing document content 1) learning outcomes of the Kurikulum Merdeka, 2) content standards of SNP, 3) publication articles on cognitive development theory, 4) publication articles on the difficulty level of teaching materials and 5) chemistry textbooks. The data obtained were then processed following the steps introduced by Miles & Huberman, including: data condensation, data display, and conclusion drawing/verification. Based on a study of learning outcomes in Kurikulum Merdeka documents, content standards of SNP, cognitive development theory, and the level of difficulty of teaching materials and chemistry textbooks, to achieve scientific literacy on green chemistry in sustainable development in class X chemistry of the Kurikulum Merdeka resulted in a learning objectives flows as follows: semester 1 consists of three learning objectives, namely 1) explaining the rules of scientific work, 2) understanding atomic structure and its application in nanotechnology, 3) writing chemical reactions and applying the basic laws of chemistry, and semester 2 consists of two learning objectives namely 4) explaining chemistry in daily life, and 5) applying chemical concepts in environmental management. Based on the five learning objectives, the green chemistry in sustainable development can be integrated into the 5th learning goal, in semester 2. So, it can be concluded that the preparation of the learning objective flow in the chemistry subject of class X Kurikulum Merdeka should be guided by learning outcomes in Kurikulum Merdeka, content standards of SBP, theory of student cognitive development, and level of difficulty of teaching materials, not only in existing textbooks.

Kata Kunci: *Learning Objectives Flow, Kurikulum Merdeka, Science Literacy, Green Chemistry, Sustainable Development*