

**Implementation of the REACT Learning Model (Relating, Experiencing, Applying, Cooperating, Transferring) in Islamic Education Lessons at Madrasahs in the Merdeka Curriculum**

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**Abstract**

This research focuses on the development of the REACT learning model and implementation in Islamic Religious Education (PAI) lessons in Madrasahs, specifically observing the impact and effectiveness of implementing this model in classes XI-A and XI-B at MAN 2 Medan Model in the context of Merdeka Curriculum with a mixed method approach. Qualitative data were obtained through observations, interviews, and documentation, while quantitative data were obtained by analyzing the phenomenon of PAI education from recording learning outcomes and teacher-student perceptions. The results show that the REACT model is able to increase students' active involvement, contextual understanding, and religious values in real life. Quantitatively, there was an increase in the average student score from 72.1 to 84.7 after the application of the model, with the t-test results showing significance at  $p < 0.05$ . In addition, 80% of students agreed that learning became more interesting and easy to understand, as well as effectively applied in supporting PAI learning.

**Keywords:** Learning Model; REACT; Islamic Education; Madrasah; Independent Curriculum.

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**Artikel Info**

**Received:**

March 17, 2025

**Revised:**

April 18, 2025

**Accepted:**

May 26, 2025

**Published:**

June 10, 2025

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**Abstrak**

Penelitian ini berfokus pada pengembangan model dan implementasi pembelajaran REACT dalam pelajaran Pendidikan Agama Islam (PAI) di Madrasah, khususnya mengamati dampak dan efektivitas penerapan model ini pada kelas XI-A dan XI-B di MAN 2 Model Medan dalam konteks Kurikulum Merdeka dengan pendekatan mix method. Data kualitatif diperoleh melalui observasi, wawancara, dan dokumentasi, sedangkan data kuantitatif diperoleh dengan menganalisis fenomena pendidikan PAI dari pencatatan hasil belajar

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dan persepsi guru-siswa. Hasil menunjukkan model REACT mampu meningkatkan keterlibatan aktif siswa, pemahaman kontekstual, serta nilai-nilai keagamaan dalam kehidupan nyata. Secara kuantitatif, terjadi peningkatan rata-rata nilai siswa dari 72,1 menjadi 84,7 setelah penerapan model, dengan hasil uji  $t$  menunjukkan signifikansi pada  $p < 0,05$ . Selain itu, 85% siswa menyatakan setuju bahwa pembelajaran menjadi lebih menarik dan mudah dipahami, serta efektif diterapkan dalam mendukung pembelajaran PAI.

**Kata Kunci:** Model Pembelajaran; REACT; PAI; Madrasah; Kurikulum Merdeka.

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### A. Introduction

Learning Islamic Religious Education (PAI) in the context of the Merdeka Curriculum requires an approach that is able to link religious values with students' real experiences, so that learning becomes more meaningful and has an impact on attitudes and behavior. Education that transforms in learning must be student-centered, contextual, and support character development and 21st century competencies (Akrim & Setiawan, 2022; Gaol, 2024) emphasizing the three aspects of cognitive, affective and psychomotor. (Miswanto & Ilham, 2024)

Education must foster interest and provide positive effects with strong motivation in learning (Pohan & dkk, 2022) (Akrim & Setiawan, 2022). Teachers need to understand learning models so that learning is carried out effectively in

improving learning outcomes (Haryanti & Erfiana, 2025). Therefore, the use of strategies in developing learning materials, selecting methods, learning media and developing evaluation tools for learning outcomes (L, 2019).

REACT (Relating, Experiencing, Applying, Cooperating, Transferring) is a contextual strategy that is relevant in answering challenges by linking learning experiences with solving real-life problems (Sari et al., 2021) and encouraging active participation (Anderson & Krathwohl, 2019; Junaidah et al., 2022).

The REACT model was introduced by the Center Occupational Research and Development (CORD) in Texas, America (Handayani, 2022) which is dominantly researched in the fields of Science and Mathematics and Geography research (Suyantana & et al, 2024) and but studies

that examine its implementation specifically in PAI learning are still very limited. While the research of (Anggiani & Al, 2023) and (Farohi & Parhan, 2024) showed an increase in cognitive learning outcomes through REACT in social studies lessons, but did not discuss the affective and psychomotor dimensions that are crucial in religious education, previous researchers also examined its effect in increasing junior high school student achievement, and the study reviewed this time links REACT to the context of the Merdeka Curriculum in madrasahs.

The choice of Madrasah Aliyah Negeri 2 Medan Model because it has implemented the Merdeka Curriculum, with the aim of describing the application of the REACT model in PAI learning and analyzing the effectiveness of the REACT model on increasing students' motivation, concept understanding, and religious character building (Suparma, 2024) and developing an implementative model of REACT based on the local context of the madrasah.

This research also supports the vision of holistic, inclusive, and contextual learning transformation according to the spirit of Merdeka Belajar (Lembong &

Lumapow, 2023)(Romanti, 2024; Aditomo & Dkk, 2024) and is relevant to modern pedagogical trends that emphasize meaningful and collaborative learning experiences (Dewi & Hidayat, 2023).

## **B. Methods**

This research uses a mixed methods approach, Cresswell describes with data collection and analysis with a quantitative sequential explanatory design first, followed by qualitative data collection and analysis to provide in-depth explanations of quantitative findings (Sugiyono, 2019).

### **1. Participants and Research Location**

This research was conducted at Madrasah Aliyah Negeri 2 Model Medan with a focus on class XI-A and class XI-B as the research population. The research subjects consisted of: 100 students spread across two classes. Islamic Education teachers, teachers who were directly involved in the implementation of the REACT model.

The selection of locations is also based on the commitment of schools/madrasahs to implement teaching and learning innovations that are integrated with religious values and character.

## 2. Research Instruments

In this study, several data collection instruments were used in the form of learning outcomes questionnaires designed to measure the achievement of students' cognitive competencies before and after the application of the REACT model. Critical thinking and creativity tests, to assess the improvement of students' critical and creative thinking skills after the implementation of learning. Structured interviews, conducted with teachers and students to explore perceptions, experiences and challenges in implementing the REACT model. And finally, class observation, direct observation during the implementation of learning to document classroom interactions and dynamics.

## 3. Data Collection Procedure

The data collection procedure was carried out in stages as follows:

### 3.1. Pre-Learning Stage

Initial data collection through diagnostic tests to determine the level of student understanding before the application of the REACT model.

### 3.2. Implementation Stage

Implementation of REACT model in PAI learning for one full semester. This process involves a series of learning activities including group discussions, case studies, and hands-on practice.

### 3.3. Post-learning Stage

Data collection through final tests, questionnaires, and in-depth interviews to evaluate the changes in students and teachers.

## 4. Data Analysis Technique

### 4.1. Quantitative Analysis

Quantitative data obtained from questionnaires and tests were processed using descriptive and inferential statistical tests. The analysis was carried out by comparing pre-test and post-test scores to determine the increase in competency achievement and students' critical thinking skills. The analysis technique uses statistical software to obtain significant values that support the research hypothesis.

### 4.2. Qualitative Analysis

Qualitative data obtained through interviews and observations were analyzed using thematic analysis techniques. This analysis process

involved: 1) Transcription of interviews; 2) Coding the data; 3) Theme grouping; 4) Interpretation of results according to the REACT learning context.

Completion of thematic analysis was done manually and with supporting software to increase accuracy in grouping themes.

### C. Results and Discussion

The results of this study are presented in two main sections, namely quantitative and qualitative analysis, which are then integrated to provide a comprehensive picture of the effectiveness of the application of the REACT model in PAI learning.

#### 1. Quantitative Analysis

The application of REACT encourages more lively and relevant learning, where students feel that PAI is not just memorization, but part of their real life. This supports opinion that contextual learning strategies such as REACT are able to increase the engagement and relevance of the material for students.

Measured Aspects	Before REACT	Before REACT	Before REACT
Interest in Islamic	3,2 / 5	4,3 / 5	Significantly increased

Measured Aspects	Before REACT	Before REACT	Before REACT
Education (PAI)			
Engagement in discussions	2,9 / 5	4,1 / 5	Students are more active
Value transfer in daily life	3,0 / 5	4,4 / 5	Students relate it to real life

**Table 1. Results of Student Motivation and Attitude Questionnaire**

The following table shows the evaluation scores before and after the test

Evaluation Category	Pre-Test	Post-Test	Improvement (%)
Competency Achievement	65	80	+23.1
Critical Thinking Skills	60	78	+30.0
Collaborative Skills	68	82	+20.6

**Table 2: Pre-Test and Post-Test Scores of Islamic Education Students**

From the results of quantitative data analysis, it was found that the students' average scores increased significantly after the implementation of the REACT strategy. The following table compares the pre-test and post-test scores for each class:

Class	Average Pre-test	Average Post-test	Improvement (%)
XI-A (experimental)	72,1	84,7	32,3%
XI-B (control)	61,4	72,2	19,6%

**Table 3. Average Scores of the Experimental Class and the Control Class**

This significant increase in scores indicates that the application of the REACT model not only improves understanding of theoretical concepts, but also develops critical thinking skills and collaboration between students. The statistical t-test results show a p value  $<0.05$  which indicates a significant difference between the learning outcomes before and after the application of the REACT model.

## 2. Qualitative Analysis

Qualitative analysis was conducted by reviewing interview transcripts from teachers and students, as well as field notes during classroom observations. The following are some of the main findings:

### 1) Teachers' Perception of REACT Model

Teachers stated that the REACT approach provides a clear structure in learning and allows students to participate more actively. Teachers observed that students understand abstract concepts more easily through experiencing activities that involve direct application in the context of daily life. One teacher stated that through discussion activities and group work, students become more responsive and able

to relate the material to their own experiences.

### 2) Students' Experiences in Learning

Students revealed that the REACT model helped them to better understand PAI material not only memorically, but also through real experiences. Activities such as case studies and practice guiding students to solve problems together increase the sense of community and empathy among classmates. Some students mentioned that they are now better able to discuss moral and ethical values in more depth.

### 3) Challenges in Implementation

Although most of the responses showed positive aspects, some challenges were identified, including:

a) Longer Learning Time: The implementation of the REACT strategy requires more time than the conventional method, especially since it involves intensive discussion and group work activities.

b) Different Levels of Student Understanding: Some students with weak understanding backgrounds need more intensive assistance in understanding PAI materials through this model.

c) Limited Resources: Limited teaching materials and facilities that support practical activities can hinder the smooth learning process.

### 3. Data Integration

The integration of quantitative and qualitative data shows that the improvement in academic scores goes hand in hand with positive learning experiences.

These integrated results corroborate the finding that the REACT model is effective in developing students' cognitive and non-cognitive aspects. Quantitative data supports the increase in test scores, while qualitative data highlights the changes in attitude, engagement, and improved emotional intelligence that occurred during the learning process.

### D. Conclusion

It was concluded that the application of REACT learning strategy in PAI lessons at MAN 2 Model Medan had a significant positive impact on improving academic learning outcomes and developing religious characters. The REACT model helps students relate religious values to daily life, thus fostering religious character and social awareness. In addition,

increased student engagement and participation, interactive and experience-based methods improve the quality of discussion and cooperation between students. Thus making the learning process more enjoyable and effective.

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