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Enhancing Arabic Reading Comprehension Through the Reference Epistemological Model

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ABSTRACT

Background: Reading comprehension (qirā'ah) is a fundamental skill in learning Arabic as a foreign language. As the complexity of texts and the demands of critical literacy increase, there is a need for a conceptual model that can map the cognitive and epistemic processes involved in understanding Arabic texts.
Purpose: This study explores the technical potential of the Reference Epistemological Model (REM) in enhancing students' qirā'ah comprehension.
Method: This study employs a qualitative approach with an exploratory case study design. Data were collected through text-based comprehension tests using authentic materials, semi-structured interviews, structured observations, and classroom documentation. Thematic analysis results indicate that the REM is effective in identifying students' conceptual representations, epistemic activities, and epistemic stances while reading Arabic texts.
Results and Discussion: The analysis reveals that most students are still operating at a literal level of comprehension, with limited use of inferential and reflective strategies. REM enabled researchers to identify specific epistemic gaps such as students' difficulty in drawing logical connections, evaluating arguments, and integrating prior knowledge with textual context. These findings confirm REM's potential as a tool for diagnosing learning obstacles and informing instructional decisions. Additionally, REM provides a structured basis for developing authentic reading assessments and designing learning strategies that encourage deeper cognitive engagement.
Conclusions and Implications: Contains one to two important sentences. This section provides a conclusion about the results of the research and what these results mean for us today, as well as the implications of the suggested research results for future research on the topic.

Keywords: *Arabic; Epistemological Reference Model; Reading Comprehension.*

ABSTRAK

Latar Belakang: Pemahaman bacaan (qirā'ah) merupakan keterampilan fundamental dalam pembelajaran bahasa Arab sebagai bahasa asing. Seiring meningkatnya kompleksitas teks dan tuntutan literasi kritis, diperlukan model konseptual yang mampu memetakan proses kognitif dan epistemik yang terlibat dalam memahami teks Arab.
Tujuan: Penelitian ini mengeksplorasi potensi teknis dari Reference Epistemological Model (REM) dalam meningkatkan pemahaman qirā'ah mahasiswa.
Metode: Penelitian ini menggunakan pendekatan kualitatif dengan desain studi kasus eksploratif. Data dikumpulkan melalui tes pemahaman berbasis teks otentik, wawancara semi-terstruktur, observasi terstruktur, dan dokumentasi kelas. Hasil analisis tematik menunjukkan bahwa REM efektif dalam mengidentifikasi representasi konseptual, aktivitas epistemik, dan sikap epistemik mahasiswa saat membaca teks Arab.
Hasil dan Pembahasan: Analisis menunjukkan bahwa sebagian besar siswa masih beroperasi pada tingkat pemahaman literal, dengan penggunaan strategi inferensial dan reflektif yang terbatas. REM memungkinkan para peneliti untuk mengidentifikasi kesenjangan epistemik spesifik seperti kesulitan siswa dalam menarik hubungan logis, mengevaluasi argumen, dan mengintegrasikan pengetahuan awal dengan konteks tekstual. Temuan ini menegaskan potensi REM sebagai alat untuk mendiagnosis hambatan belajar dan menginformasikan keputusan instruksional. Selain itu, REM menyediakan dasar terstruktur untuk mengembangkan penilaian membaca autentik dan merancang strategi pembelajaran yang mendorong keterlibatan kognitif yang lebih dalam.
Kesimpulan dan Implikasi: This study emphasizes that integrating the REM into the Arabic language teaching curriculum can serve as a reference point in efforts to enhance students' critical literacy and contextual reading skills.

Kata Kunci *Bahasa Arab; Epistemological Reference Model; Pemahaman Bacaan.*

INTRODUCTION

In the teaching of Arabic as a foreign language, reading (qirā'ah) is one of the key receptive skills that significantly determines the success of communication and text comprehension [1][2] .As new approaches in language pedagogy continue to develop, there is a growing need for theoretical models that can bridge the gap between linguistic theory and classroom practice.[3] [4] [5] One approach that has begun to attract attention is the Reference Epistemological Model (REM) [6], a framework developed to analyze cognitive and epistemic processes.[7]

Although numerous studies have explored reading comprehension in Arabic as a foreign language, most have focused primarily on linguistic features such as vocabulary acquisition and grammatical parsing, often neglecting the deeper cognitive and epistemic dimensions of text understanding. Existing pedagogical models tend to emphasize surface-level decoding rather than the internal mental processes involved in meaning-making. Moreover, while the Reference Epistemological Model (REM) has been applied in various educational contexts to analyze thinking processes, its integration into Arabic reading (qirā'ah) instruction remains limited and underexplored. There is currently a lack of research that systematically connects REM to practical reading comprehension strategies and assessment in Arabic language classrooms. Therefore, this study is necessary to address this gap by investigating the potential of REM as a conceptual and pedagogical framework for enhancing students' qirā'ah skills, particularly in fostering inferential and reflective comprehension.

There is currently no unified model of epistemological understanding to guide research, nor is there a single model that clearly articulates the relationship between personal epistemology and how epistemological beliefs change and develop.[8] Throughout their educational experience, students encounter new information and are required to interpret and evaluate it, both implicitly and explicitly.[9]

Through reference epistemology, it becomes possible to bridge the understanding of how knowledge, representation, and reader strategies contribute to the construction of meaning from a given text.[10] This approach emphasizes not only linguistic content but also considers background knowledge, epistemic assumptions, and the logical structure of discourse. Therefore, the Reference Epistemological Model (REM) holds potential for making technical contributions to the design of qirā'ah learning, particularly in the context of Arabic as a foreign language at the higher education level. The Reference Epistemological Model (REM) is a theoretical framework designed to analyze how learners engage cognitively and epistemically with knowledge, particularly during the process of interpreting texts. REM is structured around three interrelated components: (1) conceptual representations, which refer to the mental models readers form based on vocabulary, grammar, and textual structure; (2) epistemic activities, which include the cognitive operations involved in making meaning such as identifying arguments, making inferences, comparing ideas, or integrating prior knowledge; and (3) epistemic stances, which describe the reader's orientation toward knowledge whether they are passive receivers or active constructors of meaning. In the context of Arabic qirā'ah, REM helps to map how learners not only decode text but also process it deeply, engage critically, and reflect on its content. This makes REM a powerful diagnostic and pedagogical tool to inform the design of learning activities, assessments, and instructional materials in Arabic language education at the tertiary level.

Reading comprehension (*qirā'ah*) is a fundamental skill in learning Arabic as a foreign language, particularly for non-native speakers in higher education contexts. For Indonesian learners, *qirā'ah* serves as a primary gateway to accessing a wide range of Arabic texts religious, academic, cultural, and historical—which are essential for developing broader language competence and intercultural understanding. However, despite years of formal instruction, many students continue to struggle with *qirā'ah* proficiency. Common problems include over-reliance on word-for-word translation, limited vocabulary and syntactic awareness, lack of exposure to authentic texts, and difficulty in making inferences or evaluating arguments. These issues often stem from instructional approaches that emphasize rote memorization and literal comprehension over critical reading and deeper engagement with text meaning. As the demands of academic Arabic and critical literacy increase, there is a pressing need to develop pedagogical frameworks that go beyond surface-level decoding and foster higher-order reading processes. It is in this context that the Reference Epistemological Model (REM) emerges as a promising tool to bridge the gap between theory and practice in *qirā'ah* instruction.

However, practical studies and technical explorations of REM in the context of *qirā'ah* comprehension remain limited. Few studies have specifically examined how this model can be utilized to improve students' reading comprehension, especially in dealing with authentic texts of informative, argumentative, or narrative nature.

Specifically, literature related to teachers' beliefs about knowledge and learning known as epistemological beliefs can offer valuable insights into improving teaching and learning in higher education.[11]

Several previous studies have explored aspects of *qirā'ah* comprehension in the context of Arabic language learning as a foreign language. For example, a study by [12] investigated the challenges of *qirā'ah* instruction in universities. Meanwhile, earlier research in Malaysia discussed key scholarly perspectives on reading proficiency in Arabic as a foreign language.[13] In 2021,

research focused on determining Arabic teaching methods and techniques using a comprehensive approach.[14] Most recently, in 2024, a study explored and explained the application of *qirā'ah* methods used by teachers in Arabic language classes to improve students' reading abilities in Arabic texts.[15]

The Reference Epistemological Model (REM), as a theoretical framework that combines knowledge structures, cognitive processes, and epistemic stances in text comprehension, has only recently been introduced in the context of foreign language learning. However, this model has already seen extensive application in science education, particularly in mathematics.[16] [17] [18]

This study offers a novel contribution by introducing and operationalizing the Reference Epistemological Model (REM) in the domain of Arabic as a foreign language, specifically in the context of qirā'ah (reading comprehension). While REM has been widely applied in science education, particularly mathematics, its use in foreign language pedagogy remains largely unexplored. By integrating the dimensions of knowledge structure, epistemic activity, and epistemic stance into a cohesive analytical framework, this research advances the theoretical application of REM within language education. Practically, the study provides a foundation for designing diagnostic tools, learning strategies, and assessment rubrics that support deeper, more meaningful engagement with Arabic texts. Thus, the study contributes both to the expansion of epistemological models in applied linguistics and to the pedagogical innovation of qirā'ah instruction in higher education.

Consequently, this research opens new horizons in the development of Arabic language teaching models that go beyond evaluating learning outcomes to delve more deeply into the learners' cognitive and epistemic processes.

LITERATURE REVIEW

Reading Comprehension in Arabic Language Learning

Reading comprehension is one of the important receptive skills in learning a foreign language. [19][20], including Arabic. It extends beyond the mechanical recognition of letters and sentence structures to involve more complex cognitive processes such as inferring meaning, interpreting textual context, and evaluating discourse content.[21] In the context of higher education, in-depth reading skills are the foundation for mastering academic texts, classical literature, and contemporary Arabic texts.[22] [23] A review of previous research reveals that most *qirā'ah* studies have concentrated on linguistic components such as vocabulary, morphology, and syntax or on strategy training focused primarily on surface-level text decoding. These approaches, while important, are increasingly insufficient given the growing emphasis on critical literacy in 21st-century education. Recent calls in language pedagogy advocate for models that can explain not just what readers understand, but how they construct understanding through reflective, inferential, and epistemic engagement.[24]

Reference Epistemological Model (REM): Concepts and Applications

The Reference Epistemological Model (REM) is a theoretical framework originally developed in the context of science education [25], to account for the complex interplay between knowledge structures, cognitive activity, and epistemic orientation during learning. In REM, learningespecially meaning-making is seen as a dynamic process shaped by three interconnected dimensions:

a. Conceptual Representation, which is how knowledge is organized in the learner's mind.[26]
b. Epistemic Activity, which includes how readers interpret, evaluate, and reflect on information.[27]

c. Epistemic Attitude, which reflects the reader's view of knowledge, such as a belief in the non-absoluteness of information or an openness to revision of understanding.[28]

The Potential of REM in Arabic Reading Comprehension

The application of REM in the context of Arabic reading comprehension provides a new approach to developing high-order thinking skills. Readers of Arabic texts are often faced with texts that are dense with information and full of implicit meaning.[29] Despite the emergence of models addressing metacognition and strategy use in reading, existing studies in Arabic reading comprehension rarely address the epistemic dimension of comprehension. Most research remains focused on linguistic performance, vocabulary acquisition, or structural analysis of texts. Furthermore, even though REM has been applied extensively in science and mathematics education to explain concept formation and learning processes, its integration into Arabic language pedagogy—especially in *qirā'ah*—is virtually absent.

No studies to date, to our knowledge, have holistically applied REM to analyze Arabic reading comprehension by integrating all three of its dimensions: conceptual, cognitive, and epistemological. As such, there remains a critical gap in models that (1) capture the depth of students' meaning-making processes, (2) assess how they epistemically engage with Arabic texts, and (3) inform pedagogical design that cultivates higher-order literacy skills in a foreign language context.

Gaps in Research and Pedagogical Implications

This study responds to that gap by offering a novel application of the Reference Epistemological Model in Arabic language education, specifically in analyzing how learners comprehend qirā'ah texts. Theoretically, it extends REM from its original domain in science education into applied linguistics, enriching our understanding of reading as a multi-dimensional cognitive-epistemic process.

REM offers pedagogical opportunities to build more meaningful qirā'ah learning that is oriented towards the thinking process. This is in line with the needs of 21st-century education that emphasizes critical literacy skills, reflection, and meaning construction.

By bridging the gap between epistemological theory and practical classroom application, this research contributes to a paradigm shift in *qirā'ah* pedagogy from decoding-based instruction toward meaning-based, critically engaged reading in Arabic as a foreign language.

METHOD

This study employs a qualitative approach with an exploratory case study design [30][31], aimed at identifying and analyzing the technical potential of the Reference Epistemological Model (REM) in enhancing qirā'ah (reading comprehension) among students learning Arabic as a foreign language.

The study adopts an embedded single-case design, where the overarching case is the *qirā'ah* learning process, and the embedded units of analysis include (1) individual student reasoning, (2) comprehension patterns, and (3) epistemic engagement with Arabic texts. This design allows for a focused exploration of reading as a dynamic meaning-making activity within its learning context.

Participant

The participants were 19 students (see table 1) from the Arabic Language Education Study Program at a state university in Indonesia who had completed both Intermediate and Advanced *Qirā'ah* courses. All participants were selected through total sampling based on their participation in the IKHFA Arabic proficiency test conducted in April 2025 (see table 2).

Table 1. Participant demographics can be seen in table 2

Characteristic	
Age range	17-19 years
Semester level	1
Gender	
Female	12 persons
Male	7 persons
Educational background	
madrasah	5
SMA	14

The quantitative scores were not statistically analyzed. Instead, they were used to classify levels of comprehension (high, moderate, low), which then informed the qualitative interpretation of students' reading behavior. The main analysis relied on qualitative data derived from interview transcripts, text-based reasoning tasks, and students' written reflections on Arabic reading passages.

The test results served a dual function:

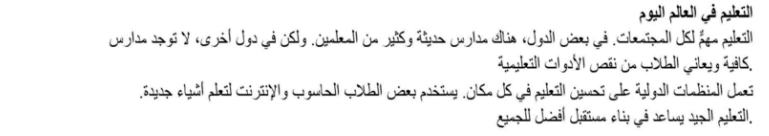
a. To identify comprehension level groupings for purposeful analysis,

b. To provide diagnostic triangulation of students' reasoning strategies.

Table 1. Student test results

No.	Group	Tags	Unfocus Count	Point Max	Point
1	S1 Ikhfa - April Batch 1		5	140	154
2	S1 Ikhfa - April Batch 1		0	140	146
3	S1 Ikhfa - April Batch 2		0	140	143
4	S1 Ikhfa - April Batch 1		0	140	141
5	S1 Ikhfa - April Batch 2		1	140	141
6	S1 Ikhfa - Mei Batch 1		0	140	141
7	S1 Ikhfa - April Batch 1		0	140	137
8	S1 Ikhfa - April Batch 2		0	140	136
9	S1 Ikhfa - April Batch 2		0	140	131
10	S1 Ikhfa - April Batch 1		0	140	131
11	S1 Ikhfa - April Batch 1		1	140	130
12	S1 Ikhfa - Mei Batch 1		0	140	130
13	S1 Ikhfa - Mei Batch 1		3	140	126
14	S1 Ikhfa - April Batch 1		3	140	122
15	S1 Ikhfa - April Batch 1		1	140	115
16	S1 Ikhfa - April Batch 1		2	140	113
17	S1 Ikhfa - April Batch 2		0	140	110

Text analysis was carried out through one of the text discourses given to participants (see figure 1)


التعليم في العالم اليوم
التعليم مهمٌ لكل المجتمعات. في بعض الدول، هناك مدارس حديثة وكثير من المعلمين. ولكن في دول أخرى، لا توجد مدارس كافية ويعاني الطلاب من نقص الأدوات التعليمية.
تعمل المنظمات الدولية على تحسين التعليم في كل مكان. يستخدم بعض الطلاب الحاسوب والإنترنت لتعلم أشياء جديدة.
التعليم الجيد يساعد في بناء مستقبل أفضل للجميع.

Picture 2. Reading comprehension questions (source: Ikhfa test April 2025, owner: Universitas Pendidikan Indonesia)

Data Collection

Data were collected through multiple qualitative sources:

a. Text-based comprehension tasks using authentic Arabic texts (e.g., expository and argumentative genres).
b. Semi-structured interviews exploring how students process, interpret, and reflect on the content they read.
c. Structured classroom observations focusing on students' interaction with texts and learning materials.
d. Documentation, including test results, class notes, student written responses, and transcripts of classroom interactions.

The IKHFA scores were not statistically analyzed but served to categorize students into comprehension levels, helping guide purposeful selection and thematic interpretation.

Data Analysis

The data were analyzed thematically by referring to the dimensions in the Epistemological Reference Model, including conceptual representation [32][33] how students represent the meaning of the text. Epistemic activity: how the reasoning process is carried out to understand the structure and meaning of the text. Cognitive process [34]: identification of reading strategies, semantic inference, and metacognitive control. Contextual suitability: the relationship between discourse structure, reading goals, and students' background knowledge.

The analysis was carried out through three stages: data reduction, data presentation, and drawing conclusions, in accordance with the procedures of Miles and Huberman.[35] Data validity was maintained through source triangulation, technical triangulation, and member checking.

The main objectives of this analysis were: Identifying the extent to which REM is able to map students' difficulties and potential in understanding the text. exploring the possibility of applying REM as a framework in designing learning instruments and evaluating understanding of qirā'ah. Finally, compiling technical recommendations for the application of REM in learning Arabic as a foreign language at the tertiary level.

To operationalize the analysis, each REM dimension was coded with specific indicators (see table 3):

Table 3. REM dimension

REM Dimension	Indicator in Data	Source
Conceptual Representation	Accuracy and structure of prior knowledge recall; clarity of paraphrasing text meaning; concept mapping	Student written responses, interviews

Epistemic Activity	Use of inference, synthesis, comparison, argument identification, and contextual reasoning	Think-aloud responses, interview coding
Epistemic Attitude	Expressions of doubt, openness to alternative interpretations, justification of viewpoints	Interview dialogue, classroom reflection

RESULT AND DISCUSSION

Result

Conceptual Representation

REM presents an approach that not only assesses what the reader understands, but also how that understanding is formed. In the realm of qirā'ah, REM emphasizes three main dimensions (see Table 4).

Table 4. Main dimensions of REM on Arabic Reading Comprehension

Dimention	Description
Knowledge Structure	How the reader organizes lexical, grammatical, and cultural knowledge into a mental system that can be accessed when reading Arabic texts.
Epistemic Activity	The mental activities carried out by the reader to construct meaning, such as comparing information, drawing conclusions, identifying arguments, and connecting different parts of the text.
Epistemic Stance	The reader's view of the text as a source of knowledge; whether they passively accept information or critically evaluate and interpret the content based on their own cognitive framework.

(source: author's work)

The results of the fahm al-maqru' test show that the majority of students are at the basic vocabulary recognition level, but have not yet reached the conceptual understanding stage. This is clearly seen when students are faced with texts such as **التعليم في العالم اليوم**.

The results of the test indicate that most students are still operating at the basic vocabulary recognition level, without reaching conceptual comprehension. For example, in the text titled **التعليم في العالم اليوم**(Education in the World Today), students successfully identified lexical items such as **المدارس**(schools) and **الطلاب**(students), but failed to grasp the main ideas related to global educational challenges.

Many were unable to interpret abstract or technical terms like **التعليم الإلكتروني**(e-education), **الفجوة الرقمية**(digital divide), or **التحديات العالمية**(global challenges), which were central to the text. This shows a significant gap between **linguistic competence** (word-level understanding) and **discourse competence** (understanding ideas, argumentation, and context).

Only a few students demonstrated awareness of inferential reading strategies, such as: drawing conclusions from contextual clues, identifying implied meanings, evaluating the internal logic of a text. Most participants stopped at literal interpretation, even when the text presented idiomatic or inferential expressions like **يعاني من نقص الأدوات التعليمية**(suffers from a lack of educational tools). They tended to translate word-for-word without processing underlying meaning or intent.

Text based Test Responses

Most students demonstrated partial understanding of vocabulary but lacked coherent conceptualization of overall text meaning. For example, in response to the text **التعليم في العالم اليوم**, students correctly identified terms like **المدارس** and **الطلاب**, but struggled to connect these to broader themes such as digital transformation or educational equity.

Interview excerpt

"*I know what* **الطلاب** *means, but I don't understand why it's called* **تحديات عالمية**, *what does that mean*??" (P3)

This quote shows lexical recognition without integrative comprehension. Students recognized familiar nouns but failed to link these to abstract or systemic issues, indicating gaps in conceptual representation.

"*I just translate word for word. Sometimes it fits, sometimes it doesn't. But I don't know what to do if the context is different.*" (P7)

Only 3 of 19 participants mentioned strategies like predicting meaning from context. When asked whether they believed the content of the text or questioned it, most students responded passively:

"*If the text is from a lecturer or from an exam, it means it is definitely correct, you just need to understand it.*" (P9)

This response shows a epistemic stance the assumption that texts are authoritative and unchallengeable, which limits critical comprehension.

Observation field notes

Observers noted that during group reading tasks, students often paused on unfamiliar terms without attempting to infer meaning from surrounding context. Translation was done word-by-word, and little discussion emerged about main ideas or textual cohesion. During think-pair-share reading activities, students rarely questioned or discussed text coherence. Most interactions centered around dictionary consultation or verifying word meanings. Observers coded these as lexical-analytical, rather than inferential-integrative behaviors.

REM is very relevant in understanding Arabic texts because of the characteristics of Arabic which has a complex morphological structure [36], high idiomatic usage [37], and semantic depth that requires contextual interpretation. With REM, teachers and researchers can be more precise in identifying the comprehension strategies used by learners and designing assessments that not only measure the final results, but also the underlying thinking processes.

Discussion

This study examines in depth the technical potential of the Reference Epistemological Model (REM) in understanding the cognitive and epistemic mechanisms involved in the qirā'ah process. The findings were obtained through analysis of data collected from classroom observations, documentation of qirā'ah test results, in-depth interviews with students. The analysis was conducted using a phenomenological and qualitative interpretative approach.

Students' Conceptual Representation of Text

One of the main findings shows that students tend to have a surface-level understanding of texts.[38] They can identify literal units of information but have difficulty in building semantic and conceptual connections between sentences and paragraphs.

For example, in a text themed **التعليم في العالم اليوم**, most students are able to recognize terms such as **المدارس** or **الطلاب**, but fail to connect them to the main idea of global challenges in education.

However, recognition of these vocabulary words does not necessarily indicate a complete understanding of the text's content. When students are asked to answer questions related to the main idea of the text for example, about global challenges facing education today, such as inequality of access, technological developments, or the transformation of digital learning they have difficulty. Most failed to identify that words such as **التعليم الإلكتروني** (e-education), **الفجوة الرقمية** (digital divide), or **التحديات العالمية** (global challenges) are closely related to the main issues discussed in the text.

This shows that although individual vocabulary mastery is quite good, students have not been able to integrate these words into a broader discourse context. In other words, they understand the meaning of words separately, but have not been able to understand the relationship between sentences or ideas in the text as a whole. As a result, they tend to focus on surface information, rather than on the deeper meanings built through argumentative structures and semantic relations between parts of the text.

This limitation indicates a gap between lexical vocabulary mastery and the ability to understand texts conceptually. In this context, a learning approach that only focuses on vocabulary quantity is less effective in supporting critical and reflective reading competencies. Therefore, a model is needed that not only teaches "what words mean", but also "what is the role of words in building the meaning of the text" and this is where the REM framework becomes relevant.

REM facilitates the mapping of this meaning construction process through an epistemic question framework, such as "What do I know?", "How do I know this?", and "How do I know I'm right?" Thus, REM provides a diagnostic tool to identify which conceptual representations are fragile, limited, or well-integrated.

Interview dialogue with participants, they construct questions in convincing their answers are correct by connecting the knowledge they know.

"*sure not sure, but looking at the context of the reading it seems right*" (P1, direct interview).

Epistemic Activities Activated While Reading

It was found that only a small number of participants consciously used inferential reading strategies, such as making inferences based on context, grouping information, or drawing conclusions from text fragments. REM allows mapping of these epistemic activities and identifying gaps between the strategies used and the demands of text complexity.

The data show that most students have not developed adequate inferential reading skills. When faced with expressions such as **يعاني من نقص الأدوات التعليمية**, students tend to stop at the lexical meaning of each word, without interpreting the idiomatic meaning or implicit meaning implied. Epistemic activities such as confirming inferential meanings, drawing conclusions from partial information, or testing the logic of text arguments are still not actively used.

REM is technically able to explore this inferential dimension through the classified categories of epistemic activities [39] (classifying, comparing, concluding, evaluating), so that the reading process is not only seen from the final understanding results, but also from the way of thinking used in forming this understanding.

Contextual Appropriateness and Barriers to Understanding

Although the texts used were at CEFR A2–B1 levels and related to education (e.g., the theme **التعليم في العالم اليوم**), participants still showed difficulties in understanding specific terms such as **نقص الأدوات التعليمية** or **يعاني من مشكلة التمويل**. The REM analysis showed that the main obstacle

was not solely vocabulary, but rather the limited ability to integrate the social, pragmatic, and semantic contexts of the text.

The findings revealed that many students relied on basic strategies such as translating word for word or memorizing equivalents, without actively monitoring their understanding. In observations, for example, participants showed no attempt to correct misunderstandings when ambiguities occurred in the text. They also do not actively engage in self-questioning or summarizing [40], two important metacognitive strategies in qirā'ah.

REM is able to identify the absence of these metacognitive processes and emphasizes the importance of reflective thinking training in teaching reading. The technical potential of REM in this case lies in its ability to visualize and assess the level of student reflection on the text being read.

Technical Potential of REM in Test Design and Learning

REM is considered effective in mapping the strengths and weaknesses of students, especially in understanding informative texts with complex structures. This framework is also useful as a basis for developing diagnostic evaluation instruments and teaching materials that are more contextual and strategy-based. Technically, REM can be used to: Design qirā'ah tests based on cognitive processing and context. Develop assessment rubrics that consider the depth of understanding, not just the correct answers. Encourage the application of explicit reading strategies in learning.

The technical potential of REM is explicitly seen in its ability to:

1. Analyze the strengths and weaknesses of reading comprehension based on layers of thinking processes [41], not just right-wrong answers;
2. Become a basis for designing context-based qirā'ah tests and different levels of thinking (Bloom's taxonomy)[42];
3. Provide a framework for teachers to develop more dialogic and reflective learning strategies, especially in developing awareness of reading strategies [43];
4. Become a diagnostic tool in determining the epistemic stage [44] of students, so that learning is more personal and differential;
5. Support the design of authentic assessment rubrics that integrate aspects of the process, not just the results.

This model also opens up space for integration between linguistic and epistemic abilities, which makes Arabic language learners active seekers of meaning, not just passive recipients of information. Therefore, REM can be a strong foundation in learning qirā'ah based on deep reading and critical literacy.[45]

Furthermore, in practice, several things were obtained:

First, analysis of how learners build understanding of Arabic texts, from the literal to the inferential and evaluative levels. Second, identification of epistemic barriers that occur when learners are unable to associate vocabulary with contextually relevant meanings. Third, designing pedagogical interventions based on thinking processes, such as guiding students to ask themselves while reading: "What does this word mean in this context?", "How does this information support the main idea?", and the like.

These results support the importance of using testing and teaching models that integrate epistemic dimensions, such as those offered by the Reference Epistemological Model (REM), to help students understand not only "what the word is", but also "why the word appears there and

for what purpose"

Thus, REM not only provides a theoretical contribution to the development of an epistemic approach in language education, but also becomes an applicable technical tool in the design of learning and evaluation of understanding Arabic texts in a more meaningful, contextual, and personal way (see table 5)

Table 5. REM Diagram

REM Dimension	Definition	Indicators in Student Reading	Technical Application in Learning & Assessment
Conceptual Representation	How the reader organizes lexical, grammatical, and cultural knowledge into coherent mental models.	- Recognizing and relating key terms - Identifying main ideas and topic flow	- Diagnose vocabulary discourse gaps - Design pre-reading concept-mapping activities
Epistemic activity	Cognitive processes used to build meaning: comparing, evaluating, inferring, connecting.	- Making inferences -Drawing conclusions - Synthesizing across text	- Develop higher-order *qirā'ah* tasks (e.g., infer meaning, detect arguments) - Scaffold reasoning prompts
Epistemic stance	Learner's orientation toward knowledge: acceptance, skepticism, critical reflection.	- Justifying answers - Questioning text authority - Reflective responses	- Encourage dialogic reading logs - Design rubrics with reflection/self-assessment layers

CONCLUSION AND IMPLICATIONS

This study demonstrates that the Reference Epistemological Model (REM) offers notable diagnostic and pedagogical value in enhancing Arabic reading comprehension (qirā'ah) among language learners. REM provides a structured lens for analyzing the cognitive and epistemic processes students engage in while interacting with Arabic texts—ranging from conceptual representation and epistemic activity to metacognitive awareness.

Specifically, REM enables the identification of students' comprehension limitations, which predominantly remain at the literal level, and reveals the challenges they face in generating inferences and interpreting contextual meaning. It also facilitates the mapping of learners' thinking patterns, highlighting the extent to which inferential and reflective strategies are employed during reading. Moreover, REM-based analysis clarifies that reading difficulties often stem not only from limited vocabulary, but from a lack of integration between prior knowledge and socio-textual context.

Taken together, these findings underscore REM's utility as both a theoretical framework for understanding reading processes and a practical tool for informing instructional design. Future research and pedagogical applications may explore how REM can support the development of curriculum, authentic assessment rubrics, and teaching strategies that foster deeper, more critical engagement with Arabic texts.

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