

Development of Nested-Integrated Learning Model in Indonesian Subjects Based on 21st Century Learning

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Article Info

History Articles

Received:
July 2019
Accepted:
August 2019
Published:
June 2020

Keywords:
collaborative,
critical thinking,
integrated learning,
learning

DOI
<https://doi.org/10.15294/ijcet.v9i1.33130>

Abstract

The nested integrated learning model is the integration of curriculum in one discipline, specifically to put the focus of interrogation on several learning skills. The purposes of the study are analyzing the learning models used in Bahasa Indonesia language, developing integrated learning models that are effective in learning Indonesian subjects, improving language skills through a cohesive type of integrated learning model to be implemented in everyday life. This method applied is research and development by Sukmadinata. Data collection techniques used performance test techniques, observations, and interviews. This study applied statistic parametric inferential data. The research and development results showed that the integrated learning model could improve language skills in grade VII students in junior high school. The nested type showed a significant increase in language skills compared to classes with conventional learning. An excess of nested teachers could combine several skills at once in one subject. This model is as an alternative in learning to improve language skills especially. The benefit of this research is to provide a contribution of science and technology in the form of a synthesis study of the Integrated Learning model (nested) type in the Indonesian subjects of class VII.

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INTRODUCTION

Learning in class generally conveyed information and knowledge without associating skills on the presentation of subjects, thus making each learner less master of skills on the subjects. Therefore, it would only provide an artificial learning experience or a simulated learning experience. Learning packaging should be appropriately designed because it affects the meaningfulness of the child's learning experience. Learning experiences that demonstrate the relevance of conceptual elements both inside and between subjects would provide opportunities for effective and more meaningful learning (the meaningful learning). Integrated learning design built experience integration among subjects, skills (skill), student interaction with teachers, and teaching materials (Haenilah, 2017).

The limitless of interesting learning models are considered a key obstacle in motivating the child to carry out the learning process. Development of the integrated learning device type webbed could serve as the right solution in answering the problem, so that integrated learning this webbed can be used as a learning model that can encourage the growth of interest. Learn more students (Dewi, 2017).

Integrated learning was a learning model that has meaningful benefits for learners in daily life. Integrated learning applied will make the process, and learning outcomes are being comprehensive. The role of teachers in the success of integrated learning requires careful planning, the implementation of students' enjoyment, and a comprehensive assessment of the attitudes, knowledge, and skills learned by learners (Murfiah, 2017).

Integrated learning is believed to be a learning practice-oriented approach that suits children's needs. Integrated learning will effectively help create a broad opportunity for students to see and build interrelated concepts.

Integrated learning model in Indonesia Language will be combined with skills with other skills that are still related to the subject matter. The implementation is attributed to a topic or theme chosen and developed by the teacher,

together with the learners. The purpose of this theme is not only to master the concepts of one of the subjects or skills, but the concepts of the related subjects are used as tools and rides to study and explore the topic or theme.

It was different from the conventional approach, where unified learning seems to emphasize the learners' involvement in the learning process or direct learners to be actively involved in the learning and decision-making process. Integrated learning approach stressed the implementation of learning concepts while doing something (learning by doing).

Integrated learning was to improve critical thinking skills effectively (Vidianto, Riyanto, and Nasution, 2018). Not only being able to improve critical thinking skills, but the integrated learning model could also enhance creativity in students. Hence, integrated learning models could improve the creativity of children (Murfiah, 2016). This was reinforced with other research that the integrated learning model provided the stimulus to the students to develop the material materials as creative development (Murfiah, 2018).

Previous research revealed that in the implementation of learning using a nested type integrated learning model there were significant differences in the science process skills of students who used nested types with those that did not use nested type integrated learning (Nuraida, Widiyantje, and Setiawati, 2019).

Also, the nested model could improve the skills of process, creativity, and critical thinking learners. Learning by using an integrated learning model was able to develop the spiritual intelligence of learners (Suryaningsih, 2016).

Integrated learning design based on core content effectively created learning activities that lead to the integration of knowledge skills, social cohesiveness in the integration of experience and training (Qorri'aina, Haryanto, and Anitah, 2017).

This research emphasized the 21st-century learning that contained the 4C (communication, collaboration, critical thinking and problem solving, creativity, and innovation). This research was integrating skills in Indonesia Language subject, namely listening, reading, writing, and

speaking skills. Subskills could be combined through a nested type of integrated learning model: thinking, social, and organizing skills.

METHODS

The methods using the procedural research and development of Borg and Gall (1989) in Sukmadinata (2016) classified within seven stages as used by Gooch di Hasyim (2016).

The implementation procedure of development through seven phases such as research and data collection, planning, initial product design development, initial product validation, initial product revision, field trials, and final product revisions (Hanum, Huda, and Kurniawan, 2018). Stage 1 represents research, and phase 2-7 represents concept planning until development.

The subject in this study was the students of the VII class, Islamic Junior High School of Luqman Al-Hakim Tegal, batch 2018/2019. The research subject amounted to 30 learners. Data updated on research gathered through interviews, polls, and tests. Then, the study had been analyzing by statistic parametric inferential.

RESULTS AND DISCUSSION

Stage Needs Analysis

At the analysis of the needs of the research was a description of the overview of the needs of the learning model. The implementation of research and development of Indonesia Language study conducted from February to May 2019. At this stage, data obtained used observations, interviews, and polls. The second stage was the planning of data obtained in the initial design of the learning tools in the form of syllabus, lesson plan, teaching materials, and learning evaluation. At the last stage was developing of results on the feasibility of the learning model taken from the validation of media experts, scholars, and practitioners. The indicators of the effectiveness of the nested-type integrated learning models were student learning activities, learning outcomes, and student response to learning models.

Preliminary study results in Bahasa Indonesia teachers revealed that the learning model used was still contemporary. It was because teachers had not been able to develop other learning models. The learning process is still a teacher center with a lecture model that conveys knowledge information. Teachers of Indonesian subjects based on the results of interviews, as big already knew the kinds of learning models. However, it had not been able to develop and apply it to learning in their respective classrooms.

Based on the poll given, there was 90% answered during lessons in the classroom, and teachers often used the conventional learning model. That could not involve learners in communicating, cooperating, and critical thinking. Current learning did not provide a learning experience that demonstrates the relevance of conceptual elements both inside and between subjects. So, learning in class was not effective and meaningful.

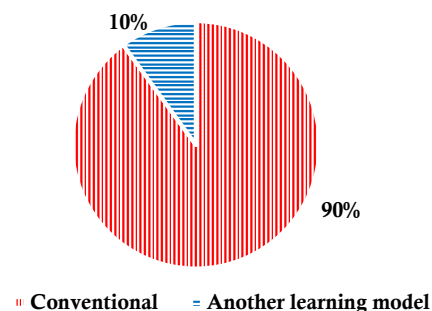


Figure 1. Analyzable Learning Model needs

Meaningful learning was packed according to students characteristics, which is critical thinking. Realistic requires integrated, thorough, and oriented learning packaging on knowledge mastery, skills, values, and attitudes (Alexon, and Sukmadinata, 2010).

Murfiah (Sundayana, 2014) learning theory meant that learning takes place in the human organism through a meaningful process of relating new events or items to already existing cognitive concepts or propositions. This theory showed that learning for learners would be meaningful to what they learn, and related to what students knew and experienced.

According to Halida (2016) unified learning provided a meaningful learning concept that was learned through direct experience by students. Integrated learning presents a variety of concepts where it should be learned as integrated. This would be following its development characteristics so that students could learn easily and meaningfully.

The results of observations and trials in the experimental class proved that to improve students critical thinking and make learning more meaningful, teachers should conduct learning planning integrated with understanding students' characteristics. Based on the results and trials, the study was following the theories of Alexon, and Sukmadinata (2010).

According to Widoyoko by Parji, and Adriani (2016), social skills were as the skills needed for life skills in diverse societies, democracy, and global society that are full of competition and challenges. Social skills included communicating skills, both orally and in writing, and skills in cooperation with others, both in small groups and in large groups. The test results in an integrated learning model by writing a review book on the material "becoming effective reader" could improve social skills (social skills) both orally and in writing. This was following the above theory that writing skills are the skills needed for life skills in communicating both orally and in writing.

Stage of Development of Integrated Learning Model Nest Type

After the next phase of the trial was improvement and development. Below is the recapitulation of the validation results of the experts.

Based on findings on the analysis needs of the learning model, researchers want to develop and implement a nested type of integrated learning model. The development of integrated learning models implemented in classroom learning and improved language skills and learners' thinking skills.

Table 1. Elements of Thinking, Social, and Organizing Skills

Thinking skills	Social skills	Organizing skills
Prediction	Attentive	Web
Inference	Listening	Venn diagram
Hypothesize	Clarifying	Flow chart
Compare	Paraphrasing	Cause-effect
Classify	Encouraging	circle
Generalize	Accepting	Agree/disagree
Prioritize	ideas	chart
Evaluate	Disagreeing	Grid/matrix
	Consensus	Concept map
	seeking	fishbone
	summarizing	

(Source: Forgaty, 1991)

Table 2. Results of Learning Device Validation Recapitulation

Learning device	Validator			Average	Criteria
	1	2	3		
Syllabus	3.80	3.85	3.90	3.85	Very valid
Learning plan	3.77	3.80	3.85	3.80	Very valid
Teaching materials	3.85	3.78	3.92	3.85	Very valid
Test result study	3.90	3.85	3.90	3.88	Very valid

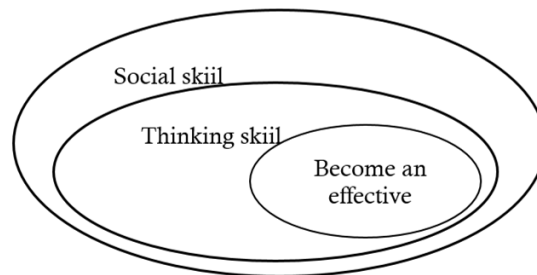


Figure 2. Model Hive (Nested) Subjects in the Indonesian Language

The next step is planning, beginning with the analysis of the syllabus, Learning Plan, and Indonesian language material in 7th grade. Reviewing resources relating to Curriculum 2013 and 21st-century learning.

At this stage analyzed the concept of the syllabus, lesson Plan, teaching materials, and learning evaluation. Furthermore, analyzing the content standard, which included standard competency and basic competency of Bahasa Indonesia subjects in the material to be effective reader.

The preparation of learning devices conducted by referring to the reference related to the development of the learning model as well as

the results of the analysis of the needs. Further conceptualized the drafting of the syllabus and the implementation plan for the integrated model of learning in *Bahasa Indonesia* with material to become an effective reader based on the 21st century. After compiling the concept of syllabus and Learning Implementation Plan (RPP), further develop teaching materials as a learning medium during learning in the classroom. Last, creating an evaluation tool was as a tool to measure the achievement of learning objectives.

The feasibility of an integrated learning model is from the validation results of some experts, namely material experts, media, and practitioners. On the feasibility validation of a second-stage learning device, the results of learning devices have reached the maximum score with good to excellent categories so that learning devices are feasible and usable in learning.

At this stage, the tested learning devices include syllabus, learning implementation plan, teaching materials, and learning outcomes test. The purpose of this trial is to gain input on the learning devices that already compiled. Then the results will be used as a reference in developing effective learning devices and worthy of use. The next step is to revise the learning device and improve it — revisions based on results from limited trials.

Learning Model Effectiveness

Observation of learning activities already done in every learning process in class. The Indonesia learning process lasts four meetings. Students are active in the learning activities if the student learns it is highly demanded of their activity. Teachers only as advisers and direct (Gustarina, 2018). The following is a description of the results of the average scoring score against the observation of student learning activities in the class. For example, the first meeting has generated an average of 2.86, the second meeting was average of 2.97, the third meeting was generated average 3.23, and the last meeting is average 3.46 if the fourth result is average, the student learning activity score is 3.13. This indicates that student-learning activities in the classroom using a nested type of integrated learning model based on 21st-century learning, learners are active in learning.

The study of students learning aimed to see the individual or classical abilities of the experiment class. The consideration of achievement of individual student learning was effective if the percentage of the submission achieved a 75 and a classical submission of 75% from the number of students in a class (Rahmadi, 2015). Table 4 is a recapitulation of the results of learning in the experiment class and the controls.

Table 4. Learning Outcomes According to Minimum Submission Criteria

Learning submission	Experiment		Control	
	Qualify (%)	Do not qualify (%)	Qualify (%)	Do not qualify (%)
Individual	25 children	5 children	12 children	13 children
Classical	83	17	48	52

Table 4 shows that students learning outcomes have achieved the maximum submission criteria that learners must obtain in learning.

The quasi-experiment applied with pre-test and post-test control group design. An experimental class group with 30 respondents and a control class group with 25 respondents were given the same test before learning using a learning tool developed and after the implementation Learning. Integrated learning can help teachers improve students critical

thinking skills (Vidianto, Riyanto, and Nasution, 2018).

The test aimed to determine the effectiveness of learning devices developed using a 21st century, nested type of integrated learning model. 21st Century Learning has the principal principle that learning must be student-centered, collaborative, contextual, and integrated with the community (Zubaidah, 2016).

The right-hand average difference test applied and calculated is to know the results of

the assessment. Table 3 is the design pre-test and post-test control group.

The purposes of the implementation of this implementation are to see the effectiveness of the learning model using nested type integrated learning devices. Indicators in knowing the effectiveness of the learning device products, namely (1) Students learning activities are measured by a tanner sheet, (2) Student learning outcomes with study results tests, and (3) Knowing students responses to Nest-Type integrated (nested) models are measured with learners' response polls (Santi, and Santosa, 2016).

Table 3. Design Trial

Experiment	O ₁	X ₁	O ₂
Control	O ₁	X ₂	O ₂

(Ruseffendi, 2005)

Information:

O₁ = pre-test before treatment in experimental class and control class

O₂ = post-test after treatment of experimental class and control class

X₁ = a nested type of 21st century learning-based integrated learning Model

X₂ = teacher learning model (conventional)

The learner's response after conducting the learning to know how the effectiveness of the integrated learning model, researchers gave a poll to every student. Based on the poll filled by learners, more than 80% of learners respond favorably or positively to a nested type of unified learning model. Analyzed the students' response to the integrated learning model developed has an average score of 90.25%. These results indicate that learners have a positive response to the unified learning model developed. Some learners respond negatively to the integrated learning model developed, which is 9.75% of learners.

CONCLUSION

Based on the results of the need analysis in advance. The need for the development of a learning model in Bahasa Indonesia to improve language skills (reading, writing, and speaking) for students to be applied in daily life. Learning devices are effectively used because second stage learning devices already tested in the experiment class. The results that learning devices have

reached a maximum score with good to excellent categories so that learning devices are suitable for learning. Nest-Type integrated learning Model with material becomes effective reader in grade VII students of Junior High School has been said to be effective because it meets the effectiveness indicators, i.e., student learning activities are in the minimal active category until At intervals of $2.50 < X \leq 4.00$. In the course of the study, the number of students in the classroom has reached a minimum of 75%. Then, the student's response to the Unified learning model reached 90.25%.

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