INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN PROGRESSIVE EDUCATION & DEVELOPMENT

OPEN ACCESS JOURNAL

Vol 15, Issue 4, (2026) E-ISSN: 2226-6348

The Use of Kilam+ to Improve Reading Proficiency among Upper Primary Special Education and Remedial Education Pupils at Sk Bandar Tawau II: An Action Research Study

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DOI Link: http://dx.doi.org/10.6007/IJARPED/v15-i4/29376

Published Online: 09 November 2026

Abstract

Reading proficiency is a fundamental skill that plays a crucial role in pupils' academic development and engagement in learning. However, some upper primary pupils in Special Education and Remedial Education have yet to achieve satisfactory reading proficiency, particularly in reading consonant-vowel-consonant (CVC) words, words containing diphthongs, and simple sentences. Therefore, this action research was conducted to evaluate the use of KILAM+ in improving reading proficiency among upper primary pupils at SK Bandar Tawau II. KILAM+ is a literacy intervention approach based on five main components: Identification, Intervention, Repetitive Practice, Analysis, and Reinforcement. These components are further supported by teacher-led interventions, home-based reinforcement activities, continuous assessment, motivation, and self-reinforcement. This study employed the Kemmis and McTaggart Action Research Model, which consists of four phases: planning, action, observation, and reflection. The participants comprised 27 upper primary pupils, including pupils enrolled in Remedial Education, fully included pupils, and pupils with Special Educational Needs (SEN) who were identified as requiring reading interventions. Data were collected through pre-tests and post-tests, structured observations, document analysis, and attendance records. The findings revealed that the mean reading proficiency score increased from 37.1% in the pre-test to 78.9% in the post-test, representing an improvement of 41.8 percentage points. Furthermore, a comparison of reading proficiency levels showed that the number of pupils who had not yet mastered reading skills decreased from 12 pupils (44.4%) to 3 pupils (11.1%), while the number of pupils who achieved fluent reading proficiency increased from none to 11 pupils (40.7%). These findings indicate positive improvements in participants' reading proficiency following the implementation of KILAM+. Overall, KILAM+ demonstrates potential as a systematic and sustainable literacy intervention approach through teacher collaboration, home-based reinforcement activities, and active pupil participation.

Keywords: KILAM+, Reading Skills, Literacy, Upper Primary Pupils, Special Education, Remedial Education, Action Research

Introduction

Reflection on Previous Teaching and Learning Practices

Reading skills are fundamental to literacy development, enabling pupils to acquire knowledge, understand information, and participate effectively in the learning process. Literacy proficiency also serves as a foundation for lifelong learning and the development of human capital capable of adapting to the demands of future education (UNESCO, 2021; OECD, 2023). In the context of Special Education and Remedial Education, reading proficiency is not only associated with academic achievement but also influences pupils' self-confidence, motivation, and engagement in learning. Therefore, every pupil should be provided with appropriate learning opportunities tailored to their individual abilities and learning needs to ensure the gradual development of fundamental reading skills. In this regard, teachers play a crucial role in identifying pupils' learning needs and designing systematic interventions that are appropriate to their levels of proficiency (Hussin & Mohd Basir, 2024).

Based on the researcher's experience in facilitating learning among upper primary pupils at SK Bandar Tawau II, particularly those enrolled in Remedial Education, fully included pupils, and pupils with Special Educational Needs (SEN), some pupils have yet to achieve the expected level of reading proficiency despite receiving instruction based on the prescribed curriculum. Observations during the teaching and learning process revealed that some pupils continued to rely on spelling out words when reading, demonstrated limited reading fluency, experienced difficulties blending syllable sounds, and frequently became confused when reading words containing consonant-vowel-consonant (CVC), consonant-vowel + consonant-vowel-consonant (CV+CVC) patterns, diphthongs, and combined syllable structures. These observations indicate that developing reading proficiency requires not only exposure to reading materials but also systematic, repetitive, and differentiated practice tailored to individual proficiency levels. These findings are consistent with the study by Lindström-Sandahl et al. (2023), which demonstrated that systematic, structured, and intensive reading interventions can support improvements in word decoding, word reading, and reading comprehension among pupils experiencing reading difficulties.

To help pupils overcome these difficulties, the researcher employed several teaching approaches, including flashcards, repeated reading, written exercises, and individual guidance tailored to pupils' proficiency levels. Although these approaches resulted in some improvements, pupils' progress remained inconsistent. Differences in pupils' proficiency levels also required varying levels of intensity and types of practice. Furthermore, learning activities conducted at school were not always systematically continued at home, while the teaching and learning materials used had not yet been progressively structured according to the development of pupils' reading skills. Consequently, opportunities for pupils to practise, reinforce, and strengthen their reading skills remained inconsistent. These observations are consistent with the findings of Çalışkan and Ulas (2022) and Lindström-Sandahl et al. (2023), who emphasised the importance of implementing systematic, structured, and consistent reading interventions, supported by repetitive practice and a supportive learning environment.

Reflection on these teaching practices made the researcher realise that efforts to improve pupils' reading skills require an approach that not only focuses on reading activities in the classroom but also ensures continuity of learning between school and home. Pupils need

structured interventions tailored to their proficiency levels, sufficient opportunities for practice, continuous monitoring of their progress, and reinforcement activities that can enhance their motivation and self-confidence. At the same time, teachers require a practical and flexible approach to identify pupils' learning needs, implement appropriate interventions, analyse their progress, and make continuous improvements.

Based on these reflections, the researcher developed KILAM+ as a systematic literacy intervention approach to support the improvement of reading skills among upper primary pupils. KILAM comprises five main components: Identification, Intervention, Repetitive Practice, Analysis, and Reinforcement, which are implemented progressively according to pupils' proficiency levels. The "+" symbol represents additional elements that strengthen the implementation of the intervention through home-based reinforcement activities, reading videos featuring the teacher's voice, continuous assessment, motivation and positive reinforcement, as well as pupils' self-reinforcement. This approach enables the intervention process to be implemented in a more structured manner while providing pupils with opportunities to practise at their own pace and according to their individual abilities.

The implementation of KILAM+ emerged from the researcher's reflection on the need to improve teaching and learning practices related to reading skills among upper primary pupils in Special Education and Remedial Education. The researcher believes that the reading difficulties experienced by pupils do not necessarily indicate an inability to learn but rather highlight the need for a more systematic approach, well-organised learning materials, consistent practice, and continuous support. Therefore, this action research was conducted to evaluate the use of KILAM+ in improving reading proficiency among upper primary Special Education and Remedial Education pupils at SK Bandar Tawau II, while also examining changes in pupils' engagement in terms of reading fluency, self-confidence, and active participation in learning.

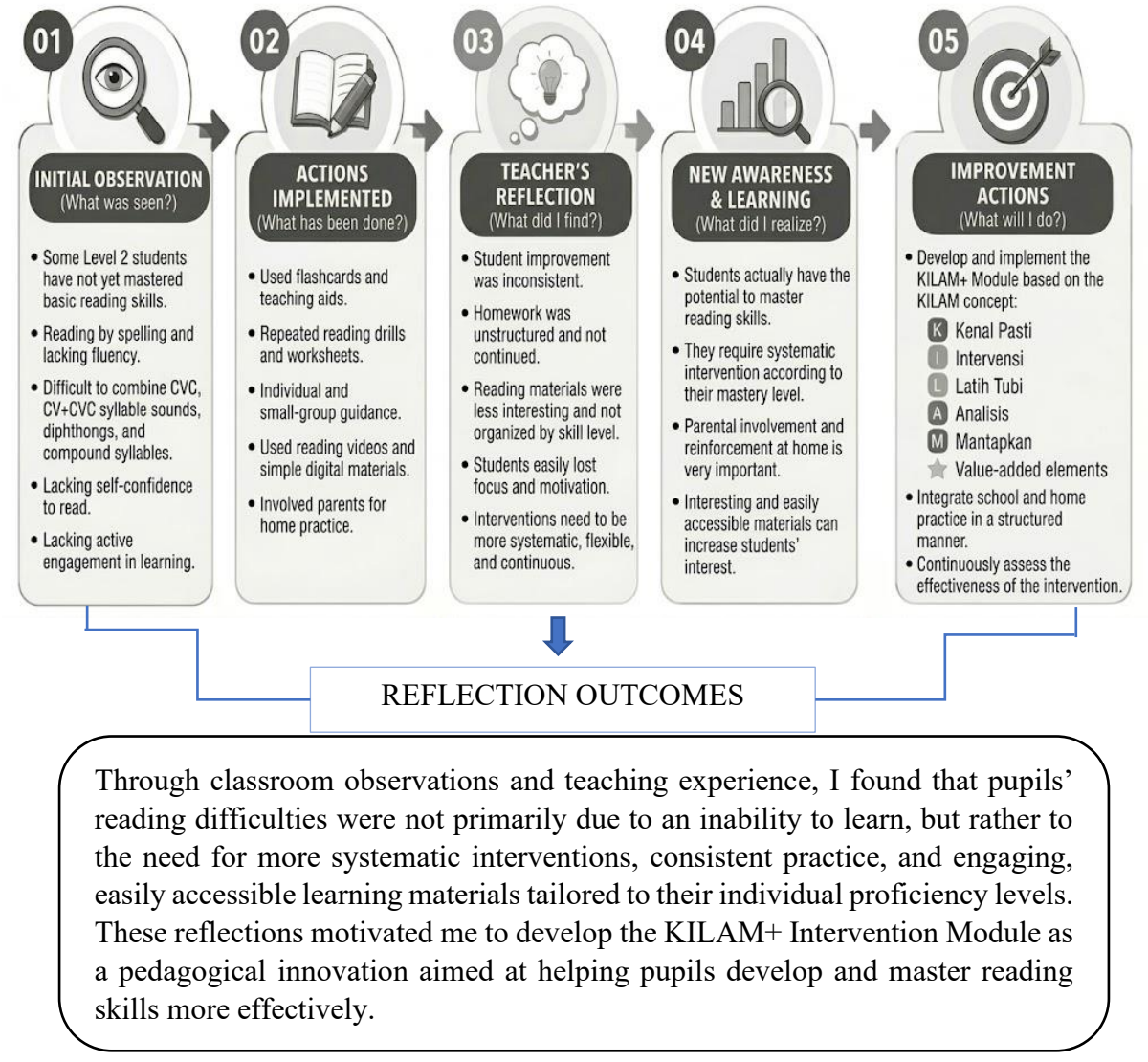


Figure 1.1 Reflection on Previous Teaching and Learning Practices That Helped Teachers Develop Meaningful Interventions.

Table 1.1
Summary of Reflections on Previous Teaching and Learning Practices

Aspect	Teacher's Reflection
Observation	Pupils have yet to master reading skills involving CVC, CV+CVC, diphthongs, and combined syllable patterns.
Initial Actions	Flashcards, repeated reading, written exercises, and individual guidance.
Limitations	Inconsistent progress, unstructured home-based practice, and less engaging learning materials.
Reflection	Pupils require systematic, flexible, and continuous interventions.
Improvement Actions	Development and implementation of the KILAM+ Intervention Module.

Area Of Concern / Research Focus

Reflection on the teaching and learning process revealed that reading proficiency among upper primary pupils remains an issue requiring attention, particularly among pupils enrolled in Remedial Education, fully included pupils, and pupils with Special Educational Needs (SEN). Reading skills are fundamental to learning, as pupils need to read, understand instructions, and interpret information before they can participate effectively in the learning process. Difficulties in reading not only affect academic achievement but also influence pupils' self-confidence, motivation, and active engagement in teaching and learning activities.

Based on the results of the pre-test conducted before the implementation of the intervention, a total of 27 upper primary pupils were identified as having not yet achieved the expected level of reading proficiency. The research participants comprised 22 pupils enrolled in Remedial Education, one fully included pupil, and four pupils with Special Educational Needs (SEN) enrolled in the Special Education Integration Programme (SEIP). Analysis of the pre-test results revealed that the pupils' mean reading proficiency score was 34.6%. These preliminary findings indicate that the participants still required systematic support and interventions to improve their reading proficiency.

Observations during the teaching and learning process also revealed that some pupils continued to rely on spelling out words when reading, experienced difficulties blending syllable sounds, demonstrated limited fluency when reading simple sentences, and lacked confidence when asked to read individually in front of teachers or peers. Prior to the implementation of KILAM+, the researcher employed several approaches, including flashcards, repeated reading, individual guidance, and written exercises, to improve pupils' reading proficiency. However, their progress remained inconsistent. This situation was associated with learning materials that had not been progressively organised according to pupils' proficiency levels, home-based reinforcement activities that had not been systematically implemented, and limited opportunities for pupils to practise reading using the same materials outside school hours. Consequently, the rate of reading skill development varied among pupils.

Based on observations and reflections on these teaching practices, the researcher believes that pupils have the potential to improve their reading proficiency when provided with systematic interventions, consistent practice, and learning materials appropriate to their proficiency levels. Accordingly, the researcher adopted KILAM+ as a literacy intervention approach based on five main components: Identification, Intervention, Repetitive Practice, Analysis, and Reinforcement. This approach is further enhanced by value-added elements (+), including home-based reinforcement activities, reading videos featuring the teacher's voice, continuous assessment, motivation and positive reinforcement, and pupils' self-reinforcement. The integration of these elements aims to ensure continuity of reading practice between school and home while providing pupils with opportunities to practise and strengthen their reading skills consistently.

Therefore, this action research focuses on examining the use of KILAM+ in improving reading proficiency among upper primary Special Education and Remedial Education pupils at SK Bandar Tawau II. It also examines changes in pupils' engagement in terms of reading fluency, self-confidence, and active participation throughout the implementation of the intervention.

This study is expected to provide insights into the potential of KILAM+ as a systematic, flexible, and pupil-centred literacy intervention approach that addresses individual learning needs within the contexts of Special Education, Inclusive Education, and Remedial Education.

This action research focuses on improving the reading proficiency of upper primary pupils in reading CVC and CV+CVC words, words containing diphthongs, and combined syllable patterns through the implementation of the KILAM+ Intervention Module. The module integrates five main components: Identification, Intervention, Repetitive Practice, Analysis, and Reinforcement, together with value-added elements (+) encompassing home-based practice, continuous assessment, pupil motivation, and self-reinforcement.

Purpose of the Study

This action research was conducted to improve teaching and learning practices aimed at enhancing reading proficiency among upper primary Special Education and Remedial Education pupils at SK Bandar Tawau II through the use of KILAM+. The study aims to examine changes in pupils' reading proficiency before and after the implementation of KILAM+, particularly in reading words containing consonant-vowel-consonant (CVC) and consonant-vowel + consonant-vowel-consonant (CV+CVC) patterns, diphthongs, and combined syllable structures in a systematic and progressive manner. In addition to examining improvements in reading proficiency, the study also focuses on changes in pupils' reading fluency, self-confidence, and active participation in learning throughout the intervention. Specifically, this study seeks to provide insights into the use of KILAM+ as a literacy intervention approach that integrates five main components: Identification, Intervention, Repetitive Practice, Analysis, and Reinforcement, together with value-added elements (+), including home-based reinforcement activities, reading videos featuring the teacher's voice, continuous assessment, motivation and positive reinforcement, and pupils' self-reinforcement. The findings of this study are expected to provide practical guidance for Remedial Education teachers, Inclusive Education teachers, and Special Education teachers in planning and implementing systematic, flexible, and responsive literacy interventions tailored to pupils' individual learning needs and proficiency levels.

Research Objective

Based on the stated purpose of the study, this action research was conducted to identify the initial level of reading proficiency among upper primary pupils prior to the implementation of KILAM+. The study subsequently examines improvements in reading proficiency by comparing pupils' performance in the pre-test and post-test following the implementation of KILAM+. In addition, the study investigates changes in pupils' engagement throughout the intervention based on structured observations, document analysis, and teachers' records, with particular emphasis on reading fluency, self-confidence, and active participation in the teaching and learning process.

Accordingly, the research objectives are as follows:

1. To identify the level of reading proficiency among upper primary pupils before the implementation of KILAM+, based on the pre-test results.

2. To determine the improvement in reading proficiency among upper primary pupils by comparing their pre-test and post-test results following the implementation of KILAM+.
3. To examine changes in pupils' engagement in terms of reading fluency, self-confidence, and active participation in learning throughout the implementation of KILAM+.

Reseach Question

Based on the established research objectives, this action research seeks to address the following research questions:

1. What is the level of reading proficiency among the upper primary pupils participating in the study before the implementation of KILAM+, based on the pre-test results?
2. To what extent does reading proficiency improve among the upper primary pupils participating in the study, based on a comparison of their pre-test and post-test results following the implementation of KILAM+?
3. What changes occur in the engagement of upper primary pupils participating in the study in terms of reading fluency, self-confidence, and active participation in learning throughout the implementation of KILAM+?

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Action Research Model

This study employed the Kemmis and McTaggart (1988) Action Research Model as the framework for conducting the research. The model consists of four interrelated phases: planning, action, observation, and reflection. This model was selected because it provides a systematic framework for the researcher to identify issues in teaching practices, plan improvement actions, implement interventions, observe changes, and reflect on the data collected. This process enables continuous improvement of teaching practices based on the needs of the research participants. The study was conducted through one action research cycle over a period of 10 weeks.

In the context of this study, KILAM+ serves as the literacy intervention approach implemented within the action research cycle, while the Kemmis and McTaggart Model provides the framework guiding the implementation and reflection processes. The planning phase began with reflections on existing teaching practices and an analysis of the pre-test results to identify the participants' levels of reading proficiency. Based on this analysis, the researcher planned the implementation of KILAM+, which comprises five main components: Identification, Intervention, Repetitive Practice, Analysis, and Reinforcement. These components are complemented by value-added elements (+), including home-based reinforcement activities, reading videos featuring the teacher's voice, continuous assessment, motivation and positive reinforcement, and pupils' self-reinforcement.

The action phase involved the systematic implementation of KILAM+ over 10 weeks, according to the proficiency levels and learning needs of the research participants. Throughout this phase, participants were provided with progressive reading exercises covering words with consonant-vowel-consonant (CVC) and consonant-vowel + consonant-vowel-consonant (CV+CVC) patterns, diphthongs, and combined syllable structures, alongside continuous repetitive practice and reinforcement activities. The observation phase involved data collection through pre-tests and post-tests, structured observations, document analysis,

and attendance records to examine changes in participants' reading proficiency and engagement in learning.

Subsequently, the reflection phase was conducted based on the analysis of the collected data to identify changes in participants' reading proficiency and engagement, particularly in terms of reading fluency, self-confidence, and active participation in learning. This reflection was also used to evaluate the suitability of the KILAM+ implementation and identify aspects that could be further improved in teaching practices. Therefore, the application of the Kemmis and McTaggart Model enabled the research process to be conducted systematically through the interconnected phases of reflection, action, observation, and continuous improvement of teaching practices.

Target Group

This action research involved 27 upper primary pupils at SK Bandar Tawau II who were identified as having not yet achieved the expected level of reading proficiency based on their pre-test results. The participants were selected using purposive sampling, as they met the predetermined criteria for the implementation of the literacy intervention. Participant selection was based on pre-test results, teachers' observations during the teaching and learning process, and an analysis of pupils' academic performance records. This sampling method enabled the implementation of KILAM+ to be specifically tailored to the participants' reading proficiency levels and individual learning needs.

The research participants comprised 22 pupils enrolled in Remedial Education, one fully included pupil, and four pupils with Special Educational Needs (SEN) enrolled in the Special Education Integration Programme (SEIP). Based on the preliminary findings, all participants were identified as experiencing difficulties in reading words containing consonant-vowel-consonant (CVC) and consonant-vowel + consonant-vowel-consonant (CV+CVC) patterns, diphthongs, and combined syllable structures. These difficulties highlighted the need for a systematic, progressive, and continuous intervention approach to support improvements in participants' reading proficiency. Although the participants belonged to different educational categories, they were all selected based on the same criterion of reading difficulties, namely, not having achieved the required level of reading proficiency as determined by the pre-test.

The use of purposive sampling is consistent with the nature of action research, which focuses on improving teaching practices based on the actual needs of the target group. In this study, emphasis was placed on participants who demonstrated a need for reading interventions, allowing KILAM+ to be implemented in a planned and structured manner. Their progress was monitored by examining changes in reading proficiency and engagement throughout the study period.

Table 2.1
Profile of the Study's Target Group

Item	Item
Information	Information
Study Location	Study Location
SK Bandar Tawau II, Sabah	SK Bandar Tawau II, Sabah
Number of Research Participants	Number of Research Participants
27 pupils	27 pupils
Educational Level	Educational Level
Upper Primary (Level 2)	Upper Primary (Level 2)
Pupil Categories	Pupil Categories

Table 2.1 presents the profile of the target group involved in this action research. All participants were selected based on their need for reading intervention rather than through random sampling. The use of purposive sampling enabled the researcher to implement the intervention among pupils who genuinely required support in developing reading proficiency, in line with the objectives of action research, which emphasises the improvement of teaching practices in authentic classroom settings.

Table 2.2
Composition of Research Participants

Pupil Category	Number of Pupils	Percentage (%)
Remedial Education Pupils	22	81.5
Fully Included Pupil	1	3.7
Pupils with Special Educational Needs (SEN) enrolled in the Special Education Integration Programme (SEIP)	4	14.8
Total	**27**	**100.0**

Table 2.2 presents the composition of the target group involved in this action research. Of the 27 research participants, the majority were Remedial Education pupils (81.5%), followed by four pupils with Special Educational Needs (SEN) (14.8%) and one fully included pupil (3.7%). All participants were selected through purposive sampling based on their pre-test results, which indicated that they had not yet achieved the expected level of reading proficiency. This selection process enabled the intervention to be implemented among pupils who genuinely required support in improving their reading skills, in line with the objectives of the action research.

Data Collection Methods

To obtain a comprehensive understanding of changes in pupils' reading proficiency and engagement throughout the implementation of KILAM+, this study employed three main data collection methods: the Reading Proficiency Test, Structured Observation, and Document Analysis. Multiple data sources were used to enable the researcher to compare and cross-validate the research findings through triangulation (Creswell & Creswell, 2018). Pupils'

attendance records were also used as supplementary data to examine the consistency of participants' involvement throughout the intervention period.

The first instrument was the Reading Proficiency Test, which was administered in the form of a pre-test and a post-test. This test was used to identify participants' initial levels of reading proficiency and determine changes in their performance following the implementation of KILAM+. The reading items covered words containing consonant-vowel-consonant (CVC) and consonant-vowel + consonant-vowel-consonant (CV+CVC) patterns, diphthongs, and combined syllable structures. Each reading response was recorded based on reading accuracy, and participants' scores were converted into percentages by comparing the scores obtained with the maximum possible test score. The pre-test results served as baseline data to identify participants' initial proficiency levels, while the post-test results were compared with the pre-test results to determine changes in reading proficiency following the implementation of KILAM+.

The research instruments consisted of a word reading test and a simple sentence reading test, which were used to assess participants' reading proficiency before and after the intervention. The word reading test comprised 30 items, consisting of 15 consonant-vowel-consonant (CVC) words and 15 words containing diphthongs, with a maximum score of 30 marks. The simple sentence reading test comprised 15 items, consisting of five sentences containing CVC words, five sentences containing diphthongs, and five sentences combining CVC words and diphthongs, with a maximum score of 15 marks.

For the word reading test, one mark was awarded for each word read accurately, while zero marks were awarded for an incorrectly read word. For the simple sentence reading test, one mark was awarded for each sentence successfully read, while zero marks were awarded for a sentence that the participant was unable to read correctly. Pre-test and post-test scores were recorded separately to enable comparisons of participants' reading proficiency before and after the intervention. The data were analysed descriptively based on the scores obtained in each section of the test.

The second instrument was Structured Observation, which was conducted continuously throughout the intervention period. The observations aimed to record changes in pupils' engagement in learning, particularly in terms of reading fluency, self-confidence, and active participation during intervention activities. The researcher used a structured observation form developed based on the research objectives. Observations were recorded throughout the intervention activities using consistent indicators to enable comparisons of participants' progress over time. Observation notes were analysed alongside pupils' work and learning progress records to support the interpretation of the findings.

The third instrument was Document Analysis, which involved reviewing practice worksheets, pupils' work, learning progress records, and intervention implementation records. Document analysis was used as supplementary data to trace pupils' development throughout the implementation of KILAM+ and to support findings obtained from the Reading Proficiency Test and Structured Observation. In addition, pupils' attendance records were examined as supplementary data to assess the consistency of participants' involvement in intervention activities.

The use of these three data collection methods enabled the researcher to obtain complementary quantitative and qualitative information. The pre-test and post-test data provided an overview of changes in reading proficiency scores, while observation and document analysis data offered insights into changes in pupils' engagement throughout the intervention process. The integration of these data sources allowed for a more comprehensive interpretation of the research findings through data triangulation.

Table 2.3
Research Data Collection Instruments

Instrument/Data Source	Data Collected	Purpose	Research Objective
Reading Proficiency Test (Pre-test and Post-test)	Reading scores for CVC, CV+CVC, diphthongs, and combined syllable patterns	To identify initial reading proficiency levels and determine improvements in reading proficiency following the implementation of KILAM+	Objectives 1 & 2
Structured Observation	Reading fluency, self-confidence, and active participation in learning	To examine changes in pupils' engagement throughout the implementation of KILAM+	Objective 3
Document Analysis	Practice worksheets, pupils' work, learning progress records, and intervention implementation records	To track learning progress and support findings through data triangulation	Objective 3
Attendance Records (Supplementary Data)	Participants' attendance throughout the intervention period	To examine the consistency of participants' involvement in the implementation of KILAM+	Supplementary Data

Table 2.3 presents the three main research instruments and one supplementary data source used in this action research. The Reading Proficiency Test was used to obtain participants' reading scores before and after the implementation of KILAM+, while Structured Observation and Document Analysis were employed to examine changes in pupils' engagement and learning progress. Attendance records were used as supplementary data to provide context regarding the consistency of participants' involvement throughout the KILAM+ intervention period. The use of multiple data sources enabled the research findings to be compared and corroborated through data triangulation.

Data Analysis

Data obtained through the Reading Proficiency Test, Structured Observation, and Document Analysis were analysed using descriptive analysis methods. For quantitative data, scores obtained from the pre-test and post-test were analysed in terms of scores, percentages, and

differences in achievement to compare participants' reading proficiency levels before and after the implementation of KILAM+. Percentage scores were calculated using the formula (score obtained ÷ maximum possible score) × 100, while changes in achievement were determined by calculating the difference between the mean post-test and pre-test scores. This analysis was used to determine changes and improvements in participants' reading proficiency following the intervention.

For data obtained through Structured Observation and Document Analysis, descriptive analysis was employed to identify and describe patterns of change in pupils' engagement throughout the implementation of KILAM+. Data were compared across the intervention period based on three main aspects: reading fluency, self-confidence, and active participation in learning. Observation notes, pupils' work, and learning progress records were compared over time to identify changes and examine the consistency of emerging patterns across different data sources.

Subsequently, findings from the Reading Proficiency Test, Structured Observation, and Document Analysis were compared through data triangulation. This process enabled the researcher to systematically examine consistencies, differences, and patterns in the information obtained from the three data sources. When a particular finding emerged consistently across multiple sources, it provided stronger support for the interpretations made. Conversely, discrepancies identified between data sources were not disregarded but were further examined to understand possible factors influencing a particular phenomenon within the research context. This approach enabled the researcher to develop interpretations based on multiple sources of evidence rather than relying solely on a single data source. Therefore, triangulation not only served as a means of data validation but also enriched the researcher's understanding of the phenomenon under investigation and enhanced the credibility of the research findings (Creswell & Creswell, 2018).

Table 2.4
Data Analysis Methods According to Research Objectives

Research Objectives	Research Objectives	Research Objectives
Objective 1: To identify the level of reading proficiency among upper primary pupils participating in the study before the implementation of KILAM+, based on the pre-test results	Reading Proficiency Test – Pre-test	Scores and percentages (%)
Objective 2 To determine improvements in reading proficiency among upper primary pupils participating in the study by comparing their pre-test and post-test results following the implementation of KILAM+.	Reading Proficiency Test – Pre-test and Post-test	Comparison of scores, percentages, and differences in achievement
Objective3 To examine changes in pupils' engagement in terms of reading fluency, self-confidence, and active		

participation in learning throughout the implementation of KILAM+.	Structured Observation and Document Analysis	Descriptive analysis based on observed patterns and changes
Supplementary Data	Pupils' Attendance Records	Attendance frequency and percentages

Table 2.4 presents the data analysis methods employed to address each research objective. Quantitative data obtained from the pre-test and post-test were used to illustrate changes in pupils' reading proficiency, while data from Structured Observation and Document Analysis were used to describe changes in pupils' engagement throughout the implementation of KILAM+. Attendance records were also used as supplementary data to provide context regarding the consistency of participants' involvement in the intervention. Comparisons across multiple data sources through triangulation enabled a more comprehensive interpretation of the findings in accordance with the research objectives.

Research Ethics

Ethical considerations were given due attention by ensuring the confidentiality of participants' identities and safeguarding their well-being throughout the study. Participants' names and identifying information were not disclosed in the research report, and the data collected were used solely for research purposes and the improvement of teaching practices. No personally identifiable information about the participants is reported in this article.

Implementation Of The KILAM+ Intervention Module

The KILAM+ approach was implemented as a literacy intervention in this action research to support improvements in reading proficiency among the participating upper primary pupils. The intervention was conducted over a period of 10 weeks and was guided by five main components of KILAM+: Identification, Intervention, Repetitive Practice, Analysis, and Reinforcement. Its implementation was further supported by value-added elements (+), including home-based reinforcement activities, reading videos featuring the teacher's voice, continuous assessment, motivation and positive reinforcement, and pupils' self-reinforcement. This approach enabled reading practice to be carried out continuously between school and home while being tailored to the participants' proficiency levels.

The implementation of KILAM+ began with the Identification component, during which a pre-test was administered to determine participants' initial proficiency in reading words containing consonant-vowel-consonant (CVC) and consonant-vowel + consonant-vowel-consonant (CV+CVC) patterns, diphthongs, and combined syllable structures. The pre-test results served as baseline data to identify intervention needs and plan activities according to participants' proficiency levels. Based on these findings, the Intervention component was implemented through structured reading activities, the use of visual materials, progressive exercises, and guidance tailored to the learning needs of the participants.

The Repetitive Practice component was implemented consistently through repeated reading activities, structured exercises, and reinforcement activities conducted both at school and at home. The value-added elements (+) enabled pupils to continue practising at home using the materials provided, including reading videos featuring the teacher's voice. This approach provided pupils with opportunities to practise reading the same materials more consistently and reinforce the skills acquired at school.

The Analysis component was conducted continuously throughout the intervention through structured observations, reviews of pupils' work, analysis of learning progress, and records of intervention activities. The information obtained was used to identify pupils' progress, adjust learning activities, and make improvements to the implementation of the intervention according to participants' needs. Thus, analysis was not confined to a specific stage but formed an integral part of the ongoing monitoring process throughout the implementation of KILAM+.

The Reinforcement component was implemented through reinforcement activities, repeated practice of skills that had not yet been mastered, feedback, and motivational support to help pupils retain the reading skills they had acquired. At the end of the intervention period, a post-test was administered to assess changes in reading proficiency following the implementation of KILAM+. The post-test results were subsequently compared with the pre-test results to determine improvements in participants' reading performance.

The overall implementation of KILAM+ followed a progressive yet interconnected process. The Identification component provided the foundation for intervention planning, while the Intervention and Repetitive Practice components formed the core processes of teaching and skill reinforcement. Analysis was conducted continuously to monitor participants' progress, whereas Reinforcement emphasised the consolidation and retention of acquired skills. The value-added elements (+) further supported learning continuity through the involvement of teachers, pupils, and parents.

This approach enabled reading activities and materials to be adapted according to each participant's proficiency level and progress throughout the intervention period. Information obtained through assessment and observation was also used to adjust the intensity of practice and provide appropriate reinforcement based on pupils' learning needs. Through this flexible and continuous approach, KILAM+ focused not only on improving reading scores but also on supporting the development of pupils' self-confidence and active engagement in the learning process.

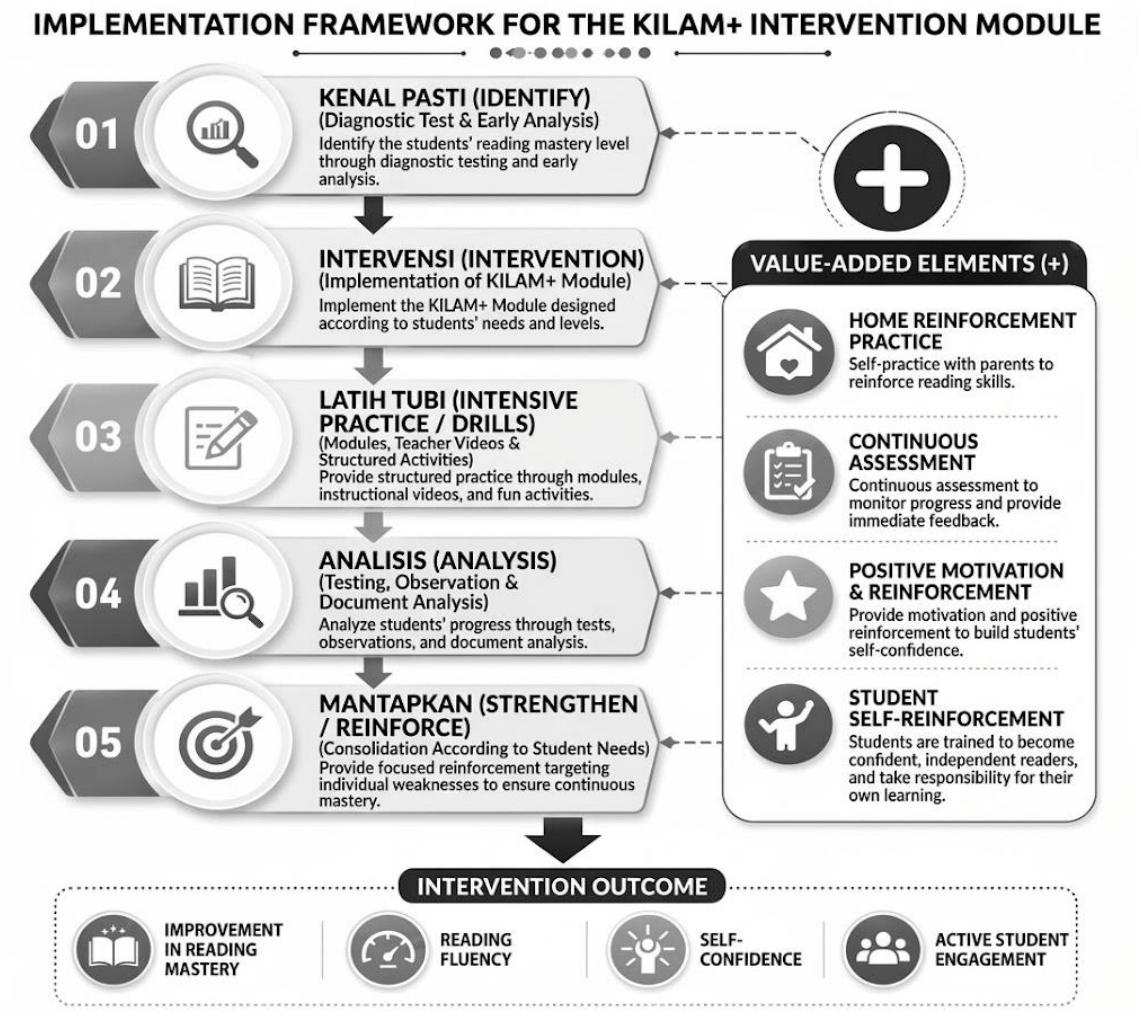


Figure 2.1: Implementation Framework of the KILAM+ Intervention Module

Figure 2.1 illustrates the KILAM+ implementation framework, which was developed based on five main components: Identification, Intervention, Repetitive Practice, Analysis, and Reinforcement. These five components are interconnected to form a systematic literacy intervention process. The value-added elements (+), including home-based reinforcement activities, reading videos featuring the teacher's voice, continuous assessment, motivation and positive reinforcement, and self-reinforcement, support the continuous implementation of the intervention both at school and at home.

Table 2.5
Weekly Implementation of the KILAM+ Intervention Module

Week	KILAM+ Component	Main Activities
1	Identification	Pre-test and analysis of participants' initial reading proficiency levels
2	Identification / Intervention	Strategy planning and introduction/reinforcement of letter recognition and sounds
3	Intervention	Reading words containing CVC and CV+CVC patterns
4	Intervention	Reading words containing diphthongs
5	Intervention	Reading combined syllable structures
6	Repetitive Practice	Repeated reading exercises and structured reading activities
7	Repetitive Practice	Reading reinforcement activities at school and at home
8	Analysis	Observations, review of pupils' work, progress analysis, and feedback
9	Reinforcement	Reinforcement of reading skills and repeated practice of skills not yet mastered
10	Reinforcement	Post-test, final reinforcement activities, and reflection on the implementation of the intervention

Note: The Analysis component was implemented continuously throughout the intervention period through observations, reviews of pupils' work, and monitoring of participants' progress.

Table 2.5 presents the implementation of KILAM+ over the 10-week intervention period. The implementation was organised progressively, beginning with the identification of participants' initial reading proficiency levels through the pre-test, followed by intervention and repetitive practice activities, monitoring and analysis of participants' progress, and subsequent reinforcement through the Reinforcement component. The value-added elements (+) were integrated throughout the intervention period to support the continuity of reading practice at school and at home. At the end of the intervention, a post-test was administered to obtain data on changes in participants' reading proficiency following the implementation of KILAM+.

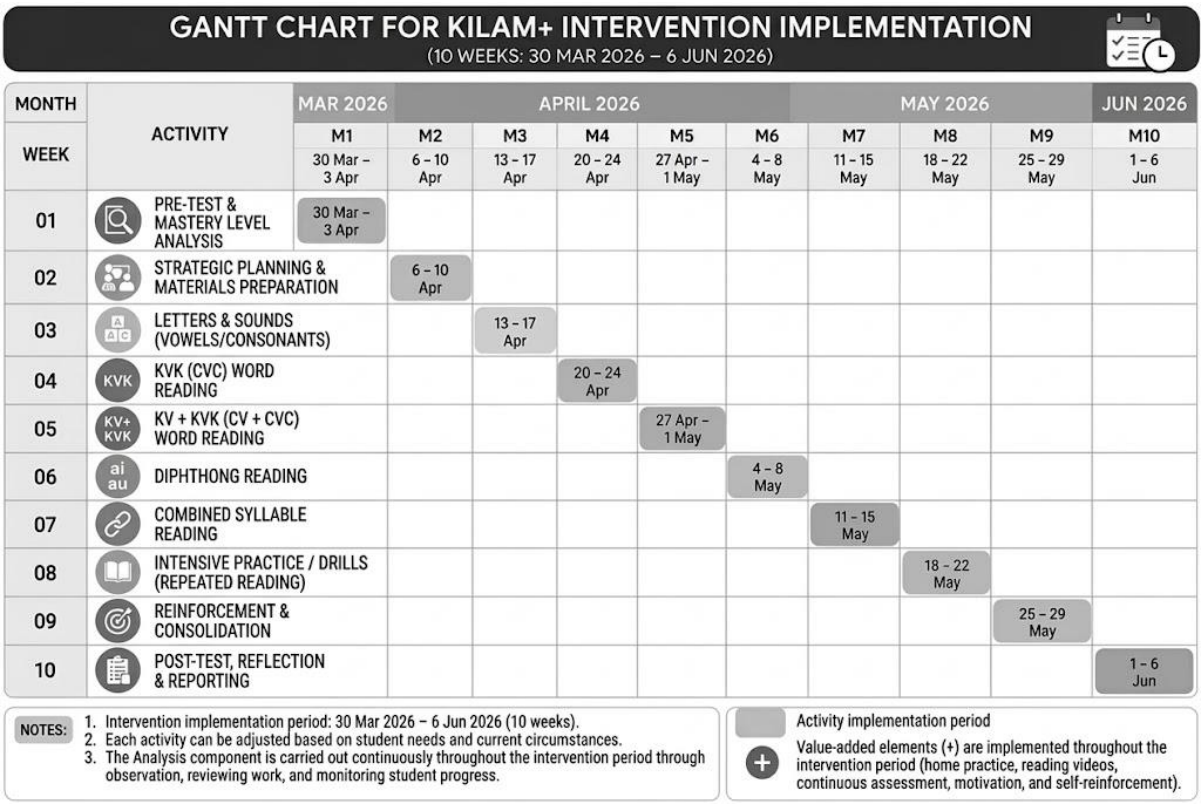


Figure 2.2: Gantt Chart of the KILAM+ Intervention Implementation

Research Findings and Discussion

This chapter presents the findings of the action research based on the three established research objectives, focusing on the use of KILAM+ to improve reading proficiency among the participating upper primary pupils at SK Bandar Tawau II. The research findings were analysed descriptively using data obtained from the Reading Proficiency Test, Structured Observation, and Document Analysis, while attendance records were used as supplementary data. The findings are discussed in relation to changes observed before and after the implementation of KILAM+, supported by previous studies related to literacy interventions, systematic reading practice, and pupils' engagement in learning.

Pupils' Reading Proficiency Levels Before the Implementation of KILAM+

The first research objective was to identify the reading proficiency levels of the participating upper primary pupils before the implementation of KILAM+, based on the pre-test results. The test involved 27 research participants and assessed their proficiency in reading words containing consonant-vowel-consonant (CVC) and consonant-vowel + consonant-vowel-consonant (CV+CVC) patterns, diphthongs, and combined syllable structures. The pre-test results served as baseline data to determine participants' initial reading proficiency levels prior to the implementation of the intervention.

Table 3.1
Reading Proficiency Levels of Research Participants Based on the Pre-test Results (n = 27)

Proficiency Level	Score (%)	Number of Pupils	Percentage (%)
Not Yet Proficient	0–39	12	44.4
Proficient but Still Spelling Out Words	40–79	15	55.6
Fluent Reading Proficiency	80–100	0	0.0
Total		**27**	**100.0**

Based on Table 3.1, a total of 12 pupils (44.4%) were classified as not yet proficient in reading, while 15 pupils (55.6%) were classified as proficient but still relied on spelling out words when reading. None of the research participants achieved fluent reading proficiency before the implementation of KILAM+. These findings indicate that all participants still required intervention support to improve their reading proficiency, particularly in reading words containing consonant-vowel-consonant (CVC) and consonant-vowel + consonant-vowel-consonant (CV+CVC) patterns, diphthongs, and combined syllable structures. Participants' reading proficiency levels were determined based on the percentage scores obtained in the pre-test and post-test. For the purpose of interpreting the research findings, the scores were divided into three operational categories: Not Yet Proficient (0–39%), Proficient but Still Spelling Out Words (40–79%), and Fluent Reading Proficiency (80–100%). These categories were developed specifically to classify participants' performance in this study and do not represent the official proficiency classifications established by the Malaysian Ministry of Education.

Table 3.2
Reading Proficiency Levels of Research Participants Based on the Post-test Results (n = 27)

Proficiency Level	Score (%)	Number of Pupils	Percentage (%)
Not Yet Proficient	0–39	3	11.1
Proficient but Still Spelling Out Words	40–79	13	48.2
Fluent Reading Proficiency	80–100	11	40.7
Total		**27**	**100.0**

Based on Table 3.2, the post-test findings revealed an improvement in reading proficiency levels among the research participants following the implementation of the KILAM+ intervention. A total of 3 pupils (11.1%) remained at the Not Yet Proficient level, while 13 pupils (48.2%) were classified as Proficient but Still Spelling Out Words. In addition, 11 pupils (40.7%) achieved the Fluent Reading Proficiency level.

These findings indicate that the majority of the research participants had achieved at least the Proficient but Still Spelling Out Words level, while some participants demonstrated better reading proficiency and greater fluency. Compared with the pre-test results, the number of pupils classified as Not Yet Proficient decreased from 12 pupils (44.4%) to 3 pupils (11.1%), representing a reduction of 9 pupils. At the same time, the number of pupils who

achieved Fluent Reading Proficiency increased from none to 11 pupils (40.7%). These changes indicate positive progress in participants' reading proficiency following the implementation of the KILAM+ intervention. Nevertheless, 16 pupils (59.3%) had not yet achieved Fluent Reading Proficiency. Therefore, continuous guidance and reinforcement activities are still required to further strengthen participants' reading skills. These efforts could be continued through a second action research cycle.

These findings are consistent with previous studies emphasising the importance of systematic, structured, and individualised reading interventions for pupils experiencing reading difficulties. Explicit and continuous interventions can provide pupils with opportunities to progressively develop word decoding skills and reading fluency (Al Otaiba et al., 2023; Lindström-Sandahl et al., 2023). Overall, the pre-test findings address Research Objective 1 by demonstrating that the participants required a more structured literacy intervention to achieve the expected level of reading proficiency.

Improvement in Reading Proficiency Following the Implementation of KILAM+

The second research objective was to determine improvements in reading proficiency among the participating upper primary pupils by comparing their pre-test and post-test results following the implementation of KILAM+. The intervention was conducted over a period of 10 weeks through the five main components of KILAM+: Identification, Intervention, Repetitive Practice, Analysis, and Reinforcement. These components were further supported by value-added elements (+), including home-based reinforcement activities, reading videos featuring the teacher's voice, continuous assessment, motivation, and self-reinforcement.

Table 3.3
Comparison of Mean Pre-test and Post-test Scores (n = 27)

Test	Mean Score (%)	Improvement (Percentage Points)
Pre-test	37.1	–
Post-test	78.9	+41.8
Overall Improvement		+41.8

Source: Analysis of the research participants' pre-test and post-test data.

Based on Table 3.3, the mean score of the research participants increased from 37.1% in the pre-test to 78.9% in the post-test following the implementation of the KILAM+ intervention. This improvement of 41.8 percentage points indicates positive progress in participants' reading proficiency. The findings suggest that the participants' overall reading performance improved following the intervention. However, this change in mean scores is interpreted as a descriptive finding and should be considered alongside the changes in participants' proficiency levels presented in Tables 3.1 and 3.2.

This improvement reflects changes in participants' reading performance following the implementation of a systematic and progressive intervention. During the initial stage, KILAM+ focused on the Identification component to determine participants' reading proficiency levels. The information obtained was subsequently used to implement the Intervention and Repetitive Practice components according to participants' reading needs. The Analysis component enabled continuous monitoring of participants' progress, while the

Reinforcement component emphasised the consolidation and retention of previously acquired reading skills.

The improvement of 38 percentage points also suggests that repeated and structured reading practice, supported by home-based reinforcement activities, provided participants with opportunities to apply the skills they had learned more consistently. Nevertheless, this improvement in scores is interpreted as a change in reading performance following the implementation of KILAM+ rather than definitive evidence of a causal relationship, given that the study employed an action research design involving pre-test and post-test comparisons.

These findings are consistent with previous studies indicating that systematic, explicit, and continuous reading interventions can support the development of reading skills among pupils experiencing literacy difficulties (Al Otaiba et al., 2023; Lindström-Sandahl et al., 2023). In the context of this study, the KILAM+ framework, which integrates the processes of identifying learning needs, intervention, repetitive practice, analysis, and reinforcement, provided participants with a more structured learning pathway.

Overall, these findings address Research Objective 2 by demonstrating an improvement in participants' mean reading proficiency scores following the implementation of KILAM+. These changes suggest that KILAM+ has the potential to support the systematic implementation of literacy interventions within the context of this study. This improvement is clearly illustrated in Figure 3.1, which presents a comparison of participants' mean scores before and after the implementation of KILAM+.

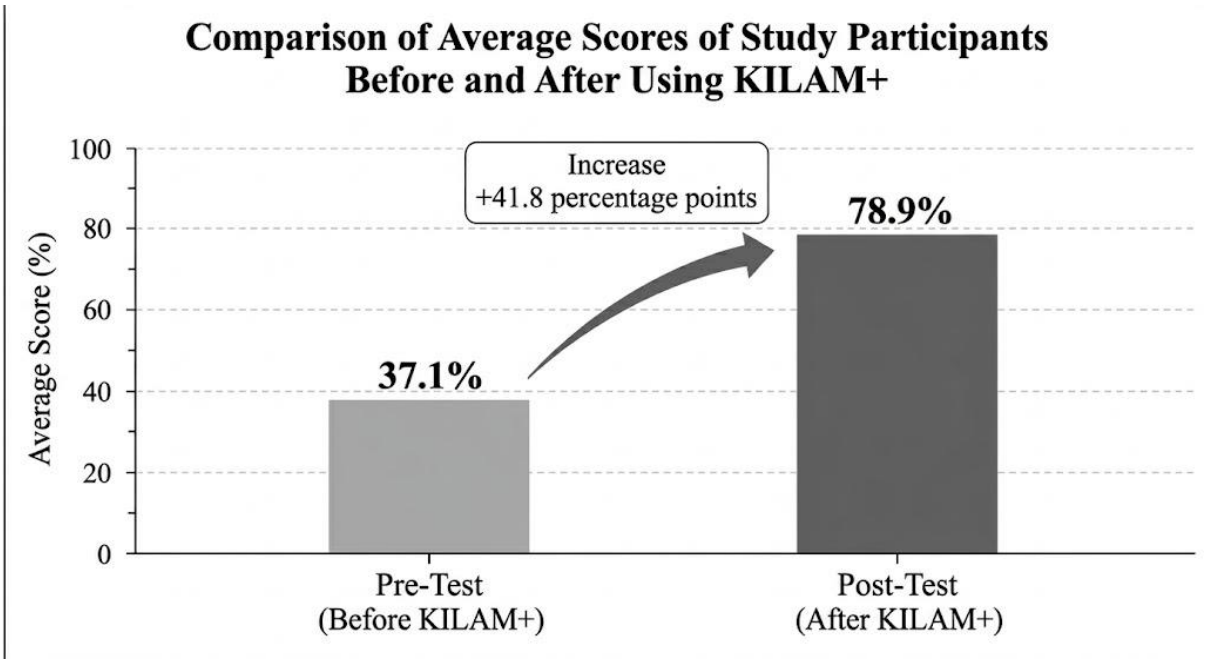


Figure 3.1: Comparison of Research Participants' Mean Scores Before and After the Implementation of KILAM+ (n = 27)

Changes in Pupils' Engagement Throughout the Implementation of KILAM+

The third research objective was to examine changes in the engagement of participating upper primary pupils in terms of reading fluency, self-confidence, and active participation in learning throughout the implementation of KILAM+. Data were obtained through Structured Observation and Document Analysis, while attendance records were used as supplementary data.

Table 3.3
Summary of Changes in Pupils' Engagement Throughout the Implementation of KILAM+

Observation Aspect	Before Intervention	After Intervention
Reading Fluency	Reading by spelling out words with limited fluency	More fluent and accurate reading
Self-Confidence	Lacked confidence when reading aloud	Demonstrated greater confidence when reading in front of teachers and peers
Participation in Teaching and Learning	Passive and required continuous guidance	More active and responsive during reading activities
Engagement in Practice Activities	Inconsistent participation	More consistent participation throughout the intervention period

Source: KILAM+ Structured Observation and Document Analysis.

Based on observations conducted throughout the implementation of KILAM+, changes were observed in participants' engagement in learning activities. During the initial stage, some participants continued to rely on spelling out words when reading, demonstrated limited reading fluency, and required continuous guidance from teachers. Participants also showed low levels of self-confidence when asked to read aloud in front of teachers or peers.

Following their participation in the progressively structured intervention activities, participants demonstrated improvements in reading fluency. Their reading became more fluent and accurate as they were provided with opportunities to practise repeatedly through structured reading exercises and materials organised according to their proficiency levels. These changes were also evident in participants' work and learning progress records.

In terms of self-confidence, participants demonstrated greater willingness to read aloud and respond during reading activities. The use of positive reinforcement, motivation, and reading videos featuring the teacher's voice as part of the value-added elements (+) provided participants with opportunities to practise in a more supportive learning environment.

Regarding active participation, observations indicated that participants became increasingly engaged in reading activities and demonstrated greater consistency in completing the assigned exercises. The continuity of reading practice between school and home also provided participants with opportunities to reinforce the skills acquired in the classroom.

These changes indicate that the implementation of KILAM+ was associated not only with improvements in reading proficiency scores but also with positive changes in

participants' engagement in learning. Nevertheless, these findings should be interpreted within the context of the observations and documents collected throughout the study and should not be generalised to pupils beyond the research participants.

These findings are consistent with the view that teacher support, consistent practice, appropriate learning materials, and a supportive learning environment can help enhance pupils' engagement in literacy learning. Within the context of KILAM+, the value-added elements (+) supported the continuity of reading practice between school and home, while continuous assessment and observation enabled the researcher to adapt learning activities according to participants' progress.

Overall, the findings from structured observations and document analysis suggest that participants demonstrated positive changes in reading fluency, self-confidence, and active participation throughout the implementation of KILAM+. Evidence of these changes included a transition from reading by spelling out words to more fluent and accurate reading, greater willingness to read aloud, and more consistent engagement in learning activities and exercises. These findings address Research Objective 3 and complement the quantitative findings obtained through the comparison of pre-test and post-test results.

Summary, Implications and Recommendations

This action research was conducted to evaluate the use of KILAM+ in improving reading proficiency among upper primary pupils at SK Bandar Tawau II. The study involved 27 participants comprising Remedial Education pupils, a fully included pupil, and pupils with Special Educational Needs (SEN) who were identified as requiring reading interventions. The KILAM+ intervention focused on strengthening reading skills through a structured approach, particularly in reading words containing consonant-vowel-consonant (CVC) patterns, words containing diphthongs, and simple sentences. The pre-test findings revealed that participants' initial mean score was 37.1%, highlighting the need for systematic and continuous literacy interventions.

The implementation of KILAM+ over a period of 10 weeks, based on five main components—Identification, Intervention, Repetitive Practice, Analysis, and Reinforcement—was associated with positive changes in participants' reading performance. The mean score increased from 37.1% in the pre-test to 78.9% in the post-test, representing an improvement of 41.8 percentage points. A comparison of reading proficiency levels also revealed that the number of participants classified as Not Yet Proficient decreased from 12 pupils (44.4%) to 3 pupils (11.1%). At the same time, the number of participants who achieved Fluent Reading Proficiency increased from none to 11 pupils (40.7%). These findings indicate positive progress in participants' reading performance following the implementation of the KILAM+ intervention.

In addition to test performance, structured observations and document analysis were employed to examine participants' development throughout the intervention. Learning support through teacher guidance, repeated reading practice, home-based reinforcement activities, reading videos featuring the teacher's voice, continuous assessment, and positive reinforcement were among the elements incorporated into the KILAM+ approach. These value-added elements (+) were intended to support continuity of reading practice and

provide participants with opportunities to strengthen their reading skills according to their individual learning needs. Nevertheless, any specific changes in self-confidence, reading fluency, and active engagement should be described based on evidence obtained from structured observations and document analysis recorded throughout the study.

Overall, the research findings suggest that KILAM+ has the potential to serve as a systematic and continuous literacy intervention approach within the context of the research participants at SK Bandar Tawau II. The integration of identifying learning needs, implementing interventions, conducting repetitive practice, analysing progress, and reinforcing acquired skills provides a structured framework for intervention implementation. This approach also connects teacher guidance with home-based reinforcement activities to support participants' reading development.

All three research objectives were examined through the findings obtained from the pre-test and post-test, structured observations, and document analysis. Improvements in mean scores and changes in reading proficiency levels provide positive indications of participants' reading development following the implementation of KILAM+. However, these findings should be interpreted within the context of an action research study involving 27 participants from a single school and should not be directly generalised to all upper primary pupils. In conclusion, efforts to improve reading proficiency require a systematic, consistent, flexible, and continuous approach that takes into account pupils' individual proficiency levels and learning needs.

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