

Contextual Chemistry Model Based Learning Environment (PKKBL) To Improve Student Learning Outcomes And Academic Honesty For Junior High School

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Abstract

The purpose of this research is to produce a model of learning based Contextual Environmental Chemistry that are valid, practical and effective to improve the Learning Outcomes and Student Academic Honesty for Junior High School. Products developed in this study consists of three components items, namely: the model of books, learning tools, and research instruments. This Refers to the development of research models Borg & Gall Consisting of 10 steps, but through consideration of capability, cost and time Researchers were very limited, only lasted until the fifth stage alone. PKKBL the model development process stages Consisting of five items, namely: (a) the initial stage of research and gathering information, (b) Planning Phase, (c) the early stages of product development format, (d) initial field test phase. Tests Carried out in two schools in turn. I performed testing on SMP 30, Makassar and II testing performed in MTsN Model Makassar. The results Obtained in the first experiment is (1) a practical models for aspects of the models consists of a feasibility PKKBL syntax, social systems, and the reaction principle support system completely undone by one (2) Including PKKBL effective models based on the criteria, that learning outcomes who Achieve mastery classes and categories have high academic honesty, student activities as expected, the ability of the teacher to manage learning in the high category, and the response of students towards learning in a positive category. Based on the results of the development, Model Obtained PKKBL valid, practical and effective. This Model has six phases PKKBL syntax items, namely (a) the phase relations / apperception, (b) organization, (c) experience, (d) apply, (e) reflecting, and (f) Transferring.

Key word: academic honesty, Contextual, study results, chemistry, teaching models

1. Introduction

SBC emphasizes contextual teaching and learning system (*Contextual Teaching and Learning, CTL*) allows both weak students who are accustomed to repeat the lessons as well as the usual lucky student gets an A with easy, to realize their potential. Learning through contextual approach based learning environment is a strategic concept to help teachers instill an understanding to students about the relationship between theory and practice in the form implementation by utilizing materials from the environment. The learning process that takes place during this time, without exception in all subjects, relying on direct instructional model. Making of any material to students is not considered, but only how each finished in the subject matter to convey to students. Teachers deliver a range of examples without presenting orally in fact in front of the student body.

Academic honesty in learning science can be embedded in Chemistry students through the learning environment-based contextual approach to cooperative strategies perform simple experiments to follow the syntax of the learning that has been compiled. The expected value of academic honesty there are three aspects, namely: (1) students can apply their learning outcomes correctly, (2) in the matter of cooperation, and (3) did not commit fraud in learning / exams.

Given the low student learning outcomes in chemistry and material character of academic honesty and the student has not implanted constraints teachers in the learning process of chemical science in SMP / MTs, it is necessary to make improvements learning models equipped with learning tools, namely Learning Model Chemistry-Based Contextual Learning Environment for Improving outcomes and student Academic Honesty SMP / MTs (Model PKKBL).

The model is designed in such a way PKKBL based on the level of mental development of students, characteristic of students, and school environment that supports the concept contextual approach, so as to enable students to construct knowledge based on previous experience and do sailed through. The design of the model refers to a model PKKBL Borg & Gall. This model has a principle cyclical and repetitive validation at each stage, where stage is more clear and practical so it is suitable for developing / improvement of educational products (Borg & Gall, 1983). The model is designed in such a way PKKBL based on the level of mental development of

students, characteristic of students, and school environment that supports the concept contextual approach, so as to enable students to construct knowledge based on previous experience and do sailed through.

In learning management resource teacher should consider the resources that are around the school and involve the people who are in the school system (Muslich, 2011: 62). It is intended as an effort to make the school as an integral part of the local community. Thus the function of the school as a center of cultural renewal and social development of society will be realized. Besides a very rich environment with learning resources, media, and learning aids. Physical and social environment, or culture is a very rich source of material for children's learning.

Contextual learning according to Hudson (Dennis, 2008) that:

"Contextual teaching and learning is defined as a conception of teaching and learning that helps teachers relate subject matter content to real-world Situations; and motivates students to the make connections between knowledge and its applications to their lives as family members, citizens, and workers and engage in the hard work that require learning"

Contextual learning is defined as a concept of learning that helps teachers relation academic learning contents and contexts, and motivate students to associate meanings between knowledge and its application in the lives of students as members of the family, community, and work hard and study hard.

The concept of contextual learning is to involve students in individual or group performs, preparing projects, or finding interesting problems, when they are making choices and accepting responsibility, seeking information and draw conclusions, when they are actively select, organize, touch, planning, investigating, question, and making decisions, they associate with the academic content in the context of life situations, then they find meaning. The discovery of the meaning of this is the main characteristic of the contextual approach in teaching and learning.

Meaning model as an object or concept that is used to represent something real and converted to a form that is more comprehensive (Trianto, 2009). Learning model by Joyce & Weil (Rusman, 2011) is a plan or pattern that can be used to form the curriculum (long-term lesson plans), designing learning materials, and classroom learning or guiding others. Further stated that the learning model is a conceptual framework which describes a systematic procedure for organizing learning experiences to achieve specific learning objectives and serves as a guide for instructional designers and teachers in planning and implementing learning. The conclusion that the learning model leads us to the design of learning to help students so that learning objectives are achieved.

According Rubiyanto, (2010) that the learning model used can be changed, tested and developed, can then be applied in the learning activities based on conditions, teaching materials and learner behavior. However, according to Kemp (Rusman, 2011) that none of the types of models of learning that can take place without being accompanied by strategies, methods, approaches, so that objectives can be achieved effectively and efficiently.

2. Methods

This research includes the development of research carried out by using the procedure for research and development (*research and development*) version of the Borg and Gall (1983) which consists of 10 stages, but based on consideration of the ability of researchers and time is not possible, then the stage of development only to five steps, namely:

- 1) Early stages of research and collection of information that includes: (a) a review of relevant literature, (b) classroom observations, and (c) reviewing the results of recent research in accordance with the model to be developed.
- 2) Planning stage, on this stage: (1) planning the implementation of learning, (b) examines the concept of learning appropriate to the subject matter, (c) explore appropriate learning approaches, (d) determining the activity and the learning process, and (e) plan procurement of instructional materials and media sources, as well as the planning of the evaluation of learning outcomes.
- 3) Estimate the time required in model development, and labor costs.
- 4) Develop initial format as a product prepared in limited testing in the field. The next step is to develop teaching materials, learning tools used, and prepare research instruments needed. Activities at the beginning of the development of the model PKKBL format begins with the manufacture of: (1) component of the model, (2) learning devices, and (3) creation of an evaluation tool.
- 5) Field trials on a limited basis. Tests carried out on a limited two (2) schools, namely SMP 30 and MTsN Model Makassar. Each school is tested on a class consisting of 42 students and 37 students. Implementation of the trials conducted by the Chemical Science teacher at each school, and observed by 4 (four) observer. Each group was observed by 2 observers, so that only two groups are chosen for the observed activity and simultaneously represent the class.

Limited trial is intended to obtain a picture of the initial quality of products that are being developed that are valid, practical, and effective use of learning tools PKKBL models that have gone through the process of validation experts and practitioners. The activities undertaken in this limited trial period is:

6) Major product revision

In this stage, the overall revision. As consideration based on the researcher, after revision as a whole, the results obtained revision is the end product of this research is valid PKKBL models, practice and effective.

The subjects were 30 students of SMP State Makassar and Makassar Model MTsN students who are still sitting in class VII. Having prior knowledge about the chemical basis before proceeding education to a higher level. At each school, a model PKKBL applied by teachers and observed four observers.

The type of data in this study is qualitative data. Qualitative data includes data on observations of student learning activities, adherence to the observation sheet, observation sheets instructional management, student questionnaire responses, observations sheets academic honesty and student learning outcomes test data.

The instrument used to look at the practicality of feasibility study is the observation sheet with PKKBL model, whereas PKKBL to see the effectiveness of the model used: (1) observation of student activity sheets, (2) learning management observation sheet, (3) student questionnaire responses, and (4) results learning and academic honesty.

3. Results and discussion

Results of Field Tests of the validity PKKBL model, the validity, and the validity of some of the related instrument, the data obtained as follows:

3.1 Instrument validity

Validity of instruments include: (1) The validity of the model, namely Model PKKBL Assessment Sheet, and (2) The validity of instruments, which include: (a) Format Validation Assessment Model PKKBL Sheet, (b) Observation Sheet Format Validation and (c) Format Validation Test. These instruments is modified from similar instruments that have been developed by Ratumanan (2003) and Jaeng (2004). Sheet Assessment Model PKKBL been validated by three experts and practitioners. The analysis showed that: (1) the overall aspect Sheet Model Assessment assessed valid, (2) The Ratings Model are very reliable with reliabilities coefficient $R = 0.78$, and (3) because it meets the validity and reliability, the Model Assessment Sheet has been able to used with minor revisions and the data obtained with these instruments can be used to assess the model PKKBL.

3.2 Practicality Instruments

Instruments include the practicality of the observation sheet PKKBL feasibility model. This instrument has been validated by three experts and practitioners in the field of education and has been tested. The analysis showed that: (1) the overall feasibility observation sheet component model PKKBL considered very valid, (2) adherence to the observation sheet models are very reliable with coefficient PKKBL reliability $R = 0.79$ and because it meets the validity and reliability, then after minor revisions Observation Sheet has done PKKBL Models can be used and the data obtained with these instruments can be used to assess the practicality Model PKKBL.

3.3 Effectiveness Instrument

Based on observations by the three experts and practitioners found that the effectiveness of instruments that include: (1) learning management observation sheet, (2) observation of student activity sheets, (3) student questionnaire responses on the application of Model PKKBL, (4) student questionnaire responses about Student book, (5) student questionnaire responses on worksheets, and (6) achievement test, considered to be valid and reliable for already qualified validity and reliability.

Analysis of the validity of model results obtained PKKBL average value of the total validity PKKBL model obtained is = 4.1. With reference to the criterion validity of the CSR model, it can be concluded that this value is included in the category of "Valid" ($3,4 \leq \bar{V} < 4,2$). So, in terms of all aspects of model validity PKKBL otherwise meet the criteria.

The results of the analysis of the validity of the learning tools developed by third declared invalid experts and practitioners

Analysis of the test results is limited in this study, including analysis of the practicality and effectiveness. The results of the analysis are limited practicality in trials I and II obtained a limited test average observations for four sessions of 1.9. This value indicates that the model is performing well PKKBL criteria ($1,5 \leq \bar{x} \leq 2,0$). As for effectiveness Analysis Model PKKBL on a limited trial I and II is said to be quite effective because three of the four components meet the criteria effective effectiveness. The three conditions are: (1) the achievement of classical completeness, (2) the ability of teachers to manage learning in the high category, and (4) students' response to PKKBL model is positive.

Student learning outcomes after the implementation of mastery learning model of PKKBL achieve an average of 82.19% or are in the high category. As for academic honesty at an average of up to 69.00% or are in the category of pretty.

4. Conclusion

PKKBL model development process through the development of a model modification Borg & Gall (1983) carried out in five stages, namely: (a) research and information gathering phase, (b) design phase, (c) the initial format of the model development stage, (d) phase limited trial, and (e) stage model revision. The first three stages of the development process produces models I and II draft PKKBL (hypothetical models) while in stage 4 and 5 is to validate and test models PKKBL limited to produce a valid, practical, and effective.

Model testing purposes PKKBL do PKKBL model of learning to follow a syntax that consists of 6 phases, namely: (1) apperception phase, (2) organizing phase, (3) experiencing phase, (4) applying phase, (5) reflecting phase, and (6) transferring phase. The results obtained through limited testing the model are as follows: (1) Model PKKBL are valid according to both validation and validation expert practitioner that states can already be used. And empirical test results meet the validity criteria ($3,4 \leq \bar{V} < 4,2$), (2) Model PKKBL been practical because all aspects of the model components implemented in full, (3) model has been effective PKKBL three of four effectiveness criteria are met.

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