

Islamic Educational Entrepreneurship in Developing Arabic Learning Media for Early Childhood: A Pesantren-Based Conceptual Framework for Pondok Pesantren Ar-Rohmah Karawang

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Abstract

Arabic learning media for early childhood can be understood not only as instructional products but also as opportunities for responsible Islamic educational entrepreneurship, yet commercial availability does not guarantee linguistic accuracy or pedagogical validity. This conceptual study develops a pesantren-based framework for Pondok Pesantren Ar-Rohmah Karawang that integrates entrepreneurship education, social value creation, early childhood pedagogy, Arabic content verification, and digital product design. Using an interdisciplinary narrative review with a qualitative conceptual-synthesis design, 26 peer-reviewed and institutional sources published between 2020 and 2025 were retrieved from Scopus, DOAJ, Google Scholar, Garuda, and official OECD, UNESCO, and NAEYC portals, selected through explicit inclusion criteria and analysed through three-stage thematic coding. The synthesis produced the Identify-Empathize-Verify-Prototype-Validate-Sustain cycle and an accompanying value-validation matrix that distinguishes educational value from commercial attractiveness: a product is not viable when it lacks linguistic accuracy, developmental suitability, safety, accessibility, or evidence of classroom usefulness. The framework positions the pesantren as a proposed, not empirically tested, site for interdisciplinary innovation and collaboration with PIAUD practitioners and early childhood institutions. Being conceptual and without empirical validation, the framework offers a testable basis for pesantren training, community service, educational-product incubation, and future empirical evaluation of Arabic learning media.

Keywords: arabic learning media; early childhood education; educational entrepreneurship; islamic economics; social value

Introduction

Educational products for young children are increasingly created and distributed through digital platforms, social media, marketplaces, and community networks. Flashcards, storybooks, audio materials, printable games, and teacher guides can support learning, but commercial availability does not guarantee educational quality. Products may contain inaccurate language, inappropriate visual design, excessive claims, or limited guidance for teachers.

The magnitude of this problem is indicated by recent syntheses of the field. Purnama et al., (2022) document a growing use of digital storytelling in Indonesian early childhood education, which shows that the production of digital learning material has expanded faster than the evidence base required to evaluate it. Liu, & Soyoof, (2024) report that digital language and literacy tools for young children vary considerably in design, so that adult guidance and instructional integration remain necessary for any learning benefit to occur. Antoninis et al., (2023) cautions that educational technology has expanded more rapidly than independent evidence of its educational contribution.

Within Arabic learning specifically, Warmansyah et al., (2023) find that early childhood teachers rely on general-purpose design applications to produce their own Arabic materials, which indicates a limited supply of ready and verified resources, while Marni & Rahmi, (2025); Sri, et al., (2024) describe Arabic vocabulary teaching for young children as dependent on strategies developed by individual teachers rather than on standardised media. Manik et al., (2024) report a comparable condition in a community service programme at a PAUD institution, where basic Arabic vocabulary input had to be introduced through an external initiative. Taken together, these studies indicate that the difficulty is not the absence of products but the absence of verification, teacher support, and instructional integration.

Educational entrepreneurship should therefore be understood as responsible value creation rather than simple product selling. Entrepreneurship education is strongest when learners practise identifying problems, creating solutions, testing assumptions, and reflecting on value for users (Ratten & Jones, 2021). In an Islamic educational context, value creation must also consider honesty, usefulness, fairness, and social benefit. Social entrepreneurship literature emphasizes the pursuit of social value through innovative and sustainable activity. Martínez-Gregorio et al., (2021) show that social entrepreneurship combines opportunity recognition with the creation of social benefit. Arabic learning media for early childhood can fit this orientation when products solve genuine instructional problems and remain accessible to teachers and families.

The educational problem is interdisciplinary. Product developers need to understand early childhood development, Arabic content, visual and audio design, teacher practice, and business sustainability. A technically attractive product can still fail if children cannot use it, teachers do not understand the instructions, or the Arabic input is inaccurate. Design thinking provides a useful process because it begins with the user and encourages iterative prototyping. Carpenter & Wilson, (2022) describe design thinking as an approach that integrates human desirability, technological feasibility, and economic viability. For early childhood Arabic media, these dimensions must be supplemented by pedagogical validity and ethical responsibility.

Pondok Pesantren Ar-Rohmah Karawang is treated as a potential community-based site for integrating Arabic learning, early childhood service, digital media production, and ethical enterprise. Implementation would require collaboration among pesantren leaders, Arabic teachers, early childhood practitioners, families, and local partners because no single role can validate the complete product. Because the framework is addressed to a specific institution, the institutional characteristics that condition its implementation must be made explicit. At Pondok Pesantren Ar-Rohmah Karawang, the relevant profile comprises the existing Arabic learning programme and its position within the daily curriculum; the presence of early childhood, Raudhatul Athfal, or PAUD units within or adjacent to the pesantren; current entrepreneurial activities such as cooperatives, production units, or santri enterprise projects; the availability of digital equipment and the digital competence of teaching staff; and the needs articulated by ustadz and ustadzah, santri families, and neighbouring early childhood institutions.

These characteristics determine which stages of the proposed cycle can be executed internally and which require external partners, and they also determine the scale at which any product can realistically be produced and distributed. The present article, however, is based on literature synthesis and does not report institutional data. The profile outlined above is therefore stated as the baseline information that must be documented before implementation, not as an empirical description of the institution.

This article does not assume that an incubation programme has already occurred or generated revenue at Pondok Pesantren Ar-Rohmah Karawang. It formulates an academically defensible framework that can guide training, community service, santri projects, or future institutional initiatives. Any claim about sales, users, partnerships, or learning effects must be supported by actual records. The article addresses three questions: what stages should organize responsible pesantren-based educational entrepreneurship; what criteria distinguish educational value from commercial appeal; and how can Pondok Pesantren Ar-Rohmah Karawang facilitate community collaboration for developing Arabic learning media for early childhood?. The distinction between a customer and a beneficiary is important. Teachers or parents may purchase a product, but children are the primary educational beneficiaries.

A design that is attractive to adult buyers may still be ineffective or inappropriate for children. User research must therefore represent both decision makers and end users while protecting children's rights. Entrepreneurship education can also become superficial when it is reduced to a sales exhibition. A responsible program should assess problem evidence, product validity, testing, revision, ethics, and sustainability. Financial performance may be examined, but it should not be the only indicator of success in an educational project.

The proposed framework contributes an educational quality gate to conventional value creation. Before a product is evaluated for market expansion, Arabic experts and early childhood practitioners must confirm that its content and proposed use meet minimum standards. This gate protects users and strengthens the credibility of the enterprise. Pesantren are educational communities in which religious learning, moral formation, social relations, and everyday practice are closely connected. Yugo, (2025) shows that the pesantren tradition is sustained through the interaction of kyai, santri, mosque, dormitory, and classical Islamic texts.

Modernisation in pesantren does not necessarily require abandoning tradition. Abubakar et al., (2025) describe pesantren as institutions that negotiate continuity and change while maintaining religious identity. Islamic educational institutions in Southeast Asia also respond to changing social, economic, and political environments. Aini & Majid, (2025) explain that modern Muslim education develops through varied institutional arrangements rather than a single model.

Educational entrepreneurship in this setting should be treated as a practice of solving community problems and sustaining beneficial services. Ratten & Jones, (2021) argue that entrepreneurship learning should develop initiative, opportunity awareness, responsibility, and the ability to act under uncertainty. A practice-based approach is

particularly suitable because participants learn through iterative action rather than through business-plan theory alone. Wardana et al., (2020) organize entrepreneurship education around experimentation, empathy, creation, play, and reflection.

The urgency of the framework arises from three converging conditions. First, learning materials for young children are increasingly produced and distributed as commercial goods, so that decisions about content are frequently made by producers rather than by educators; Antoninis et al., (2023) warns that technology in education must serve educational needs rather than become an end in itself. Second, unverified digital content carries specific risks for young users, including inaccurate language input, the collection of personal data, and exposure to design that is not developmentally appropriate.

OECD (2023) argues that technology for young children must be assessed according to quality and equity rather than novelty, and professional standards require developmentally appropriate and ethical practice (National Association for the Education of Young Children, 2020). Third, demand for Islamic educational products continues to grow alongside the expansion of pesantren-based initiatives (Abubakar et al., 2025; Aini & Majid, 2025), which increases the number of producers without a corresponding increase in verification capacity. Where linguistic accuracy is itself the object being sold, an unverified product does not merely fail to assist learning; it transmits error.

Previous studies have examined the constituent elements of this problem separately. Entrepreneurship education research has established the value of practice-based and problem-centred learning and has questioned the adequacy of intention-based outcome measures (Carpenter & Wilson, 2022; Martínez-Gregorio et al., 2021; Ratten & Usmanij, 2021), but it has not treated the verification of educational content as a condition of venture progression. Research on digital learning for young children has clarified design principles and the conditions of adult mediation (Liu et al., 2024; R. E. Mayer, 2021a; OECD, 2023), yet it treats products as given rather than as outcomes of an entrepreneurial process.

Studies of Arabic learning for early childhood have described effective classroom strategies and teacher digital competence (Hanifah, & Hanafi, 2024; Marni & Rahmi, 2025; Sri, et.al, 2024; Warmansyah, & Fitri, 2023), but they do not consider how such materials are produced, financed, or sustained. Research on pesantren modernisation and edupreneurship has examined institutional change and value formation (Aini & Majid, 2025; Lailatussaadah et al., 2023; Yugo, 2025), without connecting these processes to the design and validation of specific educational products. The gap is therefore integrative: previous studies have examined entrepreneurship education, digital Arabic learning, and pesantren modernisation separately, whereas limited research integrates entrepreneurial value creation, Arabic linguistic validation, early childhood pedagogy, and pesantren-based community innovation within a single operational framework.

The novelty of this study lies in that integration and in one specific structural modification. The framework proposed here differs from existing entrepreneurship and design models by inserting an obligatory educational verification stage between problem

exploration and product development, so that linguistic and pedagogical validity function as a gate that a product must pass rather than as a criterion applied after the product has been built and marketed. The contribution is therefore not a new inventory of entrepreneurial activities but a reordering of the value-creation sequence according to educational responsibility, formulated for the institutional conditions of a pesantren and for the specific requirements of Arabic learning media for early childhood.

The framework is intended to be operationally useful in four settings. In pesantren entrepreneurship programmes, it can serve as a project structure through which santri teams progress across defined stages, each carrying an explicit evidence requirement. In teacher training, the verify and validate stages can be used to develop the analytical competence of Arabic and early childhood teachers in assessing content accuracy, developmental suitability, and instructional fit.

In community service programmes, the identify and empathize stages provide a procedure for grounding activities in the documented needs of partner RA and PAUD institutions rather than in assumptions held by the implementing team. In educational product incubation, the value-validation matrix supplies the criteria by which an institution may decide whether a product should proceed to wider distribution or be returned for revision.

Method

The study used an interdisciplinary narrative review. Sources were drawn from entrepreneurship education, social entrepreneurship, design thinking, teacher knowledge, multimedia learning, early childhood digital practice, and Arabic learning media. The method was appropriate because the proposed framework crosses disciplinary boundaries and is intended for curriculum and program development. The final analytical corpus comprised 26 sources published between 2020 and 2025, selected for conceptual relevance, methodological credibility, and direct contribution to the proposed framework.

In terms of research design, the study adopted a qualitative approach with a conceptual synthesis design, operationalised through a narrative literature review. A narrative rather than an aggregative systematic design was selected because the objective was theory construction rather than effect estimation: the study sought to integrate constructs drawn from disciplines that do not share a common outcome measure, a purpose for which meta-analytic procedures are not appropriate. Reporting nevertheless followed the transparency principles articulated by Page et al., (2021) concerning explicit eligibility criteria, documented selection procedures, and clearly stated reporting boundaries.

With regard to data sources, literature was retrieved from indexed academic databases and recognised institutional repositories, comprising Scopus, the Directory of Open Access Journals, Google Scholar, and the Garuda national index for Indonesian journals, together with the official publication portals of OECD, UNESCO, and the National Association for the Education of Young Children for institutional documents. Keyword combinations were constructed around four construct clusters and applied in

both English and Indonesian: entrepreneurship education, social entrepreneurship, edupreneurship, and design thinking; early childhood education, PAUD, developmentally appropriate practice, and multimedia learning; Arabic learning media, Arabic vocabulary, and early childhood Arabic; and pesantren, Islamic education, and Islamic entrepreneurship. The reference lists of retrieved articles were subsequently screened to identify additional relevant sources.

Inclusion criteria were applied as follows: publication between 2020 and 2025; status as a peer-reviewed journal article, scholarly monograph, or document issued by a recognised institutional authority; substantive engagement with at least one of the four construct clusters; availability of the full text; and traceability through a DOI or an official institutional address. Exclusion criteria were: publication outside the stated period, unless the source constituted a foundational reference for a construct; opinion pieces, promotional material, and non-peer-reviewed web content; studies in which engagement with the constructs was incidental; and duplicate reports of the same dataset. Screening proceeded from title and abstract to full-text assessment, and disagreements among the authors regarding inclusion were resolved through discussion until consensus was reached. The procedure yielded the final analytical corpus of 26 sources.

The literature was coded according to problem identification, user understanding, content validity, product development, validation, and sustainability. Educational criteria were added to conventional entrepreneurship criteria so that pedagogical quality could not be displaced by market considerations. The analysis followed a three-stage thematic coding procedure. In the first stage, each source was read in full and coded openly for statements concerning the origin of educational problems, the understanding of users, the validation of content, the development of products, the testing of products, and the maintenance of value over time.

In the second stage, the open codes were grouped into six categories corresponding to these functions, and the properties of each category were specified in terms of the core question it answers and the evidence it requires. In the third stage, the categories were arranged sequentially according to their logical dependency: a category was positioned before another when its output constituted a precondition for the operation of the second. This ordering produced the six-stage cycle and the accompanying value-validation matrix presented in the following section.

Two procedures were applied to strengthen the credibility of the synthesis. First, each category was required to be supported by sources from at least two disciplinary fields, so that no stage of the framework would rest upon a single body of literature. Second, the categories and their sequence were reviewed by the authors against the original sources to confirm that the assigned meanings had not been distorted through translation across disciplinary vocabularies. Because the framework was derived from literature rather than from field data, its epistemic status is that of a testable proposition; no claim of empirical validity is advanced, and no institutional, market, or classroom data were collected.

The conceptual model was translated into a six-stage cycle and a value-validation matrix. Pondok Pesantren Ar-Rohmah Karawang is treated as a proposed implementation context. Subsequent empirical studies are required to document community needs, partnerships, market feasibility, and learning outcomes. The interdisciplinary synthesis compared concepts that use different vocabularies. Entrepreneurship literature discusses opportunity, value proposition, and viability, while education literature discusses objectives, development, pedagogy, and assessment.

The analysis translated these terms into a common framework without treating them as interchangeable. The model was checked against potential conflicts between financial and educational priorities. A stage or criterion was retained when it helped identify or manage such a conflict. Examples include the need for fair pricing, accessibility alternatives, transparent claims, and limits on the use of children's data.

Results and Discussion

The synthesis produced the Identify–Empathize–Verify–Prototype–Validate–Sustain cycle. Identify defines a specific educational problem, such as teachers' difficulty finding accurate and age-appropriate Arabic vocabulary media. Empathize investigates how teachers, children, and families currently experience the problem. Verify checks linguistic, pedagogical, ethical, and legal requirements before a product is built.

Prototype develops a limited educational product rather than a complete commercial package. Validate examines usability, instructional fit, accessibility, and willingness to use. Sustain designs production, pricing, distribution, support, and impact measurement. The cycle is iterative because validation may reveal a need to redefine the original problem.

Table 1. Educational Entrepreneurship Value-Creation Cycle

Stage	Core Question	Required Evidence
Identify	What genuine educational problem will be solved?	Problem statement supported by user observations or interviews.
Empathize	What do teachers, children, and families need?	User profiles, learning context, constraints, and accessibility needs.
Verify	Is the proposed content accurate, appropriate, and ethical?	Arabic review, PIAUD review, copyright and safety checklist.
Prototype	What minimum product can test the concept?	Sample cards, story, audio, teacher guide, or printable activity.
Validate	Does the product work educationally and practically?	Usability feedback, teaching trial, revision record.
Sustain	How will value, access, and financial continuity be maintained?	Cost structure, fair pricing, distribution, support, and impact indicators.

Source: Data Processed

The selection of these six stages is theoretically motivated rather than merely descriptive. Each stage corresponds to a function that the reviewed literature identifies as a necessary condition for a defensible educational product. Identify and Empathize derive from the problem-centred orientation of entrepreneurship education, in which value is defined by the user rather than asserted by the producer (Ratten & Jones, 2021; Ratten & Usmanij, 2021). Verify derives from the requirement, established in teacher knowledge and multimedia research, that subject content be transformed into an accurate and learnable form before it is presented to learners (Falloon, 2020; R. E. Mayer, 2021). Prototype and Validate derive from the iterative testing logic of design-oriented practice combined with the evidentiary standards of early childhood professional practice (Carpenter & Wilson, 2022). Sustain derives from the social entrepreneurship requirement that benefit be maintained over time rather than delivered on a single occasion (Aini & Majid, 2025; Martínez-Gregorio, et.al, 2021).

The position of Verify before Prototype constitutes the principal structural claim of the framework. In conventional design and lean development sequences, a prototype is constructed early and corrected through user response, on the assumption that error is recoverable and that the user is competent to detect it. Neither assumption holds in the present domain. Errors in Arabic input, whether in vocalisation, register, or pronunciation, are not detectable by the end user, since a young child cannot identify an incorrect model, and the purchasing adult frequently cannot do so either. An error introduced at the prototype stage is therefore reproduced through testing, revision, and distribution without ever being registered as an error. Placing verification before construction converts linguistic and pedagogical accuracy from a variable that the market is assumed to correct into a precondition that the market does not in fact test. This is the sense in which the framework treats verification as a gate rather than as an evaluative criterion.

Compared with existing models, the framework retains familiar elements while altering their sequence and their evidentiary requirements. Design thinking coordinates human desirability, technological feasibility, and economic viability (Carpenter & Wilson, 2022); the present framework adds pedagogical validity and linguistic accuracy as a further dimension that cannot be traded against the other three. Entrepreneurship education models typically evaluate outcomes at the level of intention, self-efficacy, or venture creation (Martínez-Gregorio et al., 2021; Wardana et al., 2020); the present framework requires stage-level evidence, including a documented problem, a user profile, an expert review record, and a revision log, so that assessment attaches to the developmental process rather than to the final presentation.

Islamic entrepreneurship education models integrate religious values with competencies and assessment (Lailatussaadah et al., 2023); the present framework specifies the points at which those values become operational decisions, namely in content verification, in pricing, and in the treatment of children's data. The theoretical contribution is therefore a modification rather than a replacement: the value-creation sequence is reordered so that an educational quality gate precedes market exposure, and

the criteria for passing that gate are made explicit and auditable. Educational value must be assessed before commercial attractiveness. The product should have accurate Arabic, a limited and age-appropriate learning objective, clear teacher guidance, meaningful child activity, and observable evidence of learning. Early childhood professional standards require developmentally appropriate and ethical practice (National Association for the Education of Young Children, 2020).

Commercial value remains important because an unsustainable product cannot serve users over time. However, viability should not be achieved through exaggerated claims. Product descriptions must avoid promises such as guaranteeing fluency or intelligence. Marketing should explain the intended age, learning objective, recommended use, limitations, and need for adult facilitation. A value-validation matrix can examine five dimensions: pedagogical validity, linguistic validity, user desirability, operational feasibility, and financial sustainability. A product should not progress to wider distribution when one of the first two dimensions is weak. This rule protects children and institutional reputation.

Collaboration is essential. Arabic teachers verify language, early childhood practitioners analyse development and classroom interaction, designers improve usability, pesantren administrators examine institutional feasibility, and community entrepreneurship mentors evaluate cost and distribution. Partner RA or PAUD institutions can provide authentic problems and carefully governed trial settings. Digital products require additional safeguards. Developers should use licensed assets, protect personal data, avoid including identifiable images of children without consent, provide offline alternatives when possible, and design for adult mediation. Technology in early childhood should be evaluated according to quality and equity rather than novelty (OECD, 2023).

The framework can be implemented through a pesantren training cycle or community project. Teams begin with interviews or observations, develop a verified prototype, conduct a limited usability and teaching trial with appropriate consent, revise the product, and present an ethical sustainability plan. Assessment should include the process portfolio rather than only the final pitch.

Possible outputs include Arabic thematic flashcards with audio, a short digital story and printable play guide, teacher pronunciation support, or a low-cost classroom game. Each product should include a user guide, language verification record, age recommendation, assessment suggestions, and transparent attribution. Future empirical research can evaluate user needs, product usability, teacher adoption, learning support, cost structure, and social impact. Revenue and learning data must be documented accurately. The present article provides a framework for such work but does not substitute for market research or classroom evaluation.

User research should begin with a narrow problem. Instead of asking whether people like Arabic flashcards, students can investigate how teachers currently introduce a particular vocabulary theme, what errors occur, which materials are unavailable, and what constraints affect use. Specific questions generate more reliable design evidence than general preference surveys.

The value proposition should identify an educational outcome and a user benefit without guaranteeing results. For example, a product may provide verified pronunciation support and a teacher guide for movement-based vocabulary practice. The proposition should explain what the product enables, not claim that every child will master Arabic after using it. A minimum viable educational product must include more than a visual sample. It should contain enough content to test the instructional sequence, language accuracy, teacher instructions, and child participation. A limited prototype is preferable to a large untested collection because early validation can prevent expensive errors.

Validation should separate usability from learning value. Teachers can report whether instructions are clear and materials are practical. Classroom observation can examine whether children understand the activity and participate. Language experts can verify accuracy. These forms of evidence answer different questions and should not be replaced by a single satisfaction score. Pricing and access require ethical consideration. Cost calculations should include design, printing, audio production, distribution, support, and revision. A sustainability plan may combine paid products with sample resources, institutional licences, or community partnerships. Fair pricing does not mean the lowest price; it means a transparent relationship between cost, quality, access, and continued support.

Impact indicators can include the number of verified products, teacher adoption, product revision, accessibility, and documented classroom use. Revenue is relevant to sustainability, but it does not demonstrate educational impact. Similarly, high download numbers do not prove that a product was used appropriately. Programme governance should establish an interdisciplinary review panel, ethical procedures for community research, copyright guidance, child-protection safeguards, and criteria for public claims. Project teams should retain records of feedback, revisions, costs, permissions, and benefit-sharing decisions.

A pilot programme at Pondok Pesantren Ar-Rohmah Karawang can begin with a small number of teams and one product category. Evaluation can examine the quality of community needs analysis, expert validation, prototype improvement, feasibility, participant learning, and social benefit. Market and learning outcomes should be reported separately. The framework should begin with problems experienced by teachers, parents, santri families, and nearby early childhood institutions. Boldureanu, et.al,(2020) show that credible entrepreneurial models can make entrepreneurship education more concrete and help learners connect examples with local opportunities.

Social value must be defined explicitly because educational beneficiaries may differ from purchasers or donors. Pesantren edupreneurship should connect practical competence, Muslim character, and community benefit (Aini & Majid, 2025). Faith-based entrepreneurship should combine innovation with religious values, community responsibility, and transparent educational benefit (Abubakar et al., 2025). Uncertain projects should start from available means, trusted partnerships, and affordable experiments. Ratten & Usmanij, (2021) argue that entrepreneurship education research

should become more contextual, practice-based, and responsive to changing social and economic conditions.

A sustainability model can clarify beneficiaries, value propositions, key activities, resources, channels, costs, and institutional support. Carpenter & Wilson, (2022) show that entrepreneurship programmes should be evaluated with outcomes that correspond to the actual educational experience rather than relying on intention alone. Entrepreneurship learning outcomes should include opportunity recognition, self-efficacy, knowledge, intention, and venture-related behaviour, but claims must match the assessment design.

Martínez-Gregorio et al., (2021) show that entrepreneurship education research often varies substantially in outcome level and methodological strength. At Pondok Pesantren Ar-Rohmah Karawang, a small pilot can involve santri teams, ustadz or ustadzah, Arabic reviewers, early childhood practitioners, and community partners. Page et al., (2021) emphasize transparent eligibility criteria, selection procedures, and reporting boundaries when literature synthesis is used to construct a testable framework.

Entrepreneurship education should align learning objectives, pedagogical models, and assessment rather than relying on motivational seminars. Ratten & Jones, (2021) propose that entrepreneurship teaching must be designed around explicit educational assumptions. Educational products require a transformation of subject knowledge into forms that are understandable and usable by learners. Ranta et al. (2023) show that early childhood pedagogical competence integrates planning, interaction, assessment, inclusion, and reflective decision making.

Digital Arabic media require the integration of language content, pedagogy, and technology. Falloon, (2020) explains that these domains should be designed relationally rather than as separate technical components. Multimedia should direct attention toward essential meaning and avoid decorative overload. R. Mayer, (2021) provides evidence-based principles for coordinating words, images, and audio. Digital competence among Arabic educators depends on pedagogical purpose, content verification, and reflective use. Hanifah et al., (2024) connect digitalisation with the pedagogical development of preservice Arabic teachers.

Digital storytelling offers one possible community product because it can integrate Arabic, Islamic values, visual narrative, and guided activity. Purnama et al., (2022) document the growing use of digital storytelling in Indonesian early childhood education. Accessible design applications can help community teams create prototypes, but templates do not guarantee instructional quality. Warmansyah et al., (2023) show that teachers view Canva as useful for early childhood Arabic learning when it supports classroom needs.

Arabic learning media for young children should use varied, engaging, and repetitive strategies without sacrificing meaningful interaction. Marni & Rahmi, (2025) describe such strategies in an Indonesian Raudhatul Athfal context. Technology-based educational products should be assessed for accessibility, privacy, human agency, and their fit with local teaching conditions. Antoninis et al., (2023) cautions that technology must serve educational needs rather than become an end in itself.

The updated literature base adds several implications for implementation and subsequent empirical testing. Islamic entrepreneurship education requires an explicit model that integrates religious values, competencies, learning activities, and assessment (Lailatussaadah et al., 2023). Arabic vocabulary learning for young children benefits from contextual repetition, visual support, movement, and meaningful classroom routines (Sri Zulfida et al., 2024). Digital language and literacy tools vary considerably in design, making adult guidance and instructional integration essential (Liu et al., 2024). Community-based Arabic vocabulary activities can connect simple language input with local early childhood learning needs (Manik et al., 2024).

Pre-service teacher digital competence should be developed as part of sustainable professional readiness rather than as a separate technical module (Zhang et al., 2026). Professional learning for digital education should connect technology with pedagogy, collaboration, school strategy, and quality assurance (OECD, 2025). Literacy play can strengthen language development when oral interaction, print, imagination, and guided participation are combined (Rifqiyah et al., 2025).

The normative provisions of this framework, namely ethical pricing, restrained claims, child protection, and the limitation of data collection, are not external additions to the model but consequences of its theoretical premises. If educational beneficiaries are analytically distinct from purchasers, as the social entrepreneurship literature maintains (Martínez-Gregorio et al., 2021), then price functions as an access condition for the beneficiary and not solely as a revenue variable for the producer, and accessibility becomes a design criterion rather than a concession. If the instructional value of digital material depends upon adult mediation (Liu et al., 2024; R. E. Mayer, 2021a), then a product claim that omits the conditions of use is not merely optimistic but inaccurate, since it describes an outcome under conditions that the product itself does not supply.

If technology for young children is to be assessed according to quality and equity rather than novelty (OECD, 2023), then data collection and the use of identifiable imagery are matters of professional standard rather than of institutional preference, consistent with the ethical requirements of early childhood practice (National Association for the Education of Young Children, 2020). The framework thus derives its ethical provisions from the same premises that generate its procedural ones, and the recommendations presented above should be read as entailments of the model rather than as separate exhortations.

It follows from the design of the study that the present analysis cannot support conclusions regarding effectiveness. The framework has been derived from literature and has not been implemented, tested, or compared with an alternative procedure; no evidence is available concerning its effect on product quality, teacher adoption, learning outcomes, or institutional sustainability. The statements in this section describe what the framework requires and why it is theoretically defensible, not what it has been demonstrated to achieve. Any assertion of superiority over existing development practice would exceed the evidentiary basis of a conceptual study and is therefore deliberately avoided.

Conclusion

Responsible pesantren-based educational entrepreneurship in early childhood Arabic media requires the integration of social value, pedagogical validity, linguistic accuracy, community participation, user-centred design, and financial sustainability. A commercially attractive product is not educationally viable when it is inaccurate, developmentally unsuitable, unsafe, inaccessible, or unsupported by classroom use. The Identify–Empathize–Verify–Prototype–Validate–Sustain cycle offers Pondok Pesantren Ar-Rohmah Karawang a cross-disciplinary basis for project courses, incubation, and community collaboration.

This study is nevertheless conceptual: the framework was derived from literature and has not been implemented, tested, or compared with alternative procedures, so no claims about users, revenue, or learning effects can yet be made. Future work should therefore pilot the cycle at the pesantren through genuine user research and transparent product trials, and empirically evaluate its effect on product quality, teacher adoption, and learning outcomes before any assertion of effectiveness is advanced. Documenting community needs, partnerships, and market feasibility remains a necessary next step.

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