PENGEMBANGAN PEMBELAJARAN IPA ABAD XXI BERBASIS *SCIENTIFIC APPROACH* SESUAI TUNTUTAN KURIKULUM 2013 UNTUK MENINGKATKAN LITERASI SAINS PESERTA DIDIK SMP

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RINGKASAN

Penelitian ini merupakan penelitian tahun kedua dari rencana penelitian tiga tahun, yang berjudul "Pengembangan Pembelajaran IPA Abad XXI Berbasis *Scientific Approach* Sesuai Tuntutan Kurikulum 2013 untuk Meningkatkan Literasi Sains Peserta Didik SMP". Untuk tahun pertama telah dilakukan need *assessment* dan pengembangan perangkat pembelajaran yang telah diujicobakan secara terbatas. Tujuan penelitian untuk tahun kedua ini adalah 1) Uji coba secara luas produk penelitian tahun pertama yang berupa perangkat pembelajaran IPA Abad XXI berbasis *scientific approach* sesuai tuntutan kurikulum 2013 untuk meningkatkan literasi sains peserta didik SMP; 2) Menerapkan model pembelajaran IPA berdasarkan perangkat pembelajaran hasil ujicoba luas dan revisi yang telah dilakukan; 3) Menyelidiki peningkatan *scientific literacy* dan kompetensi abad XXI peserta didik. Kompetensi abad XXI yang diteliti mencakup *foundational knowledge, meta knowledge* dan *humanistic knowledge* akan dioptimalkan dicapai oleh peserta didik. Model pembelajaran berbasis *scientific* approach yang digunakan meliputi *experience learning theory model*, *lateral and creative thinking model, science environtment technology society model*, *susan loucks horseley model, project based learning*, dan *self regulated learning model*.

Metode Penelitian yang digunakan adalah *Research and Development* (R&D) dan eksperimen. Penelitian ini akan dilakukan di SMP yang dijadikan *pilot project* kurikulum 2013 diberbagai daerah di Indonesia yang meliputi wilayah kota Singkawang, kota Banjarmasin, kota Makassar, kabupaten Gunung Kidul, Kabupaten Brebes, dan kabupaten Kendal. Untuk tahun ketiga direncanakan untuk desseminasi produk melalui media *android mobile phone* agar terjadi perluasan akses belajar dari dimensi tempat dan waktu.

Hasil penelitian menunjukkan 1) Dari uji coba secara luas terhadap produk, ada beberapa bagian yang perlu direvisi, 2) Perangkat pembelajaran yang sudah direvisi berdasarkan ujicoba luas dapat diterapkan dalam pembelajaran, 3) Ada peningkatan scientific literacy dan kompetensi abad XXI setelah siswa mendapatkan pembelajaran berdasarkan perangkat pembelajaran hasil ujicoba luas.

Kata kunci: ***pembelajaran IPA abad 21, pendekatan ilmiah, literasi sains, kurikulum 2013, kompetensi abad XXI.***

THE DEVELOPMENT OF 21ST CENTURY SCIENCE LEARNING BASED ON SCIENTIFIC APPROACH IN ACCORDANCE WITH CURRICULUM 2013 TO IMPROVE SCIENTIFIC LITERACY OF YUNIOR HIGH SCHOOL STUDENTS

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SUMMARY

This study is the second year of a three years research plan, entitled " The Development of 21st Century Science Learning Based on Scientific Approach in Accordance with Curriculum 2013 to Improve Scientific Literacy of Yunior High School Students". For the first year has been carried out needs assessments and the development of learning instruments that have been tested on a limited field. The research objectives for this second year are 1)Testing broadly and revising of the first year research products i.e. 21st century learning instruments based on scientific approah in accordance with curriculum 2013; 2) Implementing learning instruments resulted from step 1) in the class; 3) Investigating the increasing of scientific literacy and 21st century competencies of the students after the learning. The 21st competencies which is studied comprises foundational knowledge, meta knowledge and humanistic knowledge which will be optimized achieved by students. Scientific approach based learning model which is used include experience learning theory model, lateral and creative thinking model, science-environtment-technology-society model, susan loucks horseley model, project based learning, and self regulated learning model.

Methods used is Research and Development (R & D) and experiment. This study is conducted at the junior high school used in pilot project of curriculum 2013 in various regions in Indonesia covering Singkawang city, Banjarmasin city , Makassar city, Gunung Kidul district, Brebes, and Kendal district. For the third year is planned to disseminate products through android mobile phone media to enable the expansion of learning access in the term dimensions of space and time.

The results showed 1) From the broad testing on the product, there are some parts that need to be revised, 2) Learning instruments that has been revised based testing can be broadly applied in learning, 3) There was an increase scientific literacy and 21st century competencies after the students gets a study by using the learning instuments.

Keywords: ***21st century science learning, scientific approach, scientific literacy, curriculum 2013, 21st century competencies***.