MODELING ANALYSIS, FINDINGS, DEVELOPMENT, ORGANIZING THE MATERIAL AND LEARNING FOR STUDENTS IN ISLAMIC BOARDING SCHOOLS

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ABSTRACT
This study aims to determine the effect of a learning model called AFDOL (analyzing, finding, developing, organizing, and learning) to increase students’ critical thinking skills to find and gain new knowledge in learning Islamic traditional book at pesantren. This research is an R&D. It was carried out in 12th grade students at pesantren in Jambi. Two parallel classes were used, one class serving as the control group and one class as the experimental group. The result shows that AFDOL learning model can further improve students' critical thinking skills compared to conventional learning models. The learning model can improve students’ critical thinking skills to find new knowledge in learning Islamic traditional books. It enables teachers to deliver a more systematic learning process to improve students' understanding and critical thinking skills in learning Islamic traditional books.

Keywords: Analysis, Findings, Development, Organizing, Learning, Traditional Book, Pesantren

INTRODUCTION
Pesantren is an Islamic educational institution that uses the *kitab kuning* (Islamic scholars’ book) for learning Islamic knowledge. One of the most important elements in learning *kitab kuning* in pesantren is the sentence/syntax or called *naḥw* science, or *qawa'id* which is one of the sciences to understand *tafsir*. Syntax is the grammar that discusses the relationship between words in speech (Bellingham, 2020; Mujahid, 2021). According to Alvivin (2015) and Apdoludin et al., (2017) syntax in Arabic is synonymous with the term an-*naḥw*. According Nafilah & Irawati
Learning to read *kitab kuning* can be difficult for Indonesian students at pesantren. There are some reasons to explain this problem. At pesantren, the learning process is usually teacher-centered. Conventional learning models is marked by bigger portion on the part of the teachers and smaller chance on the part of students to explore learning process. This may result in low student activity to learn a particular subject (Zakaria, 2016; Helmi et al., 2022).

To solve the problem of learning *kitab kuning*, some efforts need to be taken. There is a need to propose a learning model that helps students learn the *kitab kuning*. Learning model is a plan or a pattern used as a guide in planning classroom lessons or learning in tutorials. Learning model can be used to determine learning tools including books, films, computers, curriculum, and so on (Avalos, 2011; Winataputra, 2005; Arends, 2010; Sulfermi, 2019; Apdoludin, 2017).

Researchers have conducted studies investigating *kitab kuning* learning in pesantren. Nursyamsiyah (2021) studied *kitab kuning* learning namely Madurese and Javanese. At pesantren, students learn to communicate using Arabic. They learn a lot of vocabulary, understand word changes, and translate *kitab kuning* from routine studies. In this study, all students are able to carry out conversations using Arabic in the pesantren environment. Another researcher, Saldiani (2022) examined rote learning method at pesantren. The model focuses on memorizing verses and other types of memorizations performed by students. He found several problems in learning *kitab kuning* like the lack of discipline of the students and the lack of competence on the part of teachers.

However, previous studies have not discussed learning model to help students learn *kitab kuning* in pesantren. This study tries to fill the gap. This study is aimed at developing the learning model for *kitab kuning* in pesantren. The proposed learning model contains AFDOL model.

**METHOD**

The objective of the study is to develop a learning model for *kitab kuning* in pesantren. To achieve its objective, the present study applied a Research and Development (R&D) proposed by Gustiani (2019), Borg & Gall (1983). This research was conducted at Pesantren Saadatuddaren Tahtul Yaman Pelayangan, Jambi. The learning model is designed to train students to perform a deeper understanding of the concept in their minds so that they can find implicit knowledge, professional attitude and preparedness of learning *kitab kuning*. The learning model is also designed to increase students’ learning enthusiasm, and raises students’ critical attitude and habits of creative thinking in learning *kitab kuning*.

The present study applied several research instruments. The instruments used are test and questionnaire (Sukardi, 2003; Widoyoko, 2014; and Ayu & Nuraida, 2021). Preliminary tests were performed to determine the student’s learning knowledge before being treated. The final test was conducted to find out students’ knowledge and debating skills as well as the material analysis by the students after being treated. The tests are performed before students received the treatment (pretest) and after they received the treatment (posttest) both to the experimental group and control group (Creswell, 2014). Research design for experimental and control group receiving pretest dan postest is shown in Table 1.

<table>
<thead>
<tr>
<th>Group</th>
<th>Pretest</th>
<th>Treatment</th>
<th>Postest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiment</td>
<td>0₁</td>
<td>X₁</td>
<td>0₂</td>
</tr>
<tr>
<td>Control</td>
<td>0₃</td>
<td>X₂</td>
<td>0₄</td>
</tr>
</tbody>
</table>
Notes:
\[ O_1 = \text{Pretest for experimental group} \]
\[ O_2 = \text{Postest for experimental group} \]
\[ O_3 = \text{Pretest for control group} \]
\[ O_4 = \text{Postest for control group} \]
\[ X_1 = \text{Yellow Book learning AFDOL model} \]
\[ X_2 = \text{Yellow Book learning Conventional models} \]

**Procedure and Data Analysis**

Data were collected in order to get empirical data about learning *kitab kuning* in pesantren. They were used to compile the design of the developed learning model. Empirical data were collected from students of 12\(^{th}\) grade in pesantren. Design of pretest and postest group control research is shown in Table 2.

<table>
<thead>
<tr>
<th>Group</th>
<th>Pretest</th>
<th>Treatment</th>
<th>Postest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiment (12 A Class)</td>
<td>12</td>
<td>(X_1)</td>
<td>25</td>
</tr>
<tr>
<td>Control (12 B Class)</td>
<td>-</td>
<td>(X_2)</td>
<td>30</td>
</tr>
</tbody>
</table>

**RESULTS AND DISCUSSION**

The present study is aimed at investigating the effectiveness of learning model to learn *kitab kuning*. The data will be described in this section.

**Students’ Results on a Limited Trial**

![Figure 1. Student Learning Outcomes (%) of Each Item](image)

Based on Figure 1, the results of the experimental class study on the subjects of interpretation at pesantren Jambi shown by the average score 58.33 from 13 students. Problem number 1 with the score reached 91.66\%, number 2 with the score reached 91.66\%, number 3 with the score reached 83.33\%, number 4 with the score reached 75.00\%, number 5 with the score reached 41.66\%, number 6 with score reached 50.00\%, number 7 with achievement score reached 33.33\%, number 8 with score reach 50.00\%, number 9 with score reach 33.33\%, number 10 with score reach 33.33\%.
Based on the Figure 2, it can be seen the results (%) of student learning in experimental class as a model of AFDOL learning in the process of learning kitab kuning in the pesantren. The results of experimental class studying nahw subjects is shown by the average score of 55.83 of 13 students. Problem number 1 with the score reached 75 %, number 2 with the score reached 83.33%, number 3 with the score reached 83.33%, number 4 with the score reached 58.33 %, number 5 with the score reached 50.00%, number 6 with score reached 50.00%, number 7 with achievement score reached 33.33%, number 8 with score reach 41.66 %, number 9 with score reach 41.66%, number 10 with score reach 41.66%.

Student learning outcomes on the nahw material for the experimental class using AFDOL learning model is shown in maximum achievement score reaching 90 and minimum achievement score is 50 with The average score of 72.80. Of 25 students in experimental class, there are 18 complete students and seven unfinished students. For student learning outcomes in control classes not using the AFDOL model, the maximum achievement score was 80 and the minimum achievement score was 30 with an average score of 61.00. Out of 30 students in control class, there are 18 complete students and 12 unfinished students. Thus, the experimental class is higher than the control class. The difference is indicated by the average score of student learning outcomes of 72.80 completion of learning outcomes on each item in the experimental class and 61.00 mastery of learning outcomes on each item in the control class is shown in Figure 3.
Experimental and control class performance in each item can be described as follows: Item number 1, experimental class reached 84.00% and control class 96.66%. Item number 2, experimental class reached 92.00% and control class 83.33%. Item number 3, experimental class reached 80.00% and control class 53.33%. Item number 4, experimental class reached 84.00% and control class 70.00%. Item number 5, experimental class reached 60.00% and control class 46.66%. Item number 6, experimental class reached 72.00% and control class 53.33%. Item number 7, experimental class reached 56.00% and control class 53.33%. Item number 8, experimental class reached 60.00% and control class 63.33%. Item number 9, experimental class reached 76.00% and control class 40.33%. Item number 10, experimental class reached 64.00% and control class 43.33%. Comparison between score result of student learning achievement (%) from each item either in experimental class or control class is shown in the Figure 5.
complete students and 10 unfinished students. Thus, the experimental class is higher than the control class.

Hypothesis in this research states that there is difference between student learning result in experimental class using AFDOL and control class which not using AFDOL model in learning process Tafseer subject at pesantren. The difference is shown by the average value of 78.80 completeness of learning outcomes on each item in the experimental class and 70.33 mastery of learning outcomes on each item in the control class is shown in the Figure 6.

![Figure 6. The Difference of Completeness Learning Outcomes](image)

Based on Figure 6, it can be seen that the difference between student learning outcomes in experimental using AFDOL) and control class which not using AFDOL. This difference can be determined by comparing the average score of student learning outcomes in the evaluation test activity on each item between the experimental class and the control class. It can be described in the Figure 7.

![Figure 7. The Difference of Average for Learning Outcomes in The Evaluation Test](image)

Based on Figure 7, it is shown that the average score of student learning outcomes on each item reveal the difference of learning outcomes between experimental class and control class. The detailed is as follows: item number 1, experimental class attained 96.00%, control class attained 90.00%. Item number 2, experimental class attained 96.00%, control class attained 93.33%. Item number 3, experimental class attained 80.00%, control class attained 86.66%. Item number 4, experimental class attained 76.00%, control class attained 76.66%. Item number 5, experimental class attained 84.00%, control class attained 63.33%. Item number 6, experimental class attained 80.00%, control class attained 66.66%. Item number 7, experimental class attained 72.00%, control class attained 66.66%. Item number 8, experimental class attained 76.00%, control class attained 53.33%. Item number 9, experimental class attained 68.00%, control class attained 63.33%. Item number 10, experimental class attained 60.00%, control class attained 46.66%.
Figure 8. Comparison of Learning Achievement from Each Item

Based on Figure 8, it can be seen that the difference between the results (%) of student learning in experimental class and control class in the learning process Tafseer subject.

The result of t-test taken from posttest data for naḥw subjects in the experimental class and control class was conducted to determine whether there was a difference between the two classes. The results of the t-test are shown in Table 3.

<table>
<thead>
<tr>
<th>Class</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Class</td>
<td>36</td>
<td>67.2222</td>
<td>10.58600</td>
<td>1.76433</td>
</tr>
<tr>
<td>Experimental Class</td>
<td>36</td>
<td>78.0556</td>
<td>10.90726</td>
<td>1.81788</td>
</tr>
</tbody>
</table>

Based on Table 3, the mean or average of the control class in learning naḥw subject was 67.22 while the experimental class was 78.05. The results of the t-test show that there were differences in student learning outcomes between the control class and experimental class.

Table 4: Summary of Posttest Data t-test Results

<table>
<thead>
<tr>
<th>Result</th>
<th>t_count</th>
<th>t_table</th>
<th>df</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control and Experimental Class in Posttest</td>
<td>4.276</td>
<td>1.994</td>
<td>70</td>
<td>th &gt; tt = sig</td>
</tr>
</tbody>
</table>

Table 4 explains the magnitude of the t_count is 4.276 with a df of 70. Then the t_count score is consulted with the t_table values at a significance level of 5% and df 70. The t_table score at a significance level of 5% and df 70 is 1.994. The results of the t-test indicate that there are differences in student learning outcomes in naḥw subjects between the control and experimental class. Where the score of experimental groups is higher than the control group.

In the previous section, the data on the effectiveness of AFDOL learning model have been presented. In this section, the findings will be discussed with relevant literature. Learning can be seen from several theories including behaviorism. Theory of behavioristic learning explains that learning is a behavior change that can be observed, measured and assessed concretely (Atwi, 2012; Sanyata, 2013; Johnson, 2022). Changes occur through stimuli that engender a reactive behavioral relationship or response based on mechanistic laws. Stimulans are none other than the learning environment of children, both internal and external that cause learning (Muliawan et al., 2016; Chiu et al., 2002; Zulhammi, 2015). While the response is a result or impact, a reaction to stimulants. Learning means strengthening the bonds, associations, traits, and behavioral responses stimulus (Gardner et al., 2021; Olasina, 2019).
The above opinion can be seen that learning is a behavioral change that can be observed directly, which occurs through the related stimulus-stimulus and the responses according to mechanistic principles. Individuals will learn if they do actions that bring satisfaction. If that does not bring satisfaction, then the action will not be done, even eliminated. Knowledge building is a mental process through the process of assimilation and accommodation. The imbalance of the cognitive structure (schemas) due to new knowledge is accommodated and then assimilated by interacting with learning resources to form a new, balanced cognitive structure (equilibrium). This process is different for every child, because it is influenced by five things: mental maturation (maturation), experience of physical interaction, logical-mathematics experience, social interaction, and equilibrium through assimilation and accommodation process (Atwi, 2012; Komarudin, 2021).

It is clear that cognitive flow is more of a learning process as a result of our efforts to better understand the world, using all mental equipments for learning purposes. Thinking about situations, using knowledge, hope, and feelings, will affect how and what we learn. Furthermore, the striking difference of views between the flow of behaviorism and cognitive flow can be explained as follows: For the flow of behaviorism, those behaviors are deliberately studied, resulting in changes in the constellation of behavior. On the other hand, the flow of cognitivism, knowledge is learned, so that changes in knowledge as well as will also change behavior.

Another theory of learning is constructivism. Constructivism is a learning process that emphasizes the awakening of self-understanding actively thinking, creatively conceptualizing and productively in giving meaning about things learned based on previous knowledge and from a meaningful learning experience. Knowledge is not a set of facts, concepts, and rules that are ready to be practiced. Human must construct that knowledge first and give meaning through real experience (Pritchard & Woollard, 2013; Larison 2022). Knowledge cannot be moved simply from a teacher's scheme to his student scheme. Each student must build that knowledge in his or her own scheme (Purnomo, 2011). The ability to think and create knowledge is a potential that can be developed (Petchton & Sumalee, 2014; Espera & Pitterson, 2021). In constructivist view, learning is more directed to the formation of meaning in the learners self for what they learn based on their previous knowledge and understanding. Learning is meaningful learning with a clearer purpose, the learning that allows the people involved in it to do more meaning to the world around them, learning more realistic things that are characterized by more active, constructive, intentional, authentic, and cooperative learning (Van Driel & Berry, 2012). Constructivism theory, views that students acquire knowledge is due to the activeness of the students themselves. The concept of learning according to constructivism theory is a learning process that conditions students to perform an active process of building new concepts, new insights, and new knowledge based on data. Therefore, the learning process must be designed and managed in such a way as to encourage students to organize their own experiences into meaningful knowledge.

The present study develops a learning model called AFDOL. Learning model refers to a conceptual framework that describes a systematic procedure in organizing learning experiences to achieve specific learning goals, and serves as a guide for the designers of learning and teachers in planning and executing learning activities (Winataputra, 2005). There are various types of learning model. One of them is cooperative learning model. Cooperative learning implies an attitude or behavior together in work or assisting among others in a regular group structure of cooperation, consisting of two or more persons whose success is greatly influenced by the involvement of each member of the group itself (Purnamasari, 2014; Kartimi et al., 2021). Cooperative learning can also be interpreted as a common task structure in an atmosphere of togetherness among fellow group members. The three instructional goals of cooperative learning are academic achievement, tolerance and acceptance of diversity, and development of
social skills. Cooperative learning model is very helpful for students in growing cooperation, critical thinking, helping group friends in understanding the material and completing the tasks together (Toong et al., 2021).

Contextual learning aims to help learners understand the subject matter they are learning by connecting the subject matter with its application in daily life (Masek & Yamin, 2011; Sanjaya & Brahmarawong, 2007). It can be concluded that the model of Contextual Teaching and In the same vein, problem-based instruction is a constructivist-based learning model that accommodates students' involvement in authentic learning and problem solving. In grabbing information and developing an understanding of topics, students learn how to construct problem frameworks, organize and investigate problems, collect and analyze data, construct facts, construct arguments about problem solving (Arend, 2001; Matson, & Barnas, 2014).

Problem-based learning (PBL) is a learning that is delivered by presenting a problem, asking questions, facilitating the investigation, and opening a dialogue. In the learning process, students form group, then they are given problem. They discuss the problem with the group that has been created. The students can play an active, critical thinking and can exchange ideas in solving problems (Khumsikiew et al., 2015; Varadarajan & Ladage, 2022).

Learning models need to be implemented by taking into consideration several aspects. One of its aspects is the use of behaviour modification, socio-emotional, and group process approach (Kennedy, 2005; Levine, 2010; Scott, 2015; Hartono, 2020; Pechak & Thompson, 2009). They are applied in the classroom to achieve learning conduciveness. On the other hand, the element of spirituality, namely the synergistic and harmonious interaction between the kiai, the teacher, and the santri are applied in achieving the learning objectives. Teaching and learning process is carried out every day except Thursday and Friday, the learning of the Islamic classic book is carried out by the teacher/ustadz delivering the subject matter using the method of delivering sorogan, bandongan and rote material. Learning evaluation uses formative evaluation, namely an assessment in the form of nadhaman memorization that is carried out before learning takes place and summative evaluation (Nurhakim, 2021; Khabibah et al., 2017). The results of this study show that the experimental class using AFDOL in the learning process demonstrated an increase in learning outcomes. Students in experimental class exhibited their critical attitude when they discussed the problems in the learning material and they tried to connect it with other learning materials.

CONCLUSION
This study is aimed at investigating the effectiveness of using AFDOL learning model to learn kitab kuning in pesantren. Students' learning outcomes on nahw learning materials for experimental class using AFDOL reached the score 90 and minimum achievement score 50 with total score of 72.80. Of 25 students in control class, there are 18 complete students and seven unfinished students. For student learning outcomes in control classes, the maximum achievement score is 80 and the minimum achievement score is 30 with an average score of 40.00. Out of 30 students in experimental class, there are 18 complete students and 12 unfinished students. Students’ learning outcomes on Tafsir materials for the experimental class using AFDOL model for maximum achievement score is 90 and minimum achievement score is 60 with an average score of 60,00. Of 25 students in control class, there are 20 students completing task and five students did not complete the task. In control class, student learning outcomes for the maximum achievement score was 80 and the minimum achievement score was 60 with an unfinished average score of 60.00. Out of 30 students in experimental class, there are 20 students completing the task and 10 students did not finish task. In summary, there was a change in critical attitudes during kitab kuning learning process.
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