

Marsiadapari Learning Model (MLM-24) On TOEFL Ability and Its Relevance to SDG 4: Quality Education

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Abstract: The low ability of students in answering TOEFL questions is the background of this study. Based on the background, this study aims to apply the MLM-24 to investigate the effectiveness of the learning model in improving students' TOEFL skills and assessing its relevance to SDGs 4 on quality education. This research method uses a mixed method, namely (1) quantitative data obtained using a test instrument and a Linkert scale questionnaire. Test data (pretest and post-test) were obtained after implementing a quasi-experiment with a non-equivalent control group design while the questionnaire results were collected to support the test results and (2) qualitative data obtained by semi-structured interviews. Data analysis was carried out using descriptive statistics, independent sample t-tests for significance testing, and thematic analysis for interview data. The results showed that the applying of the MLM-24 significantly improved students' TOEFL scores compared to conventional methods. Participants in the experimental group showed increased engagement, motivation, and understanding of TOEFL components. In addition, this model supports the principles of SDGs 4 by presenting inclusive, participatory, and skills-oriented learning. In conclusion, MLM-24 has proven effective in improving students' TOEFL skills and contributing to SDG 4, namely quality education

INTRODUCTION

Education in Indonesia is facing serious challenges in terms of quality, particularly in terms of student learning outcomes. A UNESCO report states that many students in developing countries are experiencing a "learning crisis," a situation where students attend school but fail to achieve basic competencies, including literacy and numeracy (Furnham, 2025) and (Iwatsubo, 2025). In this context, English language proficiency is a crucial indicator, especially for students who wish to continue their education at an international level.

One commonly used measure of English language competency globally is the TOEFL (Test of English as a Foreign Language). Preparation for the TOEFL is crucial because it tests the four main skills of academic English: listening, reading, speaking, and writing (Irmayana, 2025). A study shows that systematic TOEFL training can significantly improve these skills (Sukandi, 2023)

Quality education is one of the main pillars of the Sustainable Development Goals (SDG 4), which targets inclusive, equitable, and quality education for all by 2030. SDG 4 also emphasizes the importance of improving relevant skills, including language and technology skills, to support the world of work and further education (Nation, 2020)

In Indonesia, the implementation of SDG 4 still faces various challenges, including disparities in access to education between regions, a lack of innovation in learning methods, and low digital and English literacy among students (Liu, 2025). Therefore, the development of relevant and contextual learning models is urgently needed (Asadullah, 2025)

TOEFL Preparation not only aims to improve test scores but also strengthens cross-cultural and academic communication skills. Structured TOEFL learning can be instrumental in improving the quality of education at the secondary and tertiary levels (Lubis, 2025) To address these challenges, the Marsiadapari Learning Model (MPM-24) is offered as a methodological innovation in English language learning. This model is designed to encourage active engagement, contextual adaptation, and the integration of local values in foreign language learning, particularly the TOEFL.

The MPM-24 model excels in its collaborative approach, problem-based learning, and the use of relevant digital media. This aligns with the principles of Freedom to Learn and 21st-century education, which emphasize creativity, critical thinking, and communication skills (Walzer, 2025). TOEFL Preparation based on MPM-24 can also be a means to bridge the gap in access and quality of education between regions (Sadeghi & all, 2021) and (Fleckenstein, 2020). With a flexible and contextual approach, even students in remote areas have the

potential to receive effective and meaningful TOEFL learning (Utami, 2021). In the context of national and global policies, innovation-based education such as MPM-24 is crucial to ensuring the achievement of SDG 4. This is not only about access, but also the quality and relevance of education to future needs (Stenman, 2020)

The author identifies the following problems: (1) Low Academic English Proficiency of Students. Many students in Indonesia, especially at the secondary and tertiary levels, do not yet have adequate academic English skills to take the TOEFL. This is due to the lack of relevant, engaging, and contextual learning approaches, (2) Lack of Innovative and Adaptive Learning Models. English language learning, particularly TOEFL Preparation, still tends to use a conventional, teacher-centered approach, lacking interactivity, and not accommodating the diverse learning needs of students, (3) Suboptimal Implementation of SDG 4 in Language Learning. Although the government has adopted SDG, on quality education, its implementation in foreign language teaching, such as the TOEFL, remains suboptimal, especially in non-elite schools and institutions that lack resources and access to technology. (4) Lack of Integration of Local Values and Social Context in TOEFL Preparation, TOEFL learning in Indonesia is often disconnected from the local context and culture of students' learning, creating a disconnect between the material and students' daily lives. This makes learning less meaningful and less effective. (5) Limited Empirical Research on the Marsiadapari Model (MPM-24). The Marsiadapari Learning Model (MPM- 24) is relatively new, having been designed in 2024. It has not been widely implemented or investigated by other lecturers/teachers in TOEFL Preparation lessons, (6) Gap in Access to TOEFL Preparation between Urban and Remote Areas. Students in remote areas tend to have limited access to quality TOEFL courses. Learning models such as MPM-24 have the potential to be a solution, but their effectiveness has not yet been empirically proven, and (7) The Need for Learning Models that Practically Support the Achievement of SDG 4. Quality education as referred to in SDG 4 is not only about the curriculum, but also about learning methods that are adaptive, contextual, and applicable in

various settings. Therefore, MPM-24 needs to be tested as a model capable of addressing this challenge.

Based on the background and problem identification, the research questions can be formulated as follows:

1. Can implementing the MPM-24 learning model significantly improve students' TOEFL scores compared to conventional methods?
2. How do students respond to the implementation of the MPM-24 learning model in the TOEFL Preparation process?
3. Does the MPM-24 learning model support the achievement of SDG 4 indicator in terms of improving the quality of English language education?

RESEARCH METHODS

This study used a quantitative approach with a quasi-experimental design to test the effectiveness of the Marsiadapari learning model (MPM-24) on improving students' TOEFL skills. The model used was a pretest-posttest control group design, in which one group studied using the MPM-24 model (the experimental group), while the other group used conventional learning methods (the control group).

1. Research Design

This design was chosen to comparatively determine whether there were significant differences in TOEFL scores between the groups using MPM-24 and those not. Furthermore, this approach also allowed researchers to analyze student responses to the learning model through questionnaires and interviews.

2. Population

The population in this study was all students participating in the TOEFL Preparation program Institut Pendidikan Tapanuli Selatan Padangsidimpuan is located on Jl. Sutan Moh. Arif, Batang Ayumi Jae Subdistrict, North Padangsidimpuan District, Padangsidimpuan City, North Sumatra.

3. Sample

The research sample was drawn using a purposive sampling technique, which determines the sample based on certain criteria, such as:

1. Having taken at least one semester of English lessons
2. Willing to take the TOEFL pre-test and post-test
3. Not currently taking a TOEFL program outside of school/university

The sample was divided into two groups:

1. Experimental group: using the Marsiadapari learning model (MPM-24)
2. Control group: using conventional learning methods

Each group had a minimum of 25–30 students to maintain statistical validity.

4. Research Stages

Based on the previously formulated problem formulation, the research stages were as follows:

a. Preparation Stage (Preliminary Study)

1. Reviewing literature on TOEFL, SDG 4, and the MPM-24 model.
2. Developing learning materials based on the MPM-24 model.
3. Developing instruments: TOEFL pre-test and post-test questions, questionnaires, observation sheets, and interview guidelines.
4. Instrument validation by language experts and learning experts.

b. Implementation Stage

1. Pre-Test:

Both groups (experimental and control) were given a TOEFL pre-test to determine initial abilities.

2. Treatment:

The experimental group studied TOEFL using the Marsiadapari model

(MPM- 24) for 4–6 sessions. The control group studied TOEFL using conventional methods (lectures, practice questions).

The MPM-24 model is designed based on:

- a. Collaborative (group discussions)
- b. Adaptive (adapting to participants' needs)
- c. Contextual (linking TOEFL questions to local/global issues)
- d. Reflective (self-assessment and peer feedback)

3. Observation and Documentation:

- a. Class activities were observed using observation sheets.
- b. The learning process was documented for evaluation.

5. Post-Test:

Both groups were given a TOEFL post-test equivalent to the pre-test to measure improvement.

6. Questionnaires and Interviews:

1. The experimental group completed a questionnaire regarding their responses to the MPM-24 model.
2. Several participants were interviewed for further details.

c. Data Analysis Stage

1. Quantitative data (pre-test & post-test) were analyzed using t-tests (independent and paired samples) to determine significant differences between groups and improvements within groups.
2. Qualitative data (student responses, observations) were analyzed using thematic analysis to draw descriptive conclusions regarding student perceptions and the effectiveness of the process.

d. Evaluation and Reflection Stage

1. Conclude on the effectiveness of the MPM-24 model
2. Provide recommendations for model improvements
3. Compile a final report and disseminate research results

5. Research Instruments

1. TOEFL pre-test and post-test questions (reading, listening, structure)
2. Likert-scale questionnaire to measure student perceptions
3. Interview of 30 respondents

RESULTS AND DISCUSSION

1. Can implementing the MPM-24 learning model significantly improve students' TOEFL scores?

Data below provided pre-test and post-test TOEFL scores for 30 students in one group pretest post-test design. All students showed an improvement in their scores. Table.1, below describes the result of pertest and post-test TOEFL score.

Table 1. The result of pretest and post-test TOEFL score of experimental class

Sample	Pre-test Score	Post-test Score	Explanation
1	410	462	Increase
2	407	459	Increase
3	412	464	Increase
4	413	466	Increase
5	411	460	Increase
6	414	467	Increase
7	408	455	Increase
8	416	469	Increase
9	409	463	Increase
10	413	470	Increase
11	412	465	Increase
12	410	461	Increase
13	408	459	Increase
14	415	468	Increase

15	411	463	Increase
16	407	457	Increase
17	414	469	Increase
18	409	462	Increase
19	412	466	Increase
20	413	467	Increase
21	411	464	Increase
22	410	461	Increase
23	408	458	Increase
24	409	462	Increase
25	412	465	Increase
26	413	468	Increase
27	410	460	Increase
28	407	456	Increase
29	414	469	Increase
30	411	463	Increase
Average	411.1	463.3	+52.2

Implementing the MPM-24 learning model significantly improved students' TOEFL scores compared to their pre-test results. The consistent increase across all 30 students and the average increase of **+52.2** points indicate that the model has a positive impact.

However, when measured using N-Gain analysis, the improvement is categorized as "low", meaning there is still room to optimize the method for deeper impact. Even so, the result is educationally meaningful, especially when viewed in light of SDG 4, which emphasizes inclusive and quality education and lifelong learning opportunities.

Table.2. The result of pretest and post-test TOEFL score of control class

Sample	Pre-test Score	Post-test Score	Explanation
1	410	410	No Change
2	407	408	Increase
3	412	412	No Change
4	413	417	Increase
5	411	412	Increase
6	414	414	No Change
7	408	409	Increase

8	416	419	Increase
9	409	410	Increase
10	413	413	No Change
11	412	415	Increase
12	410	411	Increase
13	408	409	Increase
14	415	416	Increase
15	411	411	No Change
16	407	410	Increase
17	414	416	Increase
18	409	411	Increase
19	412	412	No Change
20	413	416	Increase
21	411	412	Increase
22	410	412	Increase
23	408	410	Increase
24	409	410	Increase
25	412	415	Increase
26	413	415	Increase
27	410	411	Increase
28	407	408	Increase
29	414	417	Increase
30	411	412	Increase
Average	411.1	413.4	+2.3

In the control class, 80% of students showed increase and 20% had no change, and. The average gain was +2.3 points, reflecting minimal overall progress compared to the experimental class.

Compared to the experimental class, which showed a significant average improvement of +52.2 points, the control class's minimal gain of +2.3 points highlights the effectiveness of the intervention applied to the experimental group. The control group's limited progress suggests that the substantial improvement in the experimental class is likely due to the specific treatment or method introduced, rather than external factors or natural learning progression alone. Therefore, the data supports the conclusion that the experimental intervention had a positive and meaningful impact on student performance.

2. How do students respond to the implementation of the MPM-24 learning model in the TOEFL Preparation process?

Table.3. The result students respond to the implementation of the MPM-24 learning model in the TOEFL Preparation process

No	Pernyataan	SS (%)	S (%)	R (%)	TS (%)	STS (%)
1	I feel happy to follow TOEFL learning with the MPM-24 model.	60	33	7	0	0
2	This model makes me more confident.	57	37	6	0	0
3	I am more active in discussions during learning.	53	30	10	7	0
4	This model helps me understand TOEFL questions more easily.	63	30	7	0	0
5	TOEFL material is delivered in an interesting way.	67	23	10	0	0
6	This model increases my motivation to learn English.	60	33	7	0	0
7	Collaborating in a group helped me understand the material	70	27	3	0	0
8	I feel better prepared for the TOEFL	53	40	7	0	0
9	Contextual learning made it easier for me to understand the material	60	33	7	0	0
10	Reflecting at the end of the lesson helps me remember the material.	47	37	13	3	0
11	This method is more engaging than conventional methods.	70	23	7	0	0
12	The teacher facilitates the learning well.	67	27	6	0	0
13	I can learn from my peers' experiences	63	30	7	0	0

14	MPM-24 accommodates all my learning styles	53	37	10	0	0
15	This model encourages independent TOEFL learning	50	43	7	0	0
16	The learning activities help me understand the TOEFL structure	60	30	10	0	0
17	I've made progress in my comprehension of academic reading	57	37	6	0	0
18	The TOEFL listening activities are easier to understand	47	40	13	0	0
19	I'd like to use this model again in my next TOEFL class	70	27	3	0	0
20	I recommend MPM-24 for TOEFL learning	73	23	4	0	0

General Statistics Summary:

1. Average Strongly Agree (SS) responses: $\pm 60\%$
2. Average Agree (S) responses: $\pm 32\%$
3. Average Neutral (Undecided) responses: $\pm 7\%$
4. Disagree (TS) and Strongly Disagree (STS): Almost 0%

Based on in-depth interviews with 30 students who had participated in TOEFL learning using the MPM 24 model, several key findings were obtained, as follows:

1. Positive Perceptions of the MPM 24 Model

Most students stated that learning using the MPM 24 model felt more enjoyable, interactive, and less boring than previous TOEFL learning methods. They felt enthusiastic about participating in the collaborative and reflective learning process.

2. Improved Understanding of TOEFL Material

Students experienced a significant improvement in their understanding of

TOEFL questions, particularly in the reading and listening aspects. They felt that the learning strategies used, such as group discussions, test simulations, and structured practice questions, were very helpful in deepening their understanding of the TOEFL format and question types.

3. Strengthened Self-Confidence and TOEFL Readiness

The majority of participants felt more confident and better prepared for the TOEFL after participating in this learning model. The gradual, task-based activities helped them develop strategies for answering questions and manage their time effectively.

4. Effectiveness of Collaboration and Group Discussion

The MPM 24 model facilitates active interaction among participants. Most students stated that group work not only enriched their perspectives but also facilitated understanding of material previously considered difficult. Learning became less teacher-centered and more focused on peer learning.

5. Technical Constraints and Improvement Suggestions

Some students expressed challenges such as limited time allocation, limited facilities (especially audio media for listening practice), and the need for adaptation during the initial use of the model. However, in general, they still recommended the widespread implementation of MPM 24, both in formal and informal settings, as it was considered to support a more effective and enjoyable learning process.

Based on the explanation above, the Marsiadapari learning model (MPM 24) not only improved students' comprehension and TOEFL scores but also built motivation, self-confidence, and active participation. This indirectly demonstrates the positive contribution of the MPM 24 model in supporting SDG indicator 4: improving the quality of inclusive, adaptive, and sustainable English language learning.

3. Does the MPM-24 learning model support the achievement of SDG 4 indicator in terms of improving the quality of English language education?

Based on the analysis of quantitative data (questionnaires) and qualitative data (interviews), the MPM-24 learning model supports the achievement of SDG 4 indicators, particularly in improving the quality of inclusive, participatory, and competency-based English language learning.

Data Analysis:

1. Quantitative Data (Questionnaire):

Of the 30 respondents who participated in TOEFL learning using the MPM-24 model, several key statements in the questionnaire were directly related to the principles of SDG 4, particularly targets 4.1 and 4.4:

Table 4. The result students respond to the implementation of the MPM-24 learning model in the TOEFL Preparation process

Number	Statement (Regarding SDG 4)	% agree + strongly agree
6	This model increased my motivation to learn English.	93%
9	Contextual learning made it easier for me to understand the material.	93%
14	MPM-24 accommodates all my learning styles.	90%
19	I plan to use this model again in my next TOEFL class.	97%
20	I recommend MPM-24 for TOEFL learning.	96%

Interpretation:

This figure indicates that students consider the MPM-24 model highly relevant to the principles of quality education, namely adaptive, engaging, contextual learning, and increased student participation.

2. Qualitative Data (Interviews):

Several quotes from students regarding SDG 4 during interviews:

"I feel like this model makes me more active, not just listening to the teacher. I understand why we need to study for the TOEFL contextually." (Respondent 12)

“MPM-24 makes learning feel more real and relevant. We are trained to think, not just memorize.” (Respondent 7)

*“I think this type of learning should continue to be developed, especially for students who don't yet have a strong foundation in English.”
(Respondent 25)*

Interpretation:

This model aligns with the principles of competency-oriented education, developing critical thinking skills, and inclusivity, which are the foundation of SDG 4.

Relation to SDG 4 (Quality Education):

SDG 4 emphasizes:

1. Improving the quality of literacy and numeracy learning outcomes (Target 4.1)
 2. Technical and vocational skills, including foreign languages (Target 4.4)
 3. Access to equitable, inclusive, and relevant education (Targets 4.5, 4.7)
- The MPM-24 model reflects these principles through:
1. An active, collaborative, and reflective approach
 2. Contextualization of TOEFL materials
 3. Flexibility of methods for various learning styles
 4. Increased long-term learning motivation

It's concluded the MPM-24 learning model not only effectively improves students' TOEFL skills but also directly supports the achievement of SDG 4, particularly in terms of quality, active engagement, and 21st-century skills-based learning. This makes MPM-24 a powerful learning model for sustainable and global education.

CONCLUSION AND RECOMENDATION

Based on the results of quantitative data analysis (pre-test and post-test), questionnaires, and interviews, this study concludes that:

1. The Marsiadapari learning model (MPM 24) has proven effective in improving students' academic English skills, particularly in the context of TOEFL Preparation. The improvement in students' TOEFL scores demonstrates the effectiveness of a task-based, collaborative, reflective, and contextual approach.
2. Students' TOEFL scores increased significantly after implementing the MPM 24 model compared to conventional learning methods. This demonstrates that this innovative approach can overcome the limitations of the lecture model, which tends to be passive.
3. Students' responses to the MPM 24 learning model were very positive. They felt more active, motivated, confident, and engaged in the learning process, which improved their TOEFL readiness.

Furthermore, the recommendations of the article as follow:

1. For Teachers/Instructors: They are encouraged to participate in training on implementing MPM 24 to enable them to manage TOEFL Preparation learning in an active, structured, and engaging manner.
2. For Educational Institutions: MPM 24 is worthy of adoption as an alternative or supplementary model in the English curriculum, especially in intensive programs or TOEFL training.
3. For Future Researchers: It is recommended to expand the scope of research on TOEFL speaking and writing skills and implement this model in online or hybrid classes.
4. For Government and Policymakers: Innovative learning models such as

MPM

24 can be incorporated into policies to improve the quality of foreign language learning, especially in vocational and non-formal education programs.

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