



Semarak International Journal of Current Research in Language and Human Studies

Journal homepage:
<https://semarakilmu.my/index.php/sijcrlhs/index>
ISSN: 3083-9572



The Effectiveness of the I See, I Think, and I Wonder (ISITIW) Method in Assessing Arabic Vocabulary Mastery among Arabic Language Teachers and Secondary School Students

Atiqah Nasuhah Zulkifli¹, W Omar Ali Saifuddin Wan Ismail^{1,*}, Farahiah 'Adila Mohamad Zaki¹, Naurah Khairina Hanafi¹, Ulfa Su'aida Ahmad Fared¹, Sharizal Ahmad Sobri²

¹ Pusat Pengajian Pendidikan, Fakulti Pengajian Kontemporari Islam, Universiti Sultan Zainal Abidin, 21300 Kuala Nerus, Terengganu, Malaysia

² Department of Engineering, Nottingham Trent University, Clifton Campus, Nottingham N11 8NS, United Kingdom

ARTICLE INFO

Article history:

Received 30 October 2025

Received in revised form 12 January 2026

Accepted 12 February 2026

Available online 23 February 2026

ABSTRACT

This study investigates the effectiveness of the I See, I Think, I Wonder (ISITIW) strategy as a 21st-century learning approach in Arabic language education for secondary school students. Although ISITIW is widely recognized as a visible thinking routine that promotes observation, interpretation, and inquiry, its application in Arabic classrooms remains limited. To address this gap, a quantitative survey design was employed involving 50 Arabic language teachers and 101 students from secondary schools in Pahang. Data were collected using two structured questionnaires on a five-point Likert scale and analyzed with SPSS to generate descriptive statistics. The research focused on three aspects: the effectiveness of ISITIW in improving vocabulary acquisition, its role in promoting active participation and critical thinking, and perceptions of its practicality and suitability for diverse proficiency levels. Findings revealed strong positive responses from both teachers and students. Results show that teachers rated the strategy highly for improving vocabulary mastery ($M = 4.2760$), promoting active engagement ($M = 4.1533$), and supporting comprehension of topics ($M = 4.3000$). Similarly, students agreed on its effectiveness for vocabulary mastery ($M = 4.0759$), active engagement ($M = 4.0429$), and understanding lesson content ($M = 4.2698$). High mean scores across engagement-related items confirm that ISITIW fosters active participation and higher-order thinking, aligning with principles of learner-centered pedagogy and inquiry-based learning. Overall, ISITIW demonstrates significant pedagogical value as a practical and adaptable strategy for Arabic language instruction. By encouraging observation, interpretation, and questioning, the method not only strengthens vocabulary acquisition but also promotes metacognitive development and collaborative learning. The study concludes that ISITIW is an effective and learner-centered approach that enhances teaching and learning outcomes in Arabic language education. It recommends broader integration of ISITIW into Arabic classrooms and suggests future research to explore its impact on other linguistic skills, such as reading comprehension and writing, as well as its long-term effect on vocabulary retention.

Keywords:

I see I think I wonder; Arabic language teaching; vocabulary mastery; student engagement; critical thinking

* Corresponding author.

E-mail address: woasaifuddin@unisza.edu.my

1. Introduction

1.1 Research Background

This study specifically focused on the “I See, I Think and I Wonder” activity as an active learning approach. In the “see” stage, students closely observe the artwork and record their impressions by describing it using nouns, adjectives and verbs. In the “think” stage, they analyse these observations, make connections and explore the underlying meanings. Finally, in the “wonder” stage, students formulate questions about aspects of the artwork that remain unclear and identify the elements they wish to explore further [1]. The process unfolds in several stages, 1) In the “see” stage, students begin by observing carefully, focusing on key elements and describing their observations using descriptive sentences that include nouns, verbs and adjectives. They also create sketches based on their observations and share their insights with their peers; 2) In the “think” stage, students analyse their observations from the “see” stage by generating additional descriptive words to deepen their understanding. This stage encourages students to consider multiple perspectives and make inferences and interpretations regarding the meaning, message or purpose of a particular element; 3) In the “wonder” stage, the activity concludes with a questioning session during which the teacher provides background information about the learning content. This sparks curiosity and encourages further exploration. Students discuss their thoughts, fostering collaborative learning and critical reflection and 4) In the final step, students reflect on their learning experiences and all the notes they recorded during the “think” stage. Overall, the ISITIW activity enhances students’ observation skills, critical thinking, and appreciation of art, thereby enriching their understanding of the learning content. This kit employs the “I See, I Think and I Wonder” (ISITIW) thinking routine, a structured three-step process that encourages children to observe artwork, analyse their observations and engage with the artwork through inquiry [1]. Learning styles refer to the different methods preferred by individuals to acquire, process, and retain information. One popular model is the Visual, Auditory, and Kinesthetic/Tactile (VAK) learning style, which suggests that learners have different preferences for learning through visual, auditory, or kinesthetic/tactile modes [2]. Each individual has a unique learning style, and their ability to understand lessons varies. Some students grasp information more easily by looking at pictures, others through the teacher’s explanation, while some understand best when actively engaged through practice or experiments [3]. Students should be given the opportunity to choose how they acquire knowledge and demonstrate their learning, in ways that align with their individual needs and preferences [4].

Teachers should implement learning strategies such as differentiated instruction to address the diverse needs of students. In accordance with the recommendations of the Ministry of Education (KPM), teachers are expected to integrate 21st Century Learning (PAK-21) approaches into their lessons, including strategies such as ISITIW, Mind Mapping, Role Play, and other relevant activities. Previous studies have also defined these skills as learning skills, creativity, critical thinking, the ability to collaborate, and the capacity to use ICT (Information and Communication Technology) as required [5].

1.2 Problem Statement

Although the implementation of 21st Century Learning (PAK-21) has become a key focus in the Malaysian education system, the use of thinking-based strategies such as ISITIW remains underexplored, particularly in the context of Arabic language instruction. Previous studies have emphasized the importance of student-centred learning and active engagement; however, empirical evidence regarding the effectiveness of ISITIW in enhancing Arabic vocabulary mastery and critical thinking skills among secondary school students is limited. This situation indicates a need for a deeper investigation into how thinking-based strategies can support learning outcomes in the context of foreign language education [5]. Furthermore, the effectiveness of ISITIW in stimulating students’ active engagement during the teaching and learning process has not been comprehensively assessed [1]. This issue is particularly complex in classrooms with students of varying abilities and motivation levels. Teachers also face challenges such as limited familiarity with thinking routines, time constraints, and uncertainty about students’ responsiveness to these strategies. These factors create a research gap in understanding the extent to which ISITIW truly influences student learning outcomes and

teacher effectiveness. Therefore, this study aims to evaluate the effectiveness of ISITIW from both teacher and student perspectives. The study focuses on how the strategy can enhance students' vocabulary mastery, encourage active classroom participation and support understanding of lesson content. This research is expected to provide valuable insights into the application of ISITIW as a PAK-21 approach in Arabic language education and offer practical guidance for teachers in implementing thinking-based strategies in the classroom.

1.3 Research Objectives

This study aims to examine the effectiveness of the ISITIW strategy as a 21st Century Learning (PAK-21) approach among Arabic language teachers and secondary school students. The specific objectives of this study are as follows, for teachers, 1) To analyse the effectiveness of the ISITIW strategy in improving students' mastery of Arabic vocabulary; 2) To evaluate the level of students' active engagement during the teaching and learning process using the ISITIW strategy and 3) To identify perceptions regarding the use of the ISITIW strategy in facilitating students' understanding of specific topics. Then for students, 1) To analyse the effectiveness of the ISITIW strategy in enhancing the mastery of Arabic vocabulary; 2) To assess the level of students' active engagement during the teaching and learning process using the ISITIW strategy and 3) To identify perceptions regarding the use of the ISITIW strategy in supporting students' understanding of a given topic.

In other words, failing to employ an explicitly multi-objective approach may result in the loss of critical information needed to thoroughly evaluate or understand the agents [6]. A study must have clear objectives to prevent deviation and to achieve the desired outcomes, thereby ensuring the validity and effectiveness of the overall research process.

Observation- and inference-based strategies, such as the "I See, I Think, I Wonder" (ISITIW) routine, have been widely recognized for their effectiveness in enhancing vocabulary acquisition and strengthening the link between visual experiences and linguistic processing. In the context of Arabic language instruction, ISITIW enables teachers to use visual stimuli as a catalyst for meaning-making, thereby facilitating deeper and more effective mastery of vocabulary. By engaging with sensory-rich materials and making inferences, students develop a more accurate understanding of word meanings and retain them longer, as the process stimulates critical thinking and reinforces cognitive connections. Furthermore, by fostering curiosity and analytical skills, the routine encourages learners to move beyond surface-level observations, enabling them to generate more meaningful insights and interpretations [7].

Moreover, active student engagement is a crucial indicator of effective teaching strategies. ISITIW promotes active learning by encouraging students to participate directly rather than passively receiving information. This is particularly important, as active participation constitutes a core component of the teaching and learning process and remains a central concern for educators [8]. Research in 21st-century learning contexts suggests that when students are given opportunities to express what they see, think, and wonder, they engage in higher-level cognitive and social interactions, which in turn enhance motivation, focus, and learning outcomes. Accordingly, evaluating active engagement within ISITIW is both relevant and justified, as such engagement is critical for the effectiveness of modern teaching practices. Adhering to this instructional cycle has been shown to refine and improve teaching practices and is widely adopted by research-oriented educators [9].

In addition, the perceptions of both teachers and students significantly influence the classroom effectiveness of ISITIW. Teachers who regard the strategy as easy to implement and suitable for their students are more likely to employ it consistently, while students who perceive the routine as helpful in understanding lesson content demonstrate higher levels of acceptance. Therefore, considering both perspectives is essential to ensure that ISITIW is effective in both theory and practice, with clear objectives and multiple perspectives further enhancing the reliability and validity of research findings [3].

Beyond classroom perceptions, inquiry-based learning strategies have been shown to enhance vocabulary retention by enabling learners to connect new lexical items with their prior knowledge. Consequently, these strategies are adaptable across different proficiency levels and offer significant potential for improving

vocabulary acquisition in Arabic language instruction [10]. Aligned with the principles of visible thinking, which emphasize observation, interpretation, and inquiry, such approaches foster cognitive engagement and help learners make meaningful connections between language and real-world contexts [10,11]. Additionally, inquiry-based practices support the development of analytical processing and comprehension, providing teachers with a reliable means of assessing students' language understanding [7].

Furthermore, visual-inquiry routines like ISITIW strengthen cognitive engagement, memory retention, and higher-order thinking skills [12-14]. Complementing this, constructivist and collaborative approaches emphasize contextualized learning and peer interaction, further promoting meaningful vocabulary development [15] and Febriani *et al.*, [16]. Together, these strategies exemplify a learner-centered pedagogy that nurtures observation, interpretation, critical thinking, and active engagement in language learning.

Importantly, ISITIW is both practical and highly effective, integrating active, contextual, and metacognitive strategies that support durable vocabulary acquisition and learner autonomy [17], [18-20] and Karatas *et al.*, [21]. Its suitability for secondary learners aligns with research on context embedded vocabulary instruction and constructivist approaches in Arabic language education [6] and Maimunah *et al.*, [22]. Overall, these findings confirm that ISITIW embodies a modern, learner centered approach that fosters observation, interpretation, critical thinking, and meaningful engagement, making it a robust and versatile strategy for language instruction.

2. Methodology

2.1 Research Design

This study uses a survey-based quantitative research design. This methodology was chosen because it allows the researcher to methodically gather information about teachers' and students' opinions about how well the ISITIW method improves Arabic vocabulary understanding. When researchers want to comprehend the opinions of a population using standardized and quantifiable questionnaire instruments, a survey research design is suitable [23]. The quantitative technique is used since it enables statistical studies to be carried out in order to evaluate respondents' inclinations, agreement levels, and perceptual patterns about the application of the ISITIW strategy in teaching and learning. Given that quantitative data offer a more objective portrayal than qualitative approaches alone, the global trend toward a broader application of quantitative methodologies in post-pandemic educational research further supports this design decision [24].

2.2 Population, Location, and Sampling

Arabic language teachers and students registered in Arabic language classes in the state of Pekan, Pahang are the two main groups involved in this study. 50 educators and 101 state secondary school students make up the research sample. These two groups were chosen because they actively participate in the ISITIW method of teaching and memorizing Arabic language. The sample was chosen to make sure it could appropriately meet the research objectives and fit the predefined criteria. The surveys were sent to the students via their individual Arabic language teachers to promote broader and more efficient participation. This method guarantees that feedback-giving respondents participated in ISITIW activities throughout vocabulary learning sessions.

2.3 Research Instrument

Two structured questionnaire instruments were created by the researcher using Google Forms. This platform was chosen because it makes data collecting quick, gives respondents simple access, and enables the researcher to download data in forms that work with statistical analysis software like SPSS. Two sets of ten-item questionnaires were created, one for teachers and one for students. The items were broken down into four sections with is Section A contained information about the respondents' demographics, Section B examined how well the ISITIW strategy improved vocabulary mastery, Section C assessed the degree of students' active participation during the implementation of ISITIW and Section D asked respondents how they

felt ISITIW supported vocabulary comprehension and assessment. A five-point Likert scale was used to measure each item. Since a Likert scale yields numerical data that is consistent, standardized, and simple to statistically analyze, its usage was judged appropriate [25]. Additionally, because it methodically gauges respondents' level of agreement, this scale is frequently employed in educational research, especially when assessing the efficacy of teaching tactics.

2.4 Data Collection Procedure

The data collection process for this study involved several systematic steps as follows: i) The researcher developed two sets of questionnaires in Google Forms based on the research objectives; ii) The questionnaires were distributed to Arabic language teachers and students through official communication platforms such as WhatsApp and Telegram; iii) Respondents were provided with a brief explanation of the purpose of the study, confidentiality of information, and the estimated time required to complete the questionnaire; iv) A sufficient response period was given to ensure that respondents could complete the questionnaire without pressure; v) Upon completion of data collection, the researcher downloaded all responses in Excel format and subsequently imported them into SPSS for data cleaning. Digital data collection methods are increasingly accepted in educational research as they not only minimize operational costs but also enhance response rates and improve the efficiency of information processing [26].

2.5 Data Analysis

The Statistical Package for the Social Sciences (SPSS) version 31.0 was used to handle the data gathered from the questionnaire sets in order to produce descriptive statistical analyses, such as means, standard deviations, and percentages. The efficiency of the ISITIW method, the degree of student participation, and opinions regarding the usage of ISITIW were the three dependent variables in the study. The mean scores obtained from the respondents' questionnaire responses were used to measure these factors. The respondents' opinions about the ISITIW method's efficacy in teaching and learning Arabic vocabulary were presented and explained using descriptive statistics [27].

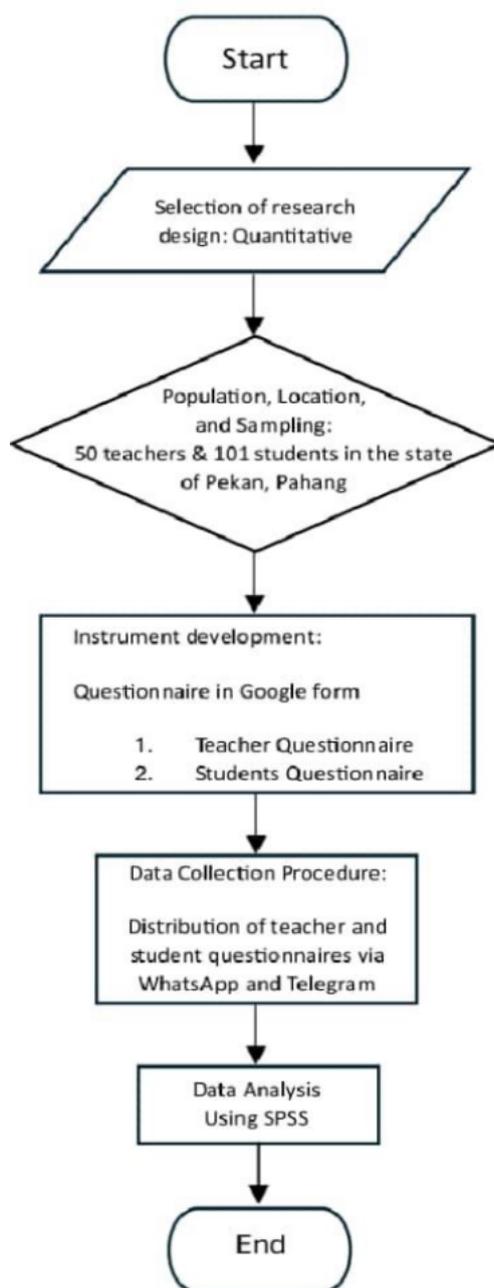


Fig. 1. Flowchart for methodology process

3. Results

3.1 Teacher's Perception of the ISITIW Method

This section presents the results of teachers' perceptions of the ISITIW method in teaching Arabic vocabulary. The data were obtained from teachers' responses to a questionnaire and are reported using descriptive statistics, including mean and standard deviation. The effectiveness of the ISITIW method from teachers' perspectives is discussed in the following sub-section.

3.1.1 Teacher's perception of the effectiveness of the ISITIW method

The findings in table 1 indicate that students displayed positive perceptions towards the ISITIW strategy in learning Arabic vocabulary. Respondents agreed or strongly agreed that the strategy is easy to implement

(M = 4.2200) and effectively increases students interest in vocabulary learning (M = 4.3600). They also perceived the strategy as beneficial in promoting critical thinking (M = 4.2800), supporting teachers in assessing vocabulary mastery (M = 4.2200), and accommodating learners of different proficiency levels (M = 4.3000). The low standard deviations show consistent agreement among participants. The total Mean of 4.2760 further indicates an overall positive perception, while the Standard Deviation of 0.63360 reflects relatively consistent responses among students. Overall, these results suggest that the strategy supports student engagement and encourages deeper processing of vocabulary items.

Table 1
 Teacher's perception of the effectiveness of the ISITIW Method

Item	Statement	Frequency and Percentage					Mean (M)	Standard Deviation (SD)	Level
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree			
A1	The ISITIW strategy is easy to implement in Arabic teaching	0 (0%)	0 (0%)	8 (16%)	23 (46%)	19 (38.0%)	4.2200	0.70826	High
A2	This strategy helps me attract students' interest in learning Arabic vocabulary	0 (0%)	0 (0%)	6 (12%)	20 (40.0%)	24 (48.0%)	4.3600	0.69282	High
A3	This approach promotes students' critical analysis of words and their definitions	0 (0%)	0 (0%)	7 (14%)	22 (44.0%)	24 (42.0%)	4.2800	0.70102	High
A4	The ISITIW strategy facilitates my assessment of students' proficiency in Arabic vocabulary	0 (0%)	0 (0%)	10 (20.0%)	19 (38.0%)	21 (42.0%)	4.2200	0.76372	High
A5	This approach can be applied to secondary school students with different language proficiency levels	0 (0%)	1 (2.0%)	6 (12.0%)	20 (40%)	23 (46.0%)	4.3000	0.76265	High
Total							4.2760	0.63360	High

The results support the use of the ISITIW strategy as an effective approach in secondary Arabic language classrooms. This routine aligns with visible thinking principles that promote observation, interpretation, and inquiry processes known to enhance comprehension and learner engagement. Research also shows that such inquiry based strategies strengthen vocabulary retention by helping students connect new words with prior knowledge. Overall, the findings indicate that the routine is adaptable for learners of different proficiency levels and can improve vocabulary acquisition in Arabic language instruction [10].

3.1.2 Teachers' perceptions of the ISITIW method in promoting engagement and critical thinking

Table 2 show that teachers had very favorable opinions of the ISITIW strategy for encouraging students' participation and critical thinking when studying Arabic. As seen by a high score (M = 4.1800, SD = 0.72) for Item B1, the vast majority of respondents believed that students demonstrated active engagement during the exercise. Item B2 also showed significant agreement, suggesting that after the strategy was put into practice, students felt more comfortable sharing their thoughts (M = 4.1600, SD = 0.77). Regarding Item B3, teachers concurred that the strategy allowed students to use newly acquired language in practical contexts (M = 4.1200, SD = 0.82). High mean scores were obtained for every item, indicating that respondents' opinions were generally favorable. The total Mean of 4.1533 further reinforces this positive perception, showing that teachers consistently agreed on the effectiveness of the method. Meanwhile, the overall Standard Deviation of 0.71336 suggests moderate consistency in responses, indicating that most teachers shared similar views regarding the ISITIW strategy.

Table 2
 Teachers' perceptions of the ISITIW method in promoting engagement and critical thinking

Item	Statement	Frequency and Percentage					Mean (M)	Standard Deviation (SD)	Level
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree			
B1	The students demonstrated active engagement during the implementation of the 'ISITIW' activity	0 (0%)	0 (0%)	9 (18%)	23 (46%)	18 (36.0%)	4.1800	0.71969	High
B2	Students became more confident in sharing their opinions and ideas after the implementation of this strategy	0 (0%)	0 (0%)	11 (22.0%)	20 (40.0%)	9 (38.0%)	4.1600	0.76559	High
B3	Students are able to apply the vocabulary they have learned to real-life situations through this activity	0 (0%)	1 (2.0%)	11 (22.0%)	19 (38.0%)	19 (38.0%)	4.1200	0.82413	High
Total							4.1533	0.71336	High

The results show that the ISITIW strategy is successful in encouraging student involvement, selfassurance, and vocabulary use when learning Arabic. These findings are consistent with the tenets of visible thinking, which highlight observation, interpretation, and inquiry as crucial components for improving cognitive engagement and expanding comprehension [10]. In line with studies showing that inquiry based learning promotes higher order thinking and enhances vocabulary retention, the strategy also helps students draw significant connections between language and real world situations [11]. The idea that using visible thinking routines might enhance students' linguistic development and enable more significant learning outcomes in the Arabic language classroom is strengthened by the current findings consistency with these earlier studies.

3.1.3 Teachers' Perceptions of the ISITIW Method for Teaching Arabic Vocabulary The findings in table 3 indicate that teachers view the ISITIW strategy as highly effective in supporting students' vocabulary learning. For Item C1, the majority of respondents agreed that the strategy helps students better understand and retain new vocabulary (M = 4.2600, SD = 0.69). For Item C2, teachers also acknowledged that the routine assists them in evaluating students comprehension of the vocabulary learned (M = 4.3400, SD = 0.72). The total mean score of 4.3000 further strengthens this overall agreement, indicating that teachers consistently perceive the ISITIW strategy as highly beneficial. Meanwhile, the total standard deviation of 0.68512 demonstrates relatively stable and consistent responses among teachers, suggesting a high level of agreement regarding the strategy's effectiveness. These high and consistent mean scores collectively reflect strong positive perceptions of the ISITIW strategy in both learning and assessment processes.

Table 3
 Teachers' perceptions of the ISITIW method for teaching Arabic vocabulary

Item	Statement	Frequency and Percentage					Mean (M)	Standard Deviation (SD)	Level
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree			
C1	Students can effectively comprehend and retain new vocabulary by using the ISITIW strategy	0 (0%)	0 (0%)	7 (14.0%)	23 (46.0%)	20 (40.0%)	4.2600	0.69429	High
C2	The ISITIW strategy assists me in evaluating students' level of understanding of the vocabulary learned	0 (0%)	0 (0%)	7 (14.0%)	19 (38.0%)	24 (48.0%)	4.3400	0.71742	High
Total							4.3000	0.68512	High

The results validate the ISITIW strategy as a useful teaching method for teaching Arabic vocabulary. The strategy's ability to foster active involvement, lead students through structured observation, and promote reflective thinking factors that correlate to improved vocabulary retention is highlighted by teachers' positive evaluations. According to Setianingsih [7], the practice successfully improves students' analytical processing and comprehension in language learning environments. When combined, these results imply that the strategy can greatly enhance vocabulary learning while giving teachers a trustworthy way to gauge students' language comprehension.

3.1 Students' Perception of the ISITIW Method

This section presents the results of students' perceptions of the ISITIW method in learning Arabic vocabulary. The data were collected through a questionnaire and analysed using descriptive statistics, including mean and standard deviation. The findings are presented in the following subsections. 3.2.1 Students' Perception of the Effectiveness of the ISITIW Method The results in table 4 indicate that students perceive the ISITIW method as highly effective in learning Arabic vocabulary, with an overall mean score of $M = 4.0759$ and a standard deviation of $SD = 0.49639$, categorized as "High." Specifically, the method was seen to enhance clarity in understanding vocabulary ($M = 3.9901$, $SD = 0.64024$), support remembering and mastering new words ($M = 4.0594$, $SD = 0.66063$), and most notably, help connect new words to meaningful contexts ($M = 4.1782$, $SD = 0.60656$).

Table 4
 Students' perception of the effectiveness of the ISITIW method

Item	Statement	Frequency and Percentage					Mean (M)	Standard Deviation (SD)	Level
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree			
A1	The I See, I Think, I Wonder method helps students understand Arabic vocabulary more clearly	0 (0%)	1 (1.0%)	18 (17.8%)	63 (62.4%)	19 (18.8%)	4.2600	0.69429	High
A2	The use of this method makes it easier for students to remember and master new vocabulary	0 (0%)	1 (1.0%)	16 (15.8%)	60 (59.4%)	24 (23.8%)	4.3400	0.71742	High
A3	This method is effective in helping students make connections between new words and the learning context	0	0	11	61	29	4.1782	0.60656	High
Total							4.0759	0.49639	High

These findings align with recent research emphasizing that visual thinking and inquiry-based strategies foster deeper cognitive engagement and improve comprehension, as noted by Dang [12] and Setianingsih [13]. Active learning approaches have also been shown to strengthen memory retention and facilitate long-term vocabulary acquisition, as discussed by Ackerman [14]. Furthermore, constructivist-based Arabic language learning models, as highlighted by Almelhes and Alsaiari [15] and Febriani *et al.*, [16], underscore the importance of contextual and collaborative learning for meaningful vocabulary development. Thus, ISITIW

reflects modern learner-centered pedagogy by promoting observation, interpretation, and critical thinking in language learning.

3.2.2 Students' perception of the effectiveness of the ISITIW method

The results in Table 5 indicate that students strongly agree on the effectiveness of the ISITIW method in promoting engagement and critical thinking during Arabic language learning, with an overall mean score of $M = 4.0429$ and a standard deviation of $SD = 0.53263$, categorized as "High." Specifically, the method was perceived to increase active engagement during teaching and learning (B1: $M = 4.0594$, $SD = 0.74595$; B2: $M = 3.9802$, $SD = 0.67794$) and encourage students to think critically and make inferences (B3: $M = 4.0891$, $SD = 0.72248$).

Table 5
 Students' perceptions of the ISITIW method in promoting engagement and critical thinking

Item	Statement	Frequency and Percentage					Mean (M)	Standard Deviation (SD)	Level
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree			
B1	The I See, I Think, I Wonder method increases students' active engagement during teaching and learning	0 (0%)	2 (2.0%)	19 (18.8%)	51 (50.5%)	29 (28.7%)	4.0594	0.74595	High
B2	B2 The I See, I Think, I Wonder method increases students' active engagement during teaching and learning	0 (0%)	1 (1.0%)	21 (20.8%)	58 (57.4%)	21 (20.8%)	3.9802	0.67794	High
B3	This method can encourage students to think critically and make inferences.	0 (0%)	1 (1.0%)	19 (18.8%)	51 (50.5%)	30 (29.7%)	4.0891	0.72248	High
Total							4.0429	0.53263	High

These findings align with recent research emphasizing that inquiry-based strategies enhance student participation and engagement, as noted by Setianingsih [13]. Furthermore, collaborative and constructivist approaches have been shown to foster critical thinking and deeper learning, as highlighted by Febriani *et al.*, [16] and Almelhes and Alsaari [15]. Active learning strategies also play a significant role in promoting higher-order thinking skills, as discussed by Ackerman [14]. Taken together, these results suggest that ISITIW reflects modern learner-centered pedagogy by encouraging observation, interpretation, and critical thinking alongside active engagement. 3.2.2 Students' Perception of the Effectiveness of the ISITIW Method The results in Table 6 show that students strongly agree on the suitability and practicality of the ISITIW method for teaching Arabic vocabulary at the secondary level, with an overall mean score of $M = 4.2698$ and a standard deviation of $SD = 0.46728$, categorized as "High." All items scored above 4.13, indicating consistent positive perceptions. Specifically, students rated the method as suitable for secondary school learners (C1: $M = 4.2673$, $SD = 0.66168$), easy to implement without complex preparation (C2: $M = 4.1386$, $SD = 0.69325$), helpful for self-

assessment of understanding (C3: M = 4.2178, SD = 0.62616), and overall an effective strategy for enhancing mastery of Arabic vocabulary (C4: M = 4.4554, SD = 0.64070), which was the highest mean score.

Table 6
 Students' perceptions of the ISITIW method for teaching Arabic vocabulary

Item	Statement	Frequency and Percentage					Mean (M)	Standard Deviation (SD)	Level
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree			
C1	The "ISITIW" method is suitable for teaching Arabic vocabulary to secondary school students	0 (0%)	0 (0%)	12 (11.9%)	50 (49.5%)	39 (38.6%)	4.2673	0.66168	High
C2	This method is easy to implement and does not require complex preparation	0 (0%)	0 (1.0%)	18 (17.8%)	51 (50.5%)	32 (31.7%)	4.1386	0.69325	High
C3	This method helps students assess their own level of understanding of the words or concepts learned	0 (0%)	1 (1.0%)	8 (7.9%)	60 (59.4%)	32 (31.7%)	4.2178	0.62616	High
C4	Overall, the "ISITIW" method is an effective strategy for enhancing mastery of Arabic vocabulary	0 (0%)	0 (0%)	8 (7.9%)	39 (38.6%)	54 (53.5%)	4.4554	0.64070	High
Total							4.2698	0.46728	High

These findings align with recent research emphasizing that visual-inquiry routines such as ISITIW are simple to adopt yet powerful for language development and engagement, as noted by Clark-Gareca and Meyer [17]. The strong agreement on overall effectiveness supports studies by Karatas *et al.*, [21], who demonstrated that active learning and memory-enhancement techniques significantly improve vocabulary retention. Similarly, Nakata and Elgort [18] highlight the benefits of spaced and contextual learning for durable vocabulary acquisition. The positive rating for selfassessment (C3) reflects the growing emphasis on metacognitive strategies in language learning, which enhance learner autonomy and progress, as discussed by Butler [19] and Qasem, [20]. Finally, the suitability for secondary learners (C1) resonates with research on context-embedded vocabulary instruction and constructivist approaches in Arabic language education, as shown by Maimunah *et al.*, [22]. Collectively, these results confirm that ISITIW is not only effective but also practical, supporting modern learner-centered pedagogy that integrates observation, interpretation, and critical thinking.

4. Conclusions

The findings of this study demonstrate that the ISITIW method is an effective and practical instructional strategy for enhancing Arabic vocabulary learning among secondary school students. Both teachers and students reported consistently high levels of agreement regarding the method's usefulness in improving comprehension, engagement, critical thinking, and vocabulary retention. Teachers perceived the ISITIW routine as easy to implement, supportive in assessing students' mastery, and adaptable to diverse proficiency levels. Similarly, students indicated that the method helped them understand vocabulary more clearly, recall new terms effectively, and link words to meaningful contexts. In addition to improving vocabulary acquisition, the ISITIW method was found to significantly promote active participation and higher-order thinking. High mean scores across items related to engagement and cognitive processing reflect the method's alignment with principles of visible thinking and inquiry-based learning, which encourage observation, interpretation, and self-directed reflection. These outcomes confirm the pedagogical value of the ISITIW routine in fostering deeper learning, supporting learners' metacognitive development, and strengthening their ability to apply vocabulary in authentic situations. Overall, the results validate the ISITIW method as a robust and learner-centered instructional approach that enhances both teaching effectiveness and student learning outcomes in Arabic language education. Its consistent positive impact across teacher and student perceptions underscores its suitability for integration into contemporary language classrooms. Future research may explore the method's effectiveness across different linguistic skills, such as reading comprehension or writing, as well as its long-term impact on vocabulary retention.

Acknowledgement The authors would like to express their sincere gratitude to the Postgraduate Diploma in Education (DPP), Faculty of Contemporary Islamic Studies, Universiti Sultan Zainal Abidin (UniSZA) for their support and guidance throughout the completion of this study. Appreciation is also extended to all lecturers, colleagues, and students who contributed their time and effort to make this research possible.

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