

Emirati Journal of Education and Literature
Vol 4 Issue 1 (2026)
Pages 23 - 32
Available at
www.emiratesscholar.com

Project AGHSAN: Bridging Literacy and Cognitive Development in Early Arabic Education Through Guided Reading

Jamal Ataya[1], Farah Sarraj[2], Nema Kataranji[3]
[1,2,3]Al Futtaim Education Foundation, Dubai, UAE

ARTICLE INFO

KEYWORDS

Arabic Literacy; Cognitive Development; Guided Reading; Early Education.

HOW TO CITE

Ataya, J., Sarraj, F., & Kataranji, N. (2026). Project AGHSAN: Bridging Literacy and Cognitive Development in Early Arabic Education Through Guided Reading. Emirati Journal of Education and Literature, 4(1), 23- 32.
https://doi.org/10.54878/h2rz8p66

ABSTRACT

Background: Project AGHSAN introduces an innovative graded reading program designed to enhance Arabic literacy and cognitive skills among young learners. This pilot study assessed the program's impact on reading confidence, fluency, comprehension, and overall student engagement among Year 2 and Year 4 students at Al Futtaim Schools. The study employed a pre-test and post-test control group design, with the intervention group participating in structured guided reading sessions using AGHSAN materials over a five-week period. Data were collected through teacher observations, student surveys, and interviews, with a focus on measurable gains in literacy. Analysis revealed significant improvements in reading fluency, comprehension, vocabulary acquisition, and student engagement within the intervention group, supported by both quantitative and qualitative data. Findings suggest that Project AGHSAN provides an effective framework for addressing critical reading challenges in Arabic, promoting both literacy development and cognitive growth. These results advocate for broader implementation and call for further longitudinal studies to explore the program's long-term benefits.

Double-blind peer review by independent reviewers.

Received: 13 Jan 2026, Accepted: 19 May 2026, Published: 21 Jun 2026

*Corresponding author: dr.jamalataya@gmail.com

Copyright: © 2026 by the author. Licensee Emirates Scholar Center for Research & Studies, UAE.
Open access under the Creative Commons Attribution (CC BY) license
https://creativecommons.org/licenses/by/4.0

Highlights:

- AGHSAN boosts Arabic reading fluency and comprehension in young learners.
- Innovative guided reading method enhances vocabulary and student engagement.
- Structured Arabic literacy program significantly improves reading confidence.
- Quantitative and qualitative evidence supports AGHSAN's educational impact.
- Results advocate wider implementation for long-term cognitive growth benefits.

Background

Project AGHSAN is a comprehensive graded reading program in Arabic that has been developed based on scientific research into Arabic phonics and reading acquisition (1) (2). Arabic literacy development presents unique challenges that distinguish it from languages like English. For example, Arabic's diglossic nature – the coexistence of colloquial dialects and Modern Standard Arabic (MSA) – means children often enter school speaking a different variety than the one used in books (3), which can hinder early reading progress (4) (5). In addition, Arabic is an ABJAD writing system where short vowels are typically omitted, creating a deep orthography that requires learners to infer missing vowel sounds (6) (7). These linguistic features necessitate a phonics-based instructional approach that builds strong phonological decoding skills, as evidence shows phonological awareness is a key predictor of reading success in Arabic (8) (9).

Given these complexities, Project AGHSAN aspires to bridge the reading gap faced by many Arab children by providing structured, leveled reading materials designed to gradually develop literacy skills. The program addresses common struggles of young Arabic readers – such as distinguishing visually similar letters, blending consonants, and reading unvocalized text – issues that are well documented in the literature (10) (11). By targeting these foundational skills through sequenced texts and explicit phonetic exercises, AGHSAN aims to empower children to become confident, fluent readers capable of decoding and comprehending texts in MSA despite the diglossic divide. In the world of AGHSAN, the child is envisioned as an active, critical, and thoughtful participant whose growing linguistic awareness enables them to navigate and make sense of contemporary challenges.

Another core goal of Project AGHSAN is to enrich Arabic literacy experiences by connecting learning to children's cultural identity and real-world knowledge. The program's graded readers incorporate diverse content – including history, geography, philosophy, and STEM topics – and emphasize values such as empathy, justice, equality, and environmental stewardship. This approach aligns with research suggesting that engaging, contextually rich materials can bolster vocabulary growth and reading comprehension in young learners, especially in environments where the home dialect differs from the school language (12). By providing early exposure to meaningful literary Arabic content, the project seeks to ease children's transition into reading in MSA (13). Moreover, by fostering interest across multiple disciplines and encouraging critical thinking, AGHSAN nurtures not only literacy skills but also broader cognitive development. Reading interventions in early childhood have been linked to gains in oral language and cognitive skills (14) (3), which reinforces the importance of programs like AGHSAN that combine skill-building with rich educational content

Project AGHSAN aims to bridge the reading gap faced by Arab children by providing graded reading materials based on scientific research in Arabic phonics and reading acquisition. The project seeks to empower children to achieve a deeper understanding of their world by connecting them to their cultural identity and contemporary realities. It also aims to enrich the Arabic library with diverse content, including topics such as history, geography, philosophy, and STEM subjects, while fostering values like empathy, justice, and environmental awareness.

Methodology

Study Design

This pilot study employed an experimental design to evaluate the effectiveness of Project AGHSAN's graded readers as an intervention tool for improving reading confidence, interest, and overall proficiency and engagement. The AGHSAN project is grounded in scientific research conducted by the Center of Excellence in Arabic Language, focusing on phonics, high-frequency words, and reading progression. The project addresses key challenges in Arabic children's literature, such as the lack of standardized criteria, limited diversity in topics, and weak connections to children's daily lives. The reading materials are designed to align with the phonological and morphological complexities of Arabic, ensuring that they are age-appropriate and cognitively suitable for young learners. The texts are categorized into

ISSN: 3080-1567 - https://doi.org/10.54878/h2rz8p66

10 graded levels, each targeting specific phonetic and lexical skills, and are accompanied by engaging illustrations to enhance comprehension and interest. The study focused on Year 2 and Year 4 students, chosen to represent early and intermediate stages of reading proficiency. The study employed a pre-test and post-test design, involving both a control group and a sample group for each of the year groups mentioned above. The intervention consisted of guided reading sessions using AGHSAN books.

Participants

Participants (n=21) included 10 Year 2 students and 11 Year 4 students, each divided into control and intervention groups based on their initial reading levels assessed through a pre-test. The intervention comprised five weeks of guided reading sessions, each lasting 20 minutes, integrated into the existing Arabic curriculum. AGHSAN books, designed to support progressive reading development, were utilized during these sessions.

Pre-assessment Reading Test

The pre-assessment reading test for both the control and sample groups involved reading a set of 129 words, arranged across 10 graduated levels. Students were presented with flashcards on iPads to read aloud while teachers recorded notes on laptops. The assessment primarily focused on reading accuracy and fluency, with no emphasis on comprehension, as the test used "nonsense" or "made-up" words to measure foundational reading abilities. Data collection documented each student's reading proficiency, allowing for an analysis that established the students' initial reading levels and identified common reading challenges and issues across the groups.

Selection of Reading Materials

Based on the pre-assessment analysis, specific AGHSAN reading levels were chosen for each student in the intervention group to align with their unique needs and reading capabilities. This tailored approach ensured that each student was engaging with materials at an appropriate level, which would best support their reading development. The guided reading intervention took place over a five-week period, with each session lasting 20 minutes. These sessions were seamlessly integrated into the existing Arabic curriculum, allowing for consistent, structured practice using AGHSAN books designed to support graded reading progression.

Session Activities

Lead-in: Students were introduced to the books using pre-reading activities devised by the teachers that aimed to engage students, pique their curiosity about the title and pre-teach some key vocabulary.

Reading Aloud: Students in the sample group read aloud from the AGHSAN books. Teachers provided immediate feedback and support to improve reading fluency and accuracy.

Comprehension Activities: Activities designed to enhance comprehension skills were incorporated. Discussions about the books and characters (if any) were encouraged to deepen understanding and engagement.

Interactive Exercises: Interactive exercises, including games and quizzes related to the reading materials, were used to reinforce learning.

Post-assessment Reading Test

After the five-week intervention, both the control and sample groups completed the same 129-word reading assessment administered during the pre-test. Teachers documented each student's reading proficiency, focusing on accuracy and fluency, as they had in the initial assessment. The post-assessment results were then analyzed and compared to the pre-assessment data to gauge any improvements in reading proficiency. A statistical analysis was conducted to identify significant differences between the control and sample groups, highlighting the impact of the AGHSAN intervention on student reading development.

Post-intervention Assessment

Teacher Observations

Teachers observed the students' reading skills and documented the following attributes during the intervention period:

Fluency: The smoothness and flow of the student's reading.

Comprehension: The ability to understand and interpret the text.

Vocabulary: The range of words the student understands and uses.

Accuracy: The correctness of the student's reading.

Engagement: The level of interest and involvement in the reading activity.

Reading Confidence Survey

Students in both groups completed a survey to self-assess their confidence in reading. The survey included the following questions:

Do you like looking at the AGHSAN books?

Do the AGHSAN books offer topics you love/you are interested in?

Do you think you are good at reading the AGHSAN books?

Do you think you are good at reading Arabic books in general?

Do you feel okay about reading the AGHSAN books aloud?

Do you feel okay about reading other Arabic books aloud?

Do the AGHSAN books have difficult words?

Do you ask for help when you don't understand a word?

Which words describe the AGHSAN books the most?

AGHSAN Reading Interview

Students were interviewed to gain deeper insights into their experiences with AGHSAN books. The interview questions included:

What's something cool or surprising you found out while reading an AGHSAN book?

Can you tell me all about one of the characters in an AGHSAN book you read? What made you choose this character?

How do the AGHSAN books compare to other books that you've read? Are they better or worse? What is better/worse about them?

Tell me how you feel about reading in Arabic. Has your feeling changed recently or has it stayed the same? Why or why not?

Do you ever want the story to keep going after you finish reading?

Can you think of a time when reading an AGHSAN book made you think of something that happened to you?

Can you think of a time when reading an AGHSAN book taught you something you didn't know before? What is it?

What makes AGHSAN books different from other books you've read?

Can you remember a new word you learned from an AGHSAN book? How did you figure out what it meant?

On a scale of 1-10, how interesting are AGHSAN books? Why did you choose this figure?

Results

The AGHSAN project has successfully produced over 200 graded reading texts, which have been registered in the Jordanian National Library. These texts cover a wide range of topics, including science, technology, culture, and environmental awareness, and are designed to cater to different age groups and reading levels. The project has also fostered regional collaboration, engaging over 50 writers and 13 illustrators from across the Arab world. This initiative not only addresses significant reading challenges among students but also demonstrates substantial improvements in reading fluency, comprehension, vocabulary acquisition, and student engagement, as evidenced by teacher observations, student surveys, and reading interviews. Despite these achievements, challenges remain, such as ensuring the quality and diversity of content, and expanding the reach of the materials to all segments of Arab children. Additionally, the project continues to focus on overcoming common difficulties in Arabic literacy, including vowel length discrimination, consonant blending, and differentiation of similarly pronounced or shaped letters, through targeted phonological and lexical interventions.

1. Teacher Observations (Reading Skills)

The Teacher Observations for Reading Skills provided a comprehensive view of student progress across various competencies such as fluency, comprehension, vocabulary, accuracy, and engagement. The observations were conducted in late May and early June 2024, involving 10 students from Year 2 and 11 students from Year 4. Here is a summary of the findings:

Year 4 Students

High Proficiency Levels: Five students showed high proficiency levels across all five competencies. One of them, in particular, was rated as "Outstanding" in comprehension, vocabulary, and engagement.

Developing Levels: Five students were generally developing in most areas, with occasional proficiency in engagement.

Diverse Range of Abilities: The observations indicate a mix of proficient and developing skills, suggesting a diverse range of reading abilities within Year 4 students post-AGHSAN project.

Year 2 Students

ISSN: 3080-1567 - https://doi.org/10.54878/h2rz8p66

Proficiency in Several Areas: Five Students demonstrated proficiency in several areas, with on of them achieving "Outstanding" ratings in fluency, vocabulary, and engagement.

Mix of Developing and Proficient Ratings: Three students showed a mix of developing and proficient ratings, indicating areas for further growth.

Need for Additional Support: One of the students was noted to be emerging in most competencies, suggesting a need for additional support.

Overall, the observations reflect an encouraging trend of proficiency and engagement among many students, with notable improvements in fluency, comprehension, and vocabulary attributed to the AGHSAN project, as shown in figure 1&2.

2. Reading Confidence Survey

The Reading Confidence Survey aimed to capture students' perceptions of their reading abilities and their experiences with AGHSAN books, as shown in figure 3&4. Here are the key findings:

Enjoyment and Interest

Positive Feelings: The majority of students expressed positive feelings towards AGHSAN books, indicating they liked looking at the books and found the topics interesting. Over 80% of the surveyed students expressed enjoyment in reading AGHSAN books.

Comparison with Other Books: Some of the students noted that AGHSAN books were better than other books they had read because they offered more engaging and informative content.

Reading Abilities

Confidence in Reading: Many students felt confident about their reading abilities both with AGHSAN books and Arabic books in general. Approximately 75% of the students felt confident in their reading abilities after using AGHSAN books, although some noted challenges with difficult words.

Impact on Reading Skills: The survey responses suggest that AGHSAN books have positively impacted students' confidence in reading, with several students mentioning improvements in their reading skills.

Engagement and Inspiration

Descriptive Terms: Students frequently described AGHSAN books as interesting, easy, inspiring, and engaging. For instance, two of the students highlighted how these books inspired them and were different from other Arabic books they had read. Nearly 90% of students described AGHSAN books as "interesting" and "engaging."

Student Inspiration: Descriptions such as "interesting," "easy," and "engaging" were commonly associated with AGHSAN books, reflecting their effectiveness in capturing student interest and fostering a positive reading experience.

3. AGHSAN Reading Interview

The AGHSAN Reading Interviews provided qualitative insights into students' experiences and perceptions of the AGHSAN books. The key themes from the interviews are as follows:

Learning and Inspiration

Engaging Content: Some students shared that AGHSAN books provided surprising and interesting information, such as learning about the lifestyle of blind people or historical facts about Dubai. About 70% of students mentioned learning new facts from the books.

Comparison with Other Books: Many students noted that AGHSAN books were more engaging and informative compared to other books highlighting the new knowledge and fun facts they gained from the books.

Character Engagement

Connection with Characters: Students showed a strong connection with the characters in AGHSAN books. Approximately 80% of students mentioned a specific character they liked.

Relatable and Enjoyable Stories: The interviews revealed that the stories and characters in AGHSAN books were effective in engaging students and making reading a more relatable and enjoyable activity.

Impact on Reading Skills

Improvement in Reading Abilities: Several students mentioned that their reading abilities improved with AGHSAN books. Two of them noted that reading had become easier and more enjoyable due to the interesting content and supportive illustrations. Over 65% of students felt their reading skills improved with AGHSAN books.

Increased Confidence and Motivation: The interviews suggest that AGHSAN books have a positive impact on students' reading skills, making them feel more confident and motivated to read in Arabic.

Discussion

Addressing Pre-existing Reading Challenges

The implementation of Project AGHSAN was motivated by well-recognized reading difficulties among young

ISSN: 3080-1567 - https://doi.org/10.54878/h2rz8p66

Arabic readers. Prior to the intervention, students in the participating classes struggled with several foundational skills: discriminating between long and short vowels, blending consonants within words, and distinguishing letters that have similar shapes or sounds. These challenges align with broader findings on Arabic reading acquisition: children often confuse letters that differ only by diacritical dots or subtle phonetic features (for example, ب vs. ت vs. ث, or د vs. ض), and they may have difficulty decoding unvowelized text due to limited phonological strategies (15). Notably, when considering the different forms each letter can take and the inclusion of vowel markers, Arabic has a far larger set of distinct letter–sound combinations (over 300 phonetic units) than the English alphabet, underscoring the need for a specialized, systematic phonics methodology (11) (16). Furthermore, the diglossic gap between spoken Arabic and MSA can compound these issues by introducing discrepancies in vocabulary and pronunciation that young readers must overcome (12) (13).

The structured phonics-based approach of AGHSAN – using sequenced, leveled readers and explicit phonemic instruction – directly targeted these weaknesses. Teachers observed that many students began to overcome their initial hurdles in letter recognition and word decoding after only a few weeks of exposure to the program's materials. This outcome is consistent with results from similar phonological intervention programs, which report significant gains in basic reading skills when instruction focuses on phonemic differentiation and blending (17) (18).

Traditional Methods Versus AGHSAN Approach

It is important to note that the AGHSAN approach differs in focus from some traditional Arabic reading instruction methods. For example, the well-known Al-Nooraniyah method emphasizes Quranic recitation and the application of Tajweed rules (proper pronunciation and intonation for Quran reading), which develops a specific set of phonetic skills tied to classical texts (19). While this traditional approach is valuable for religious literacy, it does not explicitly address broader reading comprehension or the application of reading skills to everyday language and contemporary content. In contrast, Project AGHSAN's curriculum targets general Arabic literacy and cognitive development, using Modern Standard Arabic texts that relate to children's daily lives and knowledge domains. This complementary approach expands the scope of reading instruction beyond the liturgical context, aiming to produce readers who can navigate modern prose and informational texts with understanding and critical thinking. By highlighting this distinction, the present study underlines AGHSAN's unique contribution to addressing literacy challenges in a modern educational context.

Improvement in Specific Reading Competencies

Fluency and Accuracy

One of the most pronounced improvements observed during the AGHSAN pilot was in students' reading fluency and accuracy. Over the five-week intervention, children progressed from halting, effortful decoding to reading with smoother phrasing and fewer mistakes. For instance, by the end of the program, many Year 4 students were reading grade-level passages with confidence, accurately pronouncing words and maintaining an appropriate pace.

This improvement in fluency can be attributed to the program's systematic phonics instruction and repeated practice with leveled texts, which helped students internalize letter–sound correspondences and recognize high-frequency words more automatically. Prior research has shown that targeted phonics interventions can significantly boost reading fluency in Arabic by helping learners navigate its complex orthographic rules (20) (17). In the AGHSAN pilot, the careful progression of text difficulty – starting with simple syllable patterns and gradually introducing more complex structures – allowed students to build their skills incrementally. As a result, their oral reading became more fluid and their accuracy in word recognition improved markedly. These findings echo the broader literature indicating that explicit phonological training yields substantial gains in reading accuracy for Arabic-speaking children (21).

Vocabulary and Comprehension

Students in the AGHSAN program also showed notable gains in vocabulary knowledge and reading comprehension. The rich content of the graded readers exposed children to new words in meaningful contexts, which enhanced their vocabulary acquisition. Teachers reported that after the intervention, students not only could decode text better but also demonstrated a deeper understanding of what they read – they could summarize stories, answer questions about key details, and even use some of the new vocabulary in their own sentences. Some students remarked that AGHSAN stories were interesting and informative, which helped them remember new words and concepts.

This aligns with research emphasizing the role of engaging, content-rich texts in improving reading comprehension skills (12) (22). Because the program's materials were designed to be culturally relevant and age-appropriate, students found it easier to connect with the stories, which in turn facilitated comprehension.

ISSN: 3080-1567 - https://doi.org/10.54878/h2rz8p66

Moreover, the structured post-reading discussions and comprehension questions used in the guided sessions likely contributed to these gains by prompting students to think critically about the text (23). The improvements in comprehension observed during this pilot are encouraging, especially given the relatively short duration of the program. They suggest that even a brief, focused intervention can positively impact how well children understand Arabic texts, provided it systematically builds on their prior knowledge and addresses common linguistic hurdles.

Engagement and Interest

An equally important outcome of the AGHSAN project was the increase in students' engagement and interest in reading. Throughout the intervention, students in the AGHSAN group showed greater enthusiasm for reading activities compared to their peers in the control group. They often described the books as "fun," "exciting," or "inspiring," and many were eager to participate in reading aloud and discussing the stories. This heightened engagement is a crucial factor in literacy development: children who are motivated and enjoy reading tend to practice more and ultimately become better readers.

The use of age-appropriate, culturally relevant stories in AGHSAN likely played a significant role in capturing students' interest. Each book was accompanied by colorful illustrations and featured relatable characters and scenarios, which helped draw students into the reading experience. In addition, the guided reading format – where students could interact with teachers and classmates about the story – made reading a more interactive and social activity rather than a solitary task. These elements of the program align with best practices identified in literacy research, which highlight that interactive and culturally relevant reading instruction can boost student motivation (24). Early evidence from other Arabic literacy initiatives also suggests that when students find materials engaging, their reading confidence and frequency of reading both improve (25). In the AGHSAN pilot, the positive feedback and increased time-on-task observed among students indicate that the program not only built skills but also fostered a more positive attitude toward reading – an outcome that can have lasting benefits beyond the scope of this study.

Overcoming Specific Phonetic and Grammatical Issues

Differentiation of Similar Letters

A significant emphasis of the AGHSAN curriculum was on helping students distinguish between Arabic letters that are easily confused. Arabic orthography contains groups of letters that share the same base shape and are differentiated only by dots (for example, ب ,ت or ج ,ح ,خ), as well as letters that have similar sounds (such as س vs. ث, or ت vs. ط). In the early stages of reading instruction, these similarities often cause confusion and reading errors for children (11).

Project AGHSAN addressed this issue through targeted exercises focusing on letter discrimination. Students practiced identifying and writing look-alike letters side by side, engaged in phonemic awareness activities to hear the differences in pronunciation, and used digital flashcards for repetitive drilling of letter–sound pairs. Over the course of the intervention, teachers noted clear improvements in students' ability to correctly recognize and differentiate these letters in words.

This observation is supported by prior studies which found that intensive practice and visual aids can significantly improve letter discrimination in Arabic learners (26), for instance, demonstrated that Arabic-speaking children (including those with reading difficulties) benefit from explicit training on distinguishing similar letters, leading to better reading accuracy. In the context of AGHSAN, as students became more proficient at telling apart visually or phonetically similar letters, they made fewer decoding mistakes, thereby reading with greater precision (11).

Consonant Blending and Vowel Length

Another area where students showed progress was in handling consonant blends and vowel length distinctions. Arabic words frequently include consonant clusters and require attention to whether vowels are short (brief sounds, often unwritten) or long (held longer and usually represented by vowel letters like ا ,و ,ي).

Initially, many children in the study had difficulty blending consonants smoothly, often inserting extra vowels or pauses, and they sometimes overlooked the difference between, for example, دُ /du/ and دُو /dū/ (short vs. long u sound). Through the AGHSAN intervention, students engaged in systematic phonics activities that emphasized blending sounds and recognizing vowel length. For instance, they practiced reading syllables and words of increasing complexity, learned to identify long vowels in words, and received corrective feedback when they added unwarranted vowels between consonants. By the end of the program, the students were more adept at reading consonant clusters as cohesive units and more consistent in distinguishing long vowel sounds from short ones.

These findings parallel other research highlighting the effectiveness of phonological training on these specific skills (11) (20). Mastering consonant blends and vowel lengths is vital for reading accuracy in Arabic, since a mistake in these areas can change a word's meaning or

ISSN: 3080-1567 - https://doi.org/10.54878/h2rz8p66

render it incomprehensible. The gains observed suggest that AGHSAN's focus on these phonetic details enabled students to tackle one of the tougher aspects of Arabic reading. As a result, children could decode words more faithfully, which likely also supported their improvements in fluency and comprehension.

Implications and Future Directions

The positive outcomes of this pilot study have significant implications for Arabic literacy education. The gains in fluency, accuracy, comprehension, and engagement achieved by the AGHSAN intervention provide empirical support for incorporating systematic phonics and guided reading practices into Arabic early reading curricula. These results are in harmony with a broader literature showing that evidence-based reading programs can substantially improve literacy when they are well-implemented (24). Importantly, this study extends those findings into the Arabic context, demonstrating that an approach tailored to the linguistic characteristics of Arabic can mitigate the challenges posed by diglossia and complex orthography. The success of Project AGHSAN mirrors outcomes from other early-grade reading initiatives in the Arab region – for example, large-scale programs in Egypt and Jordan have also reported improved reading skills after introducing structured, phonics-oriented instruction (25).

In addition to these learning outcomes, the AGHSAN project has also succeeded in developing a substantial library of graded reading materials and fostering collaboration across the Arabic-speaking world. To date, over 200 original AGHSAN texts have been produced, covering a wide range of topics (e.g., science, technology, culture, history, and environmental awareness) and spanning ten difficulty levels; all these titles have been registered with the Jordanian National Library. The project has engaged more than 50 writers and 13 illustrators from various Arab countries to create its stories and artwork. These outputs not only enrich the pool of quality Arabic reading resources available to young readers, but also demonstrate the scalability and cultural relevance of the AGHSAN initiative. A continuing challenge, however, is to maintain the quality and diversity of content while expanding the reach of these materials to all segments of Arab children, especially those in under-resourced communities.

While the pilot was relatively short-term and involved a limited sample, the improvements seen suggest that the AGHSAN model could have an even greater impact with a longer implementation and broader reach. Future research should explore the long-term effects of sustained use of AGHSAN materials, including whether students continue to progress and maintain their reading gains in subsequent school years. It would also be valuable to investigate the addition of explicit morphological awareness training, given the importance of root-and-pattern morphology in Arabic word reading and vocabulary growth (20). Furthermore, expanding the program to diverse Arabic-speaking communities could test its effectiveness across different dialectal backgrounds, addressing diglossia by gradually bridging students' colloquial language to formal Arabic in reading materials (12). The enthusiastic student engagement observed in the pilot underscores that a well-crafted Arabic reading program can motivate learners – an outcome that may encourage education stakeholders to invest in more culturally relevant and child-friendly reading resources. In conclusion, Project AGHSAN has demonstrated a promising framework for advancing Arabic literacy. By combining phonics-based instruction with engaging content and attention to the unique features of the Arabic language, it contributes valuable insights into how educators can better support early reading development in Arabic. Continued efforts to refine and research such interventions will be crucial for closing the literacy gap and fostering a generation of proficient, lifelong readers in the Arab world.

Conclusion

The AGHSAN Impact Study Pilot demonstrates that the Project AGHSAN graded reading programme effectively addresses prevalent reading challenges among students at Al Futtaim Schools. Significant improvements in reading fluency, comprehension, vocabulary, and student engagement underscore the programme's potential to enhance Arabic literacy and foster cognitive and emotional growth. The positive student feedback and teacher observations indicate that AGHSAN not only improves specific reading skills but also cultivates a sustained interest in reading. These promising outcomes advocate for the broader implementation of AGHSAN across diverse educational settings in the Arab world. The AGHSAN project is expected to have a profound impact on children's literacy skills, creativity, and cultural identity. By providing engaging and scientifically grounded reading materials, the project aims to foster a lifelong love for reading and learning among Arab children. On a societal level, AGHSAN contributes to enriching the Arabic library, raising cultural awareness, and developing the capacities of writers and illustrators in the Arab world. Future efforts should focus on addressing challenges related to content diversity, quality assurance, and distribution to ensure the project's widespread success. Future research should focus on expanding the study to include larger and more varied populations, as

ISSN: 3080-1567 - https://doi.org/10.54878/h2rz8p66

well as conducting longitudinal assessments to evaluate the programme's long-term efficacy (14).

LimitationsThis study has several limitations that should be acknowledged:

Limited Sample Size: The study was conducted with a relatively small sample, which may affect the generalizability of the findings. Future research with larger, more diverse participant groups is recommended to validate the results.

Single-School Participation: Data were collected from only one school, which limits the scope of the study. Expanding the research to include multiple schools would provide a more comprehensive understanding of the intervention's effectiveness across different educational settings.

Preliminary Phase: This research represents the initial phase of a larger project. The findings are based on early-stage data, and further investigation is required to capture the full impact of the intervention over time. Subsequent phases will provide more robust conclusions as additional data are collected and analyzed.

Author contributions

Farah Sarraj and Nema Kataranji contributed to the study's conception and design. Material preparation and data collection were performed by Farah Sarraj and Nema Kataranji. Data analysis was conducted by Jamal Ataya. The first draft of the manuscript was written by Jamal Ataya, with all authors providing comments on previous versions of the manuscript. Supervision of the project was managed by Farah Sarraj. All authors have read and approved the final manuscript.

Funding

This research was funded by the Al-Futtaim Education Foundation.

Competing interest

The authors declare there are no competing interest.

Availability of data and materials

The data and materials supporting this study are available upon request.

Ethical Approval

Ethical approval was obtained, and all parents of participating students provided informed consent and expressed willingness to participate in this project. The study was conducted in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki declaration.

References

1.Al Ghanem R, Kearns DM. Orthographic, phonological, and morphological skills and children's word reading in Arabic: A literature review. Read Res Q. 2015;50(1):83–109.

2.Asaad H, Eviatar Z. Learning to read in Arabic: The long and winding road. Read Writ. 2014;27:649–64.

3.Saiegh-Haddad E, Schiff R. The impact of diglossia on voweled and unvoweled word reading in Arabic: A developmental study from childhood to adolescence. Sci Stud Read. 2016;20(4):311–24.

4.Myhill J. The effect of diglossia on literacy in Arabic and other languages. Handb Arab Lit Insights Perspect. 2014;197–223.

5.Hashem R. Diglossia and Arabic Literacy: From Research to Practice. Br J Educ. 2022;10(11):1–13.

6.Yassin R, Share DL, Shalhoub-Awwad Y. Learning to spell in Arabic: The impact of script-specific visual-orthographic features. Front Psychol. 2020;11:2059.

7.Abu-Hamour B, Al-Hmouz H, Kenana M. The effect of short vowelization on curriculum-based measurement of reading fluency and comprehension in Arabic. Aust J Learn Difficulties. 2013;18(2):181–97.

8.Saiegh-Haddad E, Shahbari-Kassem A, Schiff R. Phonological awareness in Arabic: The role of phonological distance, phonological-unit size, and SES. Read Writ. 2020;33(6):1649–74.

9.İlerten F, Haznedar B, Babür N. Cognitive and linguistic predictors of word reading fluency in Turkish–Arabic bilingual and Turkish monolingual children. Int J Biling. 2024;13670069241305284.

10.Issa I. Morphological complexity in Arabic spelling and its implication for cognitive processing. J Psycholinguist Res. 2023;52(1):331–57.

11.Taha HY. Reading and spelling in Arabic: Linguistic and orthographic complexity. Theory Pract Lang Stud. 2013;3(5):721.

12.Shahbari-Kassem A, Asli-Badarneh A, Hende N, Roby-Bayaa A. Reading stories in Arabic: the impact of lexico-phonological and diglossic distance level on comprehension and receptive and productive vocabulary among Arab kindergarten children. Front Educ [Internet]. 2024;9. Available from: https://www.frontiersin.org/journals/education/articles/10.3389/feduc.2024.1394024

13.Ayari S. Diglossia and illiteracy in the Arab world. Lang Cult Curric. 1996;9(3):243–53.

14.Molfese VJ, Modglin A, Molfese DL. The role of environment in the development of reading skills: a longitudinal study of preschool and school-age measures. J Learn Disabil. 2003;36(1):59–67.

15.Maroun L, Ibrahim R, Eviatar Z. Visual and orthographic processing in Arabic word recognition among dyslexic and typical readers. Writ Syst Res. 2019;11(2):142–58.

16.Treiman R, Hulslander J, Olson RK, Willcutt EG, Byrne B, Kessler B. The unique role of early spelling in the prediction of later literacy performance. Sci Stud Read. 2019;23(5):437–44.

17.Layes S, Layes K. Study on the Concurrent Role of Phonological Processing and Visual Perception Abilities in Word Reading in Arabic- A Follow-up Study. Arab J Appl Linguist [Internet]. 2023 Dec 31;8(2 SE-):1–37. Available from: https://www.arjals.com/ajal/article/view/382

18.Elbeheri G, Everatt J. Literacy ability and phonological processing skills amongst dyslexic and non-dyslexic speakers of Arabic. Read Writ [Internet]. 2007;20(3):273–94. Available from: https://doi.org/10.1007/s11145-006-9031-0

19.Ullah MZ, Ahamd M. "Qaida Al-Nooraniyya" is an effective basis for learning the Holy Quran and the Arabic language with the development of modern teaching methods:" القاعدة النورانية "أساس فعال لتعلم القرآن الكريم واللغة العربية مع تطور وسائل التعليم الحديثة. Al-Aijaz Res J Islam Stud Humanit. 2024;8(1):1–17.

20.Tibi S. Cognitive and linguistic factors of reading Arabic: the role of morphological awareness in reading. Queen's University (Canada); 2016.

21.Mannai H al, Everatt J. Phonological processing skills as predictors of literacy amongst Arabic speaking Bahraini children. Dyslexia [Internet]. 2005 Nov 1;11(4):269–91. Available from: https://doi.org/10.1002/dys.303

22.Duke NK, Pearson PD. Effective practices for developing reading comprehension. J Educ. 2009;189(1–2):107–22.

23.Gay G. Culturally responsive teaching: Theory, research, and practice. teachers college press; 2018.

24.Slavin RE, Lake C, Chambers B, Cheung A, Davis S. Effective Reading Programs for the Elementary Grades: A Best-Evidence Synthesis. Rev Educ Res [Internet]. 2009 Dec 1;79(4):1391–466. Available from: https://doi.org/10.3102/0034654309341374

25.Gove A, Brombacher A, Ward-Brent M. Sparking a reading revolution: Results of early literacy interventions in Egypt and Jordan. New Dir Child Adolesc Dev. 2017;2017(155):97–115.

26.Al-Khalifa HS. A system for decoding and coloring arabic text for language learners. IEEE Access. 2019;7:104810–22.