Journal of Learning Improvement and Lesson Study
Volume 04 Number 01 2024, pp, 61-71
ISSN: Online 2798-9011
DOI: 10.24036/jlils.v4i1.81
Received June 06, 2024; Revised June 20, 2024; Accepted June 29, 2024
Availaible Online: http://jlils.ppj.unp.ac.id/index.php/

Diagnostic Assessment Instrument for Arabic Vocabulary Comprehension Using Crossword Puzzle

Rahmawati[1], Renni Hasibuan[2], Muhammad Jundi[3], Ranita Sari[4]
[1,4] Universitas Islam Negeri Imam Bonjol Padang ,
[2,3] Universitas Islam Negeri Maulana Malik Ibrahim Malang
*Corresponding author, e-mail: rahmawati@uinib.ac.id

Abstract
Diagnostic assessment is a crucial element in the implementation of the Merdeka Curriculum. This study aims to design a diagnostic instrument for Arabic language students in grade 7 at MTs. N Batu using Arabic vocabulary crossword puzzles and analyzing the assessment results for follow-up planning. The approach employed is a combination of quantitative and qualitative methods. Data were obtained through observation, interviews, and tests. The findings indicate that designed diagnostic assessment instrument has good content validity and is relevant to the curriculum. The use of instrument in teaching is considered efficient and effective. However, the analysis results show that most students still have low vocabulary proficiency. Several errors and weaknesses in vocabulary usage were also identified, such as incorrect use of writing vocabularies letters. It is hoped the findings of this diagnostic assessment analysis can serve as a basis for improving the quality of Arabic language learning in the future, particularly in terms of vocabulary mastery.

Keywords: diagnostic assessment; crossword puzzle; arabic vocabulary

Introduction

The process of evaluating learning outcomes plays a pivotal role in educational settings, serving as an indispensable component within the broader framework of the learning process (Arifin, 2012; Hula, 2021; Jundi, 2023c). Through evaluation, educators gain valuable insights into the efficacy of their teaching methodologies, the extent of student comprehension, and the overall academic achievements attained within various educational contexts. By systematically assessing learning outcomes, educators can identify areas of strength and areas needing improvement, thus informing instructional strategies to enhance student learning experiences (Suryadi & Husna, 2022).

Furthermore, the evaluation of learning outcomes facilitates a comprehensive understanding of individual student progress and the collective effectiveness of educational programs (Hasibuan & Jundi, 2023a). It enables educators to tailor their teaching approaches to meet the diverse needs and learning styles of students, ultimately fostering a more inclusive and supportive learning environment (Hasibuan, Fitriani, & Aziz, 2023; Pinto, Spares, & Driscoll, 2012). Additionally, by analyzing assessment data, teacher can pinpoint any gaps in curriculum delivery or areas where additional support may be required, enabling them to make informed decisions to optimize learning outcomes (Hajizadeh, Rawdhan Salman, & Ebadi, 2023; Hasibuan, Haerullah, & Fitriani, 2023; Ridho, 2018). Moreover, evaluation serves as a mechanism for accountability, allowing educational stakeholders to gauge the overall success of educational initiatives and allocate resources appropriately (Ananda, 2017). Ultimately, by prioritizing the evaluation of learning outcomes, educational institutions can continuously refine their practices and ensure the delivery of high-quality education that equips students with the knowledge and skills needed for success in an ever-evolving global landscape (Ali, Fitriani, Hasibuan, & Nandalawi, 2023; Hasibuan, Chamidah, & Akhsan, 2024).

Within the realm of Arabic language learning, the necessity for an effective assessment instrument becomes even more pronounced, particularly concerning the measurement of students' comprehension of vocabulary (Jundi, 2023a; Nabila & Jundi, 2023). As vocabulary comprehension constitutes a fundamental

aspect of language acquisition and proficiency development (Alobaydi, Alkhayat, Arshad, & Ahmed, 2017; Alqahtani, 2015; Jundi, 2023b; Muhamad, Fitriani, & Aziz, 2023), the need for a robust assessment tool becomes apparent. Such an instrument must accurately gauge students' grasp of Arabic vocabulary, thereby facilitating their language learning journey and ultimately enhancing the quality of Arabic language education.

In alignment with the principles of the Merdeka Curriculum, contemporary educational practices encompass three primary types of assessments: formative, summative, and diagnostic (Fatmawati, Yahya, & Sentaya, 2023; Pusat Asesmen dan Pembelajaran, 2021). Formative assessment aims to improve student performance, and summative assessment measures student achievement.While formative and summative assessments are widely recognized within educational settings, diagnostic assessment assumes a distinct role in the educational landscape which is to identify learning issues (Ghimire, 2021). Unlike its counterparts, diagnostic assessment primarily focuses on identifying specific areas of student strength and weakness to inform tailored instructional strategies, thereby fostering targeted academic growth and development (Liang, de la Torre, & Law, 2021; Tang & Zhan, 2021; Zhan, Li, & Jiao, 2021). Another benefit of conducting diagnostic assessments is that the implementation of diagnostic assessment has also been shown to positively influence students' learning motivation (Hidayah & Amin, 2023).

Given the importance of accurately assessing students' comprehension of Arabic vocabulary, the development of a suitable diagnostic assessment instrument becomes imperative. Such an instrument must be meticulously crafted to align with the unique characteristics of Arabic language learning. Diagnostic assessment can utilize various tools such as written tests, questionnaires, observations, self-evaluation, and co-evaluation (Cevallos, Rosado, & Terán, 2020). The form of diagnostic assessment instruments can vary depending on the needs, situations, and creativity of teachers. The utilization of technology can also be applied in designing diagnostic assessment instruments, such as utilizing applications like Quizizz, Google Form, AI utilization, and CBT based asessment (Himmah, Rufi'i, & Wiyarno, 2023; Nabila, Khair, & Jundi, 2024; Nuriyana, Firlisa, & Setiyono, 2023; Rakhmi, Utomo, Putri, & Ghufron, 2023; Zaharo, Hangkiho, Jundi, Udin, & Hasibuan, 2024). An innovative approach to diagnostic assessment, selected for evaluating students' vocabulary mastery, is through the utilization of crossword puzzles.

Crossword puzzles are widely acknowledged as a valuable educational tool, offering numerous advantages for both learning and teaching purposes. Research indicates that crossword puzzles serve as structured educational aids that facilitate critical thinking and reinforce concepts introduced during lectures (Shah, Lynch, & Macias-Moriarity, 2010). They promote active learning and self-directed study, thus fostering engagement and participation among learners (Gaikwad & Tankhiwale, 2012). Moreover, crossword puzzles have been associated with improved problem-solving skills and enhanced learning outcomes when systematically integrated into educational practices (Yuriev, Capuano, & Short, 2016; Zaharo, Chamidah, & Jundi, 2024). Additionally, they contribute to the development of vocabulary and aid in memory retention, particularly in terms of terminology, definitions, and spelling (Tambaritji & Atmawidjaja, 2020). Studies also suggest that crossword puzzles facilitate information retrieval and preservation, offering a creative and effective approach to learning (Bordeos, Mangana, Lamadrid, & Ligan, 2023). Furthermore, incorporating crossword puzzles into teaching methodologies stimulates critical thinking, problem-solving abilities, and knowledge retention, thus enhancing the overall learning experience (Kolte, Jadhav, Deshmukh, & Patil, 2017). In summary, the literature underscores the manifold benefits of crossword puzzles in education, including their role in promoting active learning, improving memory retention, and fostering critical thinking skills.

The main difference lies in the focus on the use of crossword puzzles, with my research exploring its application in the context of Arabic language. This study fills a gap in the literature concerning the lack of research considering crossword puzzles as a diagnostic assessment tool in Arabic language, and it provides a novel contribution to this field. By addressing existing gaps in the literature and leveraging innovative assessment methodologies, this study seeks to enrich the body of knowledge surrounding diagnostic assessment practices in Arabic language education. Through rigorous empirical analysis and thoughtful interpretation of findings, this research aims to provide valuable insights and practical recommendations for educators striving to enhance Arabic language learning outcomes through effective diagnostic assessment strategies.

Method

The primary objective of this research is to delve into the intricacies of developing a diagnostic assessment tool using crossword puzzles and to assess its effectiveness within the realm of Arabic language learning. By

focusing on this aspect, the study aims to contribute valuable insights into the process of designing and implementing such an assessment instrument. In order to comprehensively explore the development and implementation of the diagnostic assessment tool, this study adopts a quasi-qualitative research approach (Rahardjo, 2023). Qualitative methods allow for a nuanced understanding of the complex factors involved in the creation and utilization of educational instruments, particularly in the context of language learning (Afifuddin & Saebani, 2012; Ainin, 2016).

To gather rich and insightful data, this research employs three main data collection methods: observation, interviews, and documentation (Rahardjo, 2011). Through observation, researchers directly witness the real-time application of the diagnostic assessment tool within classroom settings. This provides an opportunity to observe how students interact with the instrument and its impact on their learning process. In addition to observation, interviews with Arabic language teachers are conducted to gain deeper insights into their perspectives and experiences regarding the use of the diagnostic assessment tool. These interviews offer valuable qualitative data, allowing researchers to uncover nuances and subtleties that may not be apparent through observation alone. Furthermore, documentation serves as a crucial source of data analysis, particularly in assessing the outcomes of the diagnostic assessments administered to students. Documenting the results of these assessments provides researchers with tangible evidence to analyze and evaluate the effectiveness of the assessment tool in measuring students' understanding of Arabic vocabulary.

The data analysis process in this study employs both qualitative and quantitative methodologies (Darmiyati, 2007). Qualitatively, an interactive analysis approach was adopted, commencing from the initial stages of data collection (Rahardjo, 2023; Sugiyono, 2016). This iterative method enables researchers to actively engage with the data, continuously reflecting on their findings, and refining their understanding throughout the research process. By employing this approach, the study aims to ensure rigor and reliability in its analysis while also facilitating ongoing learning and improvement. Conversely, a quantitative approach is utilized to analyze the results of diagnostic assessments using descriptive statistics. This quantitative analysis provides numerical summaries and insights into the performance of students, complementing the qualitative findings and enriching the overall understanding of the research phenomenon.

Results and Discussion

The term "diagnostic" was introduced around the 1950s by experts of that time (Fan, Song, & Guan, 2021; Leighton & Gierl, 2007). Diagnostic assessment is divided into two parts, namely non-cognitive diagnostic assessment and cognitive diagnostic assessment (Azis & Lubis, 2023; Purwati, Sasomo, & Rahmawati, 2023; Wahyuningsih & Maryani, 2023). Non-cognitive diagnostic assessment aims to present a profile of students, including their backgrounds and initial competencies, to tailor learning to their interests, talents, learning styles, and daily conditions (Kasman & Lubis, 2022; Zlatkin-Troitschanskaia et al., 2018). Meanwhile, cognitive diagnostic assessment aims to provide information about students' basic knowledge and abilities, enabling teachers to design learning experiences according to their needs (Coughlan et al., 2019; Sugiarto, Adnan, Aini, Suhendra, & Ubaidullah, 2023). This assessment is also intended to measure the structure of knowledge and process skills, to identify cognitive strengths and weaknesses of students before studying specific competency areas (Leighton & Gierl, 2007; Suryadi & Husna, 2022). In the context of this study, the intended diagnostic assessment is cognitive diagnostic assessment, designed to explore students' fundamental understanding of Arabic vocabulary from previous materials.

Diagnostic assessment offers several significant benefits. Firstly, it enables teachers to design and adjust instruction more effectively by gaining an accurate understanding of students' learning difficulties. Secondly, diagnostic assessment allows teachers to identify students' issues as early as possible. This aligns with the view that diagnostic assessment aims to recognize students' abilities, strengths, and weaknesses so that teachers can design instruction that aligns with their characteristics and abilities . Thirdly, diagnostic assessment enables teachers to tailor or adjust instruction to better meet students' needs. Diagnostic assessment can be conducted using various techniques and instruments tailored to specific needs. These instruments can be standardized or designed by teachers (Kumar, 2016). Additionally, there are five levels of diagnostic assessment. The first level identifies students experiencing problems, the second level identifies the competencies students face, the third level identifies the causes of problems, the fourth level identifies the types of remedial activities to be undertaken, and the fifth level identifies preventive measures to address these issues (Kumar, 2016).

Development of Diagnostic Assessment Instrument Using Crossword Puzzle

Developing a language assessment instrument entails a series of pivotal steps aimed at guaranteeing its validity and reliability. The procedure typically commences with the design-based research (DBR) approach, as advocated by the Association of Language Testers in Europe (Boeriswati, Ningsih, & Rahayu, 2023). This approach offers a systematic framework for crafting test instruments, ensuring that the methodologies adhere to established standards. Moreover, it is imperative to factor in the proficiency levels of the target language, as underscored in (Tremblay, 2011). Sensitizing researchers to the necessity of documenting and controlling for participants' proficiency contributes to the establishment of robust proficiency assessment criteria. Furthermore, the validation process assumes a pivotal role in ensuring the instrument's reliability. Pinheiro et al. (2020) underscored the significance of validation through expert scrutiny and the practical application of the instrument, involving contributions from linguists and language specialists. This rigorous validation process enhances the overall quality and credibility of the language test instrument.

The process of developing the diagnostic assessment instrument commences with material analysis. The diagnostic assessment aims to evaluate students' understanding of previously covered material and assess their readiness for upcoming topics. Therefore, material analysis focuses on the content taught in the previous semester, specifically the odd semester, considering that this research is conducted at the beginning of the even semester. The analyzed material encompasses three units covered during the odd semester, with a focus on determining essential vocabulary that will be used as questions in this diagnostic assessment. The material selected for inclusion in the assessment instrument is aligned with the existing competencies and learning objectives, as is the case for the development of the diagnostic assessment (Adam, Jundi, Ali, Laubaha, & Kadir, 2023; Ali, Jundi, Adam, Laubaha, & Kadir, 2022; Jundi & Solong, 2021).

The subsequent step involves formulating these questions in the form of crossword puzzles. Initially, the researcher utilized automatic crossword puzzle automated generators like Wordmint (Crossword Puzzle Maker). Wordmint is an open-access platform that can be utilized to create various word games for various purposes, including crossword puzzles, among others (Mete, AliBaşiÇ, & Köksal, 2023). However, the results were unsatisfactory, primarily because the Arabic language is read from right to left, whereas the generated crossword puzzles tended to produce irregular words. This may pose difficulties for students and even disrupt their focus on assessing their own abilities. Therefore, crossword puzzles were manually created using Microsoft Word, with all questions arranged horizontally, providing one letter clue in each answer column.

The researcher chose crossword puzzles as a media for designing diagnostic assessment because there have been numerous studies showing positive evidence regarding its utilization, particularly in Arabic language learning(Hasibuan & Fitriani, 2023; Ritonga, Ritonga, Septiana, & Mahmud, 2021; Zamani, Haghighi, & Ravanbakhsh, 2021). One of the studies that demonstrated success in implementing crossword puzzles is the research conducted by Renni Hasibuan, who incorporated them into teaching Arabic balaghah to college students. The findings of the study indicated that the use of this media significantly enhanced student learning outcomes. This suggests that crossword puzzles can be an effective tool in delivering content and facilitating student understanding of Arabic language concepts, especially within the realm of balaghah (Hasibuan, 2023). Thus, this research provides additional support for the positive benefits of crossword puzzles in improving the effectiveness of learning, specifically in the context of Arabic language education at the college level.

Once the instrument is designed, it is then handed over to the Arabic language subject teacher for evaluation of its alignment with the taught material. Additionally, the instrument is assessed by peer researchers. Thus, it is expected that the designed instrument possesses validity and alignment suitable for the taught material. In certain circumstances, particularly in research and development (R&D), an instrument that has been designed is subsequently submitted to relevant experts in the field for assessment qualitatively (Lovendra & Aisiah, 2023). This process aims to obtain evaluations and feedback from knowledgeable professionals who can provide valuable insights and critical analysis. In addition to conducting qualitative analysis on the questions in diagnostic assessments, quantitative analysis can also be performed. For instance, in a study conducted by Forniawan & Wati, they conducted quantitative analysis on the diagnostic assessment instrument and found that it exhibited high levels of validity and reliability. However, despite these findings, approximately 60% of the total questions were considered easy, indicating a low level of question difficulty (Forniawan & Wati, 2024).

Furthermore, in response to the need for enhancing teachers' proficiency in assessment development, particularly in diagnostic assessment, the implementation of training workshops and programs has been intensified in various regions of Indonesia over the past two years (Sugiarto et al., 2023; Supriyadi et al., 2022). The data indicates that only a few teachers possess the expertise in developing diagnostic assessment

instruments, and the implementation of diagnostic assessments in elementary schools is not yet optimal due to the teachers' inadequate understanding of diagnostic assessment (Alimuddin, 2023; Sayekti, 2022). Existing research also suggests the need for follow-up actions to enhance teachers' knowledge and skills in assessment development, particularly in diagnostic assessment. Concrete evidence can be observed from two different schools. In the first school, an elementary school in Southeast Sulawesi, findings revealed that 59.09% of teachers were still hesitant to implement assessments based on the Merdeka Curriculum in the following semester, primarily due to their lack of understanding and information (Maut, 2022). Meanwhile, in an elementary school in East Java, it was found that teachers' understanding of diagnostic assessment was relatively low, and the utilization of information from the implementation of diagnostic assessments at the beginning of instruction as the basis for designing learning activities received insufficient attention (Mudrikah, Kusumaningrum, & Dewi, 2022). Nevertheless, training workshops related to the implementation of the Merdeka Curriculum have been increasingly intensified in various regions of Indonesia over the past two years (Setyawarno, Widodo, Rosana, & Maryati, 2023) . Particularly, training on the development of formative, summative, and diagnostic assessments within the Merdeka Curriculum has been emphasized (Sugiarto et al., 2023; Supriyadi et al., 2022). Moreover, training on assessment development utilizing technology has also been widely conducted (Fatmawati et al., 2023). It is hoped that there will be an improvement in teachers' abilities to design and implement various types of assessments in line with the principles of the Merdeka Curriculum.

Utilizing Diagnostic Assessment Instruments with Crossword Puzzles

Once the instrument is ready, the next step is to implement it in diagnostic assessment. The assessment is administered to students in the form of student answer sheets, where students directly fill in their responses. During this process, observations will be made to assess the practicality of using the diagnostic assessment instrument that has been developed (Lovendra & Aisiah, 2023).

The implementation process of diagnostic assessments in classrooms typically commences with the teacher's introduction. The teacher does not explicitly announce the assessment but rather explains that before commencing the lesson, students will be given a crossword puzzle. The teacher emphasizes that the content of the crossword puzzle pertains to previously covered material. Subsequently, the teacher distributes the crossword puzzle to each student. Before students begin solving it, the teacher provides instructions on how to fill in the answers and offers a concrete example of how to complete the crossword puzzle. Additionally, the teacher informs students of the guidelines for completing the puzzle to prevent cheating.

Once students have completed the crossword puzzle, the teacher collects all answer sheets. Then, the teacher revisits the previously covered material while addressing each clue of the crossword puzzle one by one. The teacher also provides feedback to students regarding their performance in completing the crossword puzzle. Following this, the teacher proceeds with a review and recapitulation of the previously covered material as part of the lesson introduction. Only then does the teacher commence teaching the new material.

The results of the diagnostic assessment revealed that the average score obtained was only 57.17% out of 59 participants. This figure indicates a relatively low achievement level, falling short of the established proficiency standard set at 65. Only 21 participants, or approximately 35.6%, managed to attain scores above the standard threshold. The highest score obtained was 78, while the lowest score was 40. These findings suggest that a significant portion of the participants, around 64.6% comprising 38 students, still exhibit relatively shaky comprehension of the previously taught material.

These outcomes are believed to be influenced by several factors, primarily the learning gap that occurs during vacations, which may lead to the forgetting of vocabulary. Similarly, the results of cognitive diagnostic assessments in the Quran Hadith subject at one of the middle schools indicate a low level of achievement, with 72% of 302 students failing to reach the minimum score of 70. This phenomenon is also attributed to various factors (Huda, Alamsyah, Selvia, & Sangadah, 2023). Furthermore, the aspects of students' errors have been analyzed through the answer sheets they completed.

The analysis of data from diagnostic assessments not only focuses on students' scores but also involves examining their performance in completing the crossword puzzles on their answer sheets. This analysis emphasizes the identification of common errors and students' weaknesses in mastering Arabic vocabulary. Two primary approaches have been identified: (a) deficit analysis, which focuses on students' weaknesses (Isbell, 2021), and (b) error analysis, which emphasizes the types of errors made by students (Bejar, 1984). It can help teachers identify misconceptions and errors, aiding in instructional decision-making (Ketterlin-Geller, Shivraj, Basaraba, & Yovanoff, 2019). The results of the analysis indicate that one common error is inaccurate letter writing within vocabulary words. In other words, while students understand and recognize

the intended vocabulary, there are inaccuracies in their written application. For instance, there is a lack of writing of elongated letters (*mad*), such as the letters *alif*, *ya'*, or *wau*. Additionally, errors occur in the pronunciation of 'n', which should represent tanwin but is written using the letter nun, as seen in the word *'kitabun*,' which should be written as كِتَابٌbut is written by students as كِتَابُن. Furthermore, errors are observed in the writing of *ta' marbutah* (ة), which should be written with the letter *ta' maftuhah* (ت).

After analyzing the gathered data, the next step involves planning follow-up actions. In the context of this research, planning follow-up actions is not within the scope of the study, thus the research findings serve as a reference for teachers in decision-making and designing follow-up actions (Ketterlin-Geller et al., 2019). Teachers will utilize the assessment results to tailor instruction according to each student's level of understanding based on the conducted diagnostic assessments (Forniawan & Wati, 2024). Teachers can also provide guidance to students with below-average initial understanding (Melati, 2023; Nasution, 2022). Full intervention using a diagnostic assessment system and learning activities significantly improved students' ability and overcoming common misconceptions in algebraic material (Russell, O'Dwyer, & Miranda, 2009). Additionally, teachers can make decisions regarding students' understanding and areas that need improvement (Bradshaw & Levy, 2019; Paulsen & Valdivia, 2022). Adapting instruction to meet the individual needs of students is crucial for achieving optimal learning outcomes (Zhu & Liu, 2020).

The utilization of diagnostic assessment outcomes holds significant implications for the implementation of differentiated instruction in schools. Research conducted by Insani revealed that teachers have successfully categorized groups based on students' readiness levels through cognitive diagnostic assessment tests. These groupings include the developing group and the proficient group. In the context of differentiated instruction, this approach enables the delivery of learning materials tailored to the proficiency levels of each group, thus ensuring optimal fulfillment of students' learning needs (Insani, Nuroso, & Purnamasari, 2023). The concept of differentiated learning allows teachers to design learning activities that cater to the individual needs of each student (Elizasri & Ilyas, 2023). The outcomes of diagnostic assessments can serve as guidelines for teachers in planning learning activities that align with the characteristics and needs of the learners (Ardiansyah, Sagita, & Juanda, 2023; Pusat Asesmen dan Pembelajaran, 2021). Therefore, there is a need for the development of more innovative and responsive learning strategies that integrate technology, interactive methods, engaging media, and personalized approaches (Amin, Hasibuan, & Jundi, 2023; Hasibuan, Haerullah, & Machmudah, 2023; Hasibuan & Jundi, 2023b; Siregar, Hasibuan, & Jundi, 2023).

In addition to its application in subject-specific contexts and classroom settings, diagnostic assessment also holds broader implications within or educational institutions such as schools. An assessment also holds broader implications within programs and for its future development (Jundi & Ali, 2023; Jundi & Hasibuan, 2023). For instance, at MTs. N. 28 Jakarta, diagnostic assessments are conducted to analyze students' levels of reading, writing, and numeracy skills in preparation for the implementation of the Merdeka Curriculum, as well as to enhance students' literacy and numeracy indices (Suryadi & Husna, 2022). At the institutional level, the results of non-cognitive diagnostic assessments can serve as a basis for the School Principal in formulating school policies. Several policies implemented in schools are based on the outcomes of diagnostic assessments, including collaboration between schools and health centers, the establishment of parent associations in schools, the provision of green open spaces for outdoor learning, and the provision of guidance and counseling services (Rahman & Ririen, 2023). Furthermore, diagnostic assessments of student learning achievements at higher education institutions also represent a crucial component in understanding the strengths and weaknesses of academic and general education programs (Jurich & Bradshaw, 2014).

Conclusion

Based on the presentation of the results and discussion above, two main conclusions can be drawn. Firstly, the development process of the diagnostic assessment instrument begins with material analysis to ensure alignment with previous semester content. Despite initial challenges with automated generators, manual creation of crossword puzzles in Microsoft Word proved effective. Collaboration with subject teachers and peer researchers enhances the validity and alignment of the instrument. Secondly, the implementation of diagnostic assessments using crossword puzzles in the classroom setting involves careful introduction and administration by the teacher. By integrating the assessment seamlessly into the lesson, teachers can effectively gauge students' understanding of previously covered material and provide targeted feedback for improvement. The diagnostic assessment results indicate a concerning trend of low achievement levels among participants, with only a minority meeting the proficiency standard. Common errors in vocabulary application, such as inaccurate letter writing and mispronunciation, highlight areas for

improvement in Arabic language learning. Moving forward, teachers can leverage these findings to tailor instruction and provide targeted support to address students' individual needs, ultimately enhancing learning outcomes. The utilization of diagnostic assessment outcomes underscores the importance of differentiated instruction in optimizing student learning experiences and academic success in schools.

References

Adam, M. Z., Jundi, M., Ali, I., Laubaha, S. A., & Kadir, S. D. (2023). Studi Komparatif Kompetensi Dasar KMA 183 dan KMA 164 pada Mata Pelajaran Bahasa Arab Kelas VII MTs pada Kompetensi Ranah Kognitif. *Assuthur: Jurnal Pendidikan Bahasa Arab*, *2*(1). https://doi.org/10.58194/as.v2i1.262

Afifuddin, & Saebani, B. A. (2012). *Metodologi Penelitian Kualitatif*. Bandung: Pustaka Setia.

Ainin, M. (2016). *Metodologi Penelitian Bahasa Arab*. Malang: Bintang Sejahtera.

Ali, I., Fitriani, L., Hasibuan, R., & Nandalawi. (2023). تطبيق طريقة Hypnoteaching في تعليم قواعد اللغة العربية. *Lahjatuna: Jurnal Pendidikan Bahasa Arab*, *2*(2), 96–110. (Metode Pembelajaran Bahasa Arab). https://doi.org/10.38073/lahjatuna.v2i2.1062

Ali, I., Jundi, M., Adam, M. Z., Laubaha, S. A., & Kadir, S. D. (2022). Implementasi KMA 183 dalam Penyajian Materi Bahasa Arab Berbasis E-Learning Di MAN 1 Kabupaten Gorontalo. *PIWULANG Jurnal Pendidikan Agama Islam*, *4*(2). https://doi.org/10.32478/piwulang.v4i2.969

Alimuddin, J. (2023). Implementasi Kurikulum Merdeka di Sekolah Dasar. *Jurnal Ilmiah KONTEKSTUAL*, *4*(02), 67–75. https://doi.org/10.46772/kontekstual.v4i02.995

Alobaydi, E. K., Alkhayat, R. Y., Arshad, M. R. Mohd., & Ahmed, E. R. (2017). Context-aware ubiquitous Arabic vocabularies learning system (U-Arabic): A framework design and implementation. *2017 7th IEEE International Conference on Control System, Computing and Engineering (ICCSCE)*, 23–28. https://doi.org/10.1109/ICCSCE.2017.8284373

Alqahtani, M. (2015). The importance of vocabulary in language learning and how to be taught. *International Journal of Teaching and Education*, *3*(3), 21–34.

Amin, M. A., Hasibuan, R., & Jundi, M. (2023). Optimizing Student's Reading Skill: An Experimental Study on The Influence of Comic Media on Arabic Language Learning. *El-Mahara*, *1*(2), 55–68. https://doi.org/10.62086/ej.v1i2.500

Ananda, R. and T. R. (2017). *Pengantar Evaluasi Program Pendidikan*. Perdana Publishing.

Ardiansyah, A., Sagita, F., & Juanda, J. (2023). Assesmen dalam Kurikulum Merdeka Belajar. *Jurnal Literasi Dan Pembelajaran Indonesia*, *3*(1), 8–13.

Arifin, Z. (2012). *Evaluasi Pembelajaran*. Jakarta: Direktorat Jenderal Pendidikan Islam Kementerian Agama RI.

Azis, A. C. K., & Lubis, S. K. (2023). ASESMEN DIAGNOSTIK SEBAGAI PENILAIAN PEMBELAJARAN DALAM KURIKULUM MERDEKA DI SEKOLAH DASAR. *Pena Anda: Jurnal Pendidikan Sekolah Dasar*, *1*(2), 20–29. https://doi.org/10.33830/penaanda.v1i2.6202

Bejar, I. I. (1984). EDUCATIONAL DIAGNOSTIC ASSESSMENT. *Journal of Educational Measurement*, *21*(2), 175–189. https://doi.org/10.1111/j.1745-3984.1984.tb00228.x

Boeriswati, E., Ningsih, R. Y., & Rahayu, W. (2023). Web-Based Design of BIPA Placement Test Instrument for Foreign Speakers. *International Journal of Learning, Teaching and Educational Research*, *22*(2). Retrieved from https://ijlter.org/index.php/ijlter/article/view/6932

Bordeos, M. L., Mangana, G. R., Lamadrid, J. B., & Ligan, J. E. (2023). Students' Perceptions of Crossword Puzzles to Enhance Learning in Social Studies 10. *American Journal of Education and Technology*, *2*(3), 147–153. https://doi.org/10.54536/ajet.v2i3.1920

Bradshaw, L., & Levy, R. (2019). Interpreting Probabilistic Classifications From Diagnostic Psychometric Models. *Educational Measurement: Issues and Practice*, *38*(2), 79–88. https://doi.org/10.1111/emip.12247

Cevallos, M. A. S., Rosado, C. A. Z., & Terán, O. V. T. (2020). The Procedure Used on Diagnostic Evaluation Process. *International Journal of Health and Medical Sciences*, *3*(1), 1–10. https://doi.org/10.31295/ijhms.v3n1.98

Coughlan, G., Coutrot, A., Khondoker, M., Minihane, A.-M., Spiers, H., & Hornberger, M. (2019). Toward personalized cognitive diagnostics of at-genetic-risk Alzheimer's disease. *Proceedings of the National Academy of Sciences of the United States of America*, *116*(19), 9285–9292. https://doi.org/10.1073/pnas.1901600116

Crossword Puzzle Maker. (n.d.). Retrieved February 12, 2024, from https://wordmint.com/crossword-puzzle-maker

Darmiyati, D. (2007). IMPLEMENTASI ASESMEN DIAGNOSTIK DALAM UPAYA MENINGKATKAN HASIL BELAJAR MATEMATIKA DI SD KOTA BANJARBARU KALIMANTAN SELATAN. *Jurnal Pendidikan Dan Kebudayaan*, *13*(67), 509–531. https://doi.org/10.24832/jpnk.v13i67.376

Elizasri, & Ilyas, A. (2023). Pelaksanaan Asesmen Diagnostik Non Kognitif dalam Kurikulum Merdeka di MIN 2 Kota Sawahlunto. *Jurnal Pustaka Cendekia Pendidikan*, *1*(01), 44–49.

Fan, T., Song, J., & Guan, Z. (2021). Integrating diagnostic assessment into curriculum: A theoretical framework and teaching practices. *Language Testing in Asia*, *11*(1), 2. https://doi.org/10.1186/s40468-020-00117-y

Fatmawati, F., Yahya, F., & Sentaya, I. M. (2023). PELATIHAN PELAKSANAAN ASESMEN DIAGNOSTIK, FORMATIF, DAN SUMATIF BERBANTUAN TIK UNTUK GURU-GURU PASRAMAN WIDYA DHARMA SUMBAWA. *Jurnal Pendidikan Dan Pengabdian Masyarakat*, *6*(3), 154–161. https://doi.org/10.29303/jppm.v6i3.5595

Forniawan, A., & Wati, D. R. (2024). Analisis dan Tindak Lanjut Hasil Asesmen Diagnostik Kognitif Mata Pelajaran Ilmu Pengetahuan Alam dan Sosial Sekolah Dasar. *Al Jahiz: Journal of Biology Education Research*, *4*(2). https://doi.org/10.32332/al-jahiz.v4i2.7962

Gaikwad, N., & Tankhiwale, S. (2012). *Crossword puzzles: Self-learning tool in pharmacology*. *1*(5–6), 237. https://doi.org/10.1007/S40037-012-0033-0

Ghimire, L. (2021). Assessment of the policy. In *Multilingualism in Education in Nepal* (1st ed., p. 23). London: Routledge India. Retrieved from https://doi.org/10.4324/9781003159964

Hajizadeh, S., Rawdhan Salman, A., & Ebadi, S. (2023, June 5). Evaluating Language Learning Applications from EFL Learners' Perspectives: The Case of Mondly. https://doi.org/10.21203/rs.3.rs-3011332/v1

Hasibuan, R. (2023). *فعالية تطبيق مباراة لعبة الفرق بوسيلة الكلمات المتقاطعة في تعليم البلاغة لطلبة جامعة إمام بونجول الإسلامية الحكومية بادانج* (Masters, Universitas Islam Negeri Maulana Malik Ibrahim). Universitas Islam Negeri Maulana Malik Ibrahim. Retrieved from http://etheses.uin-malang.ac.id/59687/

Hasibuan, R., Chamidah, D., & Akhsan, A. (2024). TATHBIQU I'DADI BUNUDI AL-IKHTIBARI LI MAHARAH AL-ISTIMA' WA AL-KALAM. *Lahjah Arabiyah: Jurnal Bahasa Arab Dan Pendidikan Bahasa Arab*, *5*(1), 15–30. https://doi.org/10.35316/lahjah.v5i1.15-30

Hasibuan, R., & Fitriani, L. (2023). Innovative Approach to Reading Skill Development: Jigsaw Strategy and Crossword Puzzle Media. *Journal of Arabic Language Learning and Teaching (JALLT)*, *1*(2). https://doi.org/10.23971/jallt.v1i2.98

Hasibuan, R., Fitriani, L., & Aziz, A. (2023). Application of Jigsaw Strategy with Crossword Puzzle Media in Reading Skill Learning. *Al-Uslub: Journal of Arabic Linguistic and Literature*, *7*(02), 207–218. https://doi.org/10.30631/al-uslub.v7i02.152

Hasibuan, R., Haerullah, I. S., & Fitriani, L. (2023). Merdeka Curriculum Innovation for Arabic Learning in 5.0 Era. *International Conference on Law, Technology, Spirituality and Society (ICOLESS)*, *3*, 402–410.

Hasibuan, R., Haerullah, I. S., & Machmudah, U. (2023). TPACK dalam Pembelajaran Bahasa Arab (Studi Implementasi dan Efektivitas). *Islamic Manuscript of Linguistics and Humanity*, *5*(1), 23–34. https://ejournal.uinib.ac.id/jurnal/index.php/imlah/article/view/7103

Hasibuan, R., & Jundi, M. (2023a). Crafting Success: Creative Management Techniques for Darul Ulum Sipaho Islamic Boarding School's Arabic Language Learning Program Implementation. *Kitaba*, *1*(3), 135–146. https://doi.org/10.18860/kitaba.v1i3.24218

Hasibuan, R., & Jundi, M. (2023b). إدارة البيئة العربية: تحليل تنفيذ الترغيب والترهيب في معهد دار العلوم الإسلامية الحديثة سيباهو. *Islamic Manuscript of Linguistics and Humanity*, *5*(2), 76–95.

Hidayah, N., & Amin, M. (2023). Pengaruh Penerapan Asesmen Diagnostik Terhadap Semangat Belajar Siswa Kelas IV MI Ma'arif Ketegan Sidoarjo. *Jurnal Ilmiah Dan Karya Mahasiswa*, *1*(6), 245–255. https://doi.org/10.54066/jikma.v1i6.1104

Himmah, F., Rufi'i, R., & Wiyarno, Y. (2023). PENGEMBANGAN APLIKASI ASESMEN DIAGNOSTIK BERBASIS COMPUTER BASED TEST (CBT) MENGGUNAKAN MOODLE. *JIPI (Jurnal Ilmiah Penelitian Dan Pembelajaran Informatika)*, *8*(3), 1022–1032. https://doi.org/10.29100/jipi.v8i3.4380

Huda, A. A. S., Alamsyah, A., Selvia, S., & Sangadah, N. (2023). ASESMEN DIAGNOSTIK KOGNITIF PADA MATA PELAJARAN PAI KELAS 7 DI SMPN 3 LEMBANG. *Al'Ulum Jurnal Pendidikan Islam*, 213–224. https://doi.org/10.54090/alulum.298

Hula, I. R. (2021). EVALUASI DAN TES BAHASA ARAB: Tinjauan Teori. *Language Development Center*, *12*(7). https://doi.org/10.31219/osf.io/uwt8x

Insani, F., Nuroso, H., & Purnamasari, I. (2023). ANALISIS HASIL ASEMEN DIAGNOSTIK SEBAGAI DASAR PELAKSANAAN PEMBELAJARAN BERDIFERENSIASI DI SEKOLAH DASAR. *Didaktik : Jurnal Ilmiah PGSD STKIP Subang*, *9*(2), 4450–4458. https://doi.org/10.36989/didaktik.v9i2.1154

Isbell, D. R. (2021). Can the Test Support Student Learning? Validating the Use of a Second Language Pronunciation Diagnostic. *Language Assessment Quarterly*, *18*(4), 331–356. https://doi.org/10.1080/15434303.2021.1874382

Jundi, M. (2023a). Classical Test Theory in Analyzing Arabic Test Questions: A Descriptive Study on Item Analysis Research in Indonesia. *ATHLA: Journal of Arabic Teaching, Linguistic and Literature*, *4*(2). https://doi.org/10.22515/athla.v4i2.7747

Jundi, M. (2023b). تصميم برنامج أندرويد لتعزيز إتقان المفردات لدى طلاب المدرسة العالية. *Lahjah Arabiyah: Jurnal Bahasa Arab Dan Pendidikan Bahasa Arab*, *4*(2), 140–158. https://doi.org/10.35316/lahjah.v4i2.140-158

Jundi, M. (2023c). *مقارنة تحليل بنود الأسئلة باستخدام نظرية الاختبار التقليدية ونظرية استجابة البنود لدرس اللغة العربية في المدرسة المتوسطة الإسلامية الحكومية باتو* (Masters, Universitas Islam Negeri Maulana Malik Ibrahim). Universitas Islam Negeri Maulana Malik Ibrahim, Malang. Retrieved from http://etheses.uin-malang.ac.id/60055/

Jundi, M., & Ali, M. (2023). Assessing The Classroom Learning in Arabic Matriculation Program: Tutor and Student Perspective. *Jurnal Al-Maqayis*, *10*(2), 21–36.

Jundi, M., & Hasibuan, R. (2023). Enhancing Arabic Language Proficiency among Students: A Case Study of Language Matriculation Strategies at Al-Hasyimiyah Darul Ulum Sipaho Islamic Boarding School. *Kilmatuna: Journal Of Arabic Education*, *3*(2), 114–129. https://doi.org/10.55352/pba.v3i2.619

Jundi, M., & Solong, N. P. (2021). Conformity Analysis of Arabic Basic Competencies and Indicators in KMA 183. *Tatsqifiy: Jurnal Pendidikan Bahasa Arab*, *2*(1), 61–70. https://doi.org/10.30997/tjpba.v2i1.3642

Jurich, D., & Bradshaw, L. (2014). An Illustration of Diagnostic Classification Modeling in Student Learning Outcomes Assessment. *International Journal of Testing*, *14*(1), 49–72. https://doi.org/10.1080/15305058.2013.835728

Kasman, K., & Lubis, S. K. (2022). Teachers' Performance Evaluation Instrument Designs in the Implementation of the New Learning Paradigm of the Merdeka Curriculum. *Jurnal Kependidikan: Jurnal Hasil Penelitian Dan Kajian Kepustakaan Di Bidang Pendidikan, Pengajaran Dan Pembelajaran*, *8*(3), 760–775. https://doi.org/10.33394/jk.v8i3.5674

Ketterlin-Geller, L. R., Shivraj, P., Basaraba, D., & Yovanoff, P. (2019). Considerations for Using Mathematical Learning Progressions to Design Diagnostic Assessments. *Measurement: Interdisciplinary Research and Perspectives*, *17*(1), 1–22. https://doi.org/10.1080/15366367.2018.1479087

Kolte, S., Jadhav, P. R., Deshmukh, Y. A., & Patil, A. (2017). Effectiveness of crossword puzzle as an adjunct tool for active learning and critical thinking in Pharmacology. *International Journal of Basic & Clinical Pharmacology*, *6*(6), 1431–1436. https://doi.org/10.18203/2319-2003.ijbcp20172236

Kumar, N. (2016). *Diagnostic Test Pedagogy of Commerce*. Ludhina: Nalwa Center College of Education for Women.

Leighton, J. P., & Gierl, M. J. (2007). *Cognitive diagnostic assessment for education: Theory and applications* (pp. viii, 371). New York, NY, US: Cambridge University Press. https://doi.org/10.1017/CBO9780511611186

Liang, Q., de la Torre, J., & Law, N. (2021). Do background characteristics matter in Children's mastery of digital literacy? A cognitive diagnosis model analysis. *Computers in Human Behavior*, *122*, 106850. https://doi.org/10.1016/j.chb.2021.106850

Lovendra, C., & Aisiah, A. (2023). Pengembangan Instrumen Asesmen Diagnostik Kognitif Pembelajaran Sejarah. *Jurnal Kronologi*, *5*(4), 44–55. https://doi.org/10.24036/jk.v5i4.764

Maut, W. O. A. (2022). Asesmen Diagnostik dalam Implementasi Kurikulum Merdeka (IKM) di SD Negeri 1 Tongkuno Kecamatan Tongkuno Kabupaten Muna Sulawesi Tenggara. *Dikmas: Jurnal Pendidikan Masyarakat dan Pengabdian*, *2*(4), 1305–1312. https://doi.org/10.37905/dikmas.2.4.1305-1312.2022

Melati, P. S. (2023). Implementasi Kurikulum Merdeka Belajar Pada Sekolah Dasar Mempengaruhi Pada Hasil Evaluasi Belajar Peserta Didik. *Proceedings Series of Educational Studies*. https://doi.org/10.17977/um083.7893

Mete, F., AliÏBaşiÇ, B., & Köksal, B. (2023). Impact of Vocabulary Teaching Approach in Turkish Curriculum on Turkish Textbooks and Use of Technology in Vocabulary Teaching. *Journal of Learning and Teaching in Digital Age*, *8*(1), 124–135. https://doi.org/10.53850/joltida.1179069

Mudrikah, M., Kusumaningrum, S. R., & Dewi, R. S. I. (2022). Implementation Of Diagnostic Assessments In Learning Design For Optimal Learning Outcome. *Reforma : Jurnal Pendidikan dan Pembelajaran*, *11*(2), 1–7. https://doi.org/10.30736/rf.v11i2.691

Muhamad, S., Fitriani, L., & Aziz, A. (2023). Teams Games Tournament Method Assisted Quizizz Media in Mufradat Learning for Students of The Islamic Education Management Program. *Insyirah: Jurnal Ilmu Bahasa Arab Dan Studi Islam*, *6*(2), 174–185. https://doi.org/10.26555/insyirah.v6i2.9425

Nabila, Khair, M., & Jundi, M. (2024). Uncovering Innovations in Instructional System Design Models for Arabic Language Learning. *Al-Madrasah: Jurnal Pendidikan, Pembelajaran Dan Kebudayaan*, *1*(1). Retrieved from https://journal.syamilahpublishing.com/index.php/madrasah/article/view/37

Nabila, N., & Jundi, M. (2023). Transformational-Generative Theory Perspective in Teaching The Four Language Skills of Arabic. *Al-Fusha : Arabic Language Education Journal*, *5*(2), 72–81. https://doi.org/10.36835/alfusha.v5i2.1193

Nasution, S. W. (2022). Asesment Kurikulum Merdeka Belajar di Sekolah Dasar. *Prosiding Pendidikan Dasar*, *1*(1).

Nuriyana, A., Firlisa, U. D., & Setiyono, J. (2023). Pemanfaatan Aplikasi Quizizz sebagai Model Penilaian Diagnostik pada Pembelajaran Bahasa Indonesia Siswa SMA. *Seminar Nasional Daring Sinergi*, *1*(1), 1386–1395.

Paulsen, J., & Valdivia, D. S. (2022). Examining cognitive diagnostic modeling in classroom assessment conditions. *The Journal of Experimental Education*, *90*(4), 916–933. https://doi.org/10.1080/00220973.2021.1891008

Pinheiro, L. A. da C., Silva, A. P. da, & Hage, S. R. de V. (2020). Morphosyntactic Evaluation Protocol (MEP): Validation of content. *CoDAS*, *32*, e20190148. https://doi.org/10.1590/2317-1782/20202019148

Pinto, L. e, Spares, S., & Driscoll, L. (2012). *95 Strategies for Remodeling Instruction: Ideas for Incorporating CCSS*. Corwin Press.

Purwati, W. antika, Sasomo, B., & Rahmawati, A. D. (2023). ANALISIS ASESMEN DIAGNOSTIK PADA MODEL PEMBELAJARAN PROJECT BASED LEARNING DI KURIKULUM MERDEKA SMPN 3 SINE. *Pedagogy: Jurnal Pendidikan Matematika*, *8*(1), 250–263. https://doi.org/10.30605/pedagogy.v8i1.2512

Pusat Asesmen dan Pembelajaran. (2021). *Panduan pembelajaran dan asesmen jenjang pendidikan dasar dan menengah (SD/MI, SMP/MTs, SMA/SMK/MA)*. Balitbang dan Perbukuan, Kemdikbudristek. Retrieved from https://repositori.kemdikbud.go.id/24921/

Rahardjo, M. (2011). Metode pengumpulan data penelitian kualitatif. *Pascasarjana UIN Maulana Malik Ibrahim Malang*. Retrieved from http://repository.uin-malang.ac.id/1123/

Rahardjo, M. (2023). *Tanya Jawab Metodologi Penelitian Kualitatif, dari Postpositivitistik hingga Postkualitatif*. Mojokerto: Giri Prapanca Loka.

Rahman, K., & Ririen, D. (2023). Implementasi Asesmen Diagnostik Non Kognitif dalam Kebijakan Sekolah. *EDUKATIF : JURNAL ILMU PENDIDIKAN*, *5*(5), 1815–1823. https://doi.org/10.31004/edukatif.v5i5.3954

Rakhmi, M. P., Utomo, A. P. Y., Putri, S. A. A. S., & Ghufron, W. (2023). Pemanfaatan Google Form dalam Asesmen Diagnostik di SMA Negeri 11 Semarang. *Concept: Journal of Social Humanities and Education*, *2*(1), 115–126. https://doi.org/10.55606/concept.v2i1.236

Ridho, U. (2018). EVALUASI DALAM PEMBELAJARAN BAHASA ARAB. *An Nabighoh*, *20*(01), 19–26. https://doi.org/10.32332/an-nabighoh.v20i01.1124

Ritonga, A. W., Ritonga, M., Septiana, V. W., & Mahmud. (2021). Crossword puzzle as a learning media during the covid-19 pandemic: HOTS, MOTS or LOTS? *Journal of Physics: Conference Series*, *1933*(1), 012126. https://doi.org/10.1088/1742-6596/1933/1/012126

Russell, M., O'Dwyer, L. M., & Miranda, H. (2009). Diagnosing students' misconceptions in algebra: Results from an experimental pilot study. *Behavior Research Methods*, *41*(2), 414–424. https://doi.org/10.3758/BRM.41.2.414

Sayekti, S. P. (2022). SYSTEMATIC LITERATURE REVIEW: PENGEMBANGAN ASESMEN PEMBELAJARAN KURIKULUM MERDEKA BELAJAR TINGKAT SEKOLAH DASAR. *Prosiding Seminar Nasional Pendidikan Guru Sekolah Dasar*, *2*(1), 22–28. https://doi.org/10.25134/prosidingsemnaspgsd.v2i1.21

Setyawarno, D., Widodo, E., Rosana, D., & Maryati, M. (2023). Workshop Pengembangan Diagnostic Assessment Untuk Mengukur Kesiapan Peserta Didik SMP Menghadapi Asesmen Kompetensi Minimum (AKM) Dan Programme For International Student Assessment (PISA) Bagi Guru IPA

SMP di Sleman-Yogyakarta. *Jurnal Pengabdian Masyarakat MIPA dan Pendidikan MIPA*, *7*(2), 149–157.

Shah, S., Lynch, L. M. J., & Macias-Moriarity, L. Z. (2010). Crossword Puzzles as a Tool to Enhance Learning About Anti-Ulcer Agents. *American Journal of Pharmaceutical Education*, *74*(7). https://doi.org/10.5688/aj7407117

Siregar, A. H., Hasibuan, R., & Jundi, M. (2023). Exploring the Characteristics of Arabic Learning Content on Tiktok and Instagram: A Qualitative Analysis. *INTERNATIONAL CONFERENCE ON EDUCATIONAL THEORIES, PRACTICES, AND RESEARCH*, *1*(01), 11–27.

Sugiarto, S., Adnan, Aini, R. Q., Suhendra, R., & Ubaidullah. (2023). PELATIHAN IMPELEMTASI ASESMEN DIAGNOSTIK MATA PELAJARAN BAHASA INDONESIA BAGI GURU SEKOLAH DASAR DI KECAMATAN TALIWANG. *KARYA: Jurnal Pengabdian Kepada Masyarakat*, *3*(1), 76–80.

Sugiyono, S. (2016). *Metode Penelitian Pendidikan; Pendekatan Kuantitatif, Kualitatif, dan R&D*. Bandung: Alfabeta.

Supriyadi, S., Lia, R. M., Rusilowati, A., Isnaeni, W., Susilaningsih, E., & Suraji, S. (2022). Penyusunan Instrumen Asesmen Diagnostik untuk Persiapan Kurikulum Merdeka. *Journal of Community Empowerment*, *2*(2), 67–73. https://doi.org/10.15294/jce.v2i2.61886

Suryadi, A., & Husna, S. (2022). ASESMEN DIAGNOSTIK MAKRO PERSIAPAN PENERAPAN KURIKULUM MERDEKA MTsN 28 JAKARTA. *JENTRE*, *3*(2), 74–89. https://doi.org/10.38075/jen.v3i2.273

Tambaritji, V. N., & Atmawidjaja, N. S. (2020). IMPROVING STUDENTS' VOCABULARY MASTERY USING CROSSWORD PUZZLE. *PROJECT (Professional Journal of English Education)*, *3*(5), 588–596. https://doi.org/10.22460/project.v3i5.p588-596

Tang, F., & Zhan, P. (2021). Does Diagnostic Feedback Promote Learning? Evidence From a Longitudinal Cognitive Diagnostic Assessment. *AERA Open*, *7*, 23328584211060804. https://doi.org/10.1177/23328584211060804

Tremblay, A. (2011). PROFICIENCY ASSESSMENT STANDARDS IN SECOND LANGUAGE ACQUISITION RESEARCH: "Clozing" the Gap. *Studies in Second Language Acquisition*, *33*(3), 339–372. https://doi.org/10.1017/S0272263111000015

Wahyuningsih, E., & Maryani, I. (2023). Implementasi Asesmen Diagnostik Dalam Meningkatkan Hasil Belajar Siswa SMP Negeri 1 Cikalongwetan. *Jurnal Manajemen Pendidikan Dasar, Menengah dan Tinggi [JMP-DMT]*, *4*(4), 445–455. https://doi.org/10.30596/jmp-dmt.v4i4.16575

Yuriev, E., Capuano, B., & Short, J. L. (2016). Crossword puzzles for chemistry education: Learning goals beyond vocabulary. *Chemistry Education Research and Practice*, *17*(3), 532–554. https://doi.org/10.1039/C6RP00018E

Zaharo, Hangkiho, R., Jundi, M., Udin, R., & Hasibuan, R. (2024). Al-Ibtikār al-Hadīṡ fi al-Taqyīm al-Takwīni: Istifādatu min al- Ṣuwari al-Muwalladah bi al- Żakā` al-I ṣtinā'i fi Taqyīm Maḥārah al-Kalām li al-Lugah al-Arabiyyah: الابتكار الحديث في التقييم التكويني: استفادة من الصور المولدة بالذكاء الاصطناعي في تقييم مهارة الكلام للّغة العربية. *Al-Madrasah: Jurnal Pendidikan, Pembelajaran dan Kebudayaan*, *1*(1), 14–37.

Zaharo, Z., Chamidah, D., & Jundi, M. (2024). Can Word Puzzle-Based Formative Assessments Track Student Progress in Arabic Language Learning? *Kilmatuna: Journal Of Arabic Education*, *4*(1), 45–60. https://doi.org/10.55352/pba.v4i1.871

Zamani, P., Haghighi, S. B., & Ravanbakhsh, M. (2021). The use of crossword puzzles as an educational tool. *Journal of Advances in Medical Education & Professionalism*, *9*(2), 102–102.

Zhan, P., Li, F., & Jiao, H. (2021). Editorial: Cognitive Diagnostic Assessment for Learning. *Frontiers in Psychology*, *12*. Retrieved from https://www.frontiersin.org/journals/psychology/articles/10.3389/fpsyg.2021.806636

Zhu, X., & Liu, J. (2020). Education in and After Covid-19: Immediate Responses and Long-Term Visions. *Postdigital Science and Education*, *2*(3), 695–699. https://doi.org/10.1007/s42438-020-00126-3

Zlatkin-Troitschanskaia, O., Happ, R., Nell-Müller, S., Deribo, T., Reinhardt, F., & Toepper, M. (2018). Successful Integration of Refugee Students in Higher Education: Insights from Entry Diagnostics in an Online Study Program. *Global Education Review*, *5*(4), 158–181.