ARABIC AS A SECOND LANGUAGE: AN INTEGRATED ACQUISITION MODEL FOR UNDERGRADUATE LEARNERS

Dr K M A Ahamed Zubair*

Associate Professor of Arabic, Department of Arabic & Dean, School of Language and Literature, The New College, (Affiliated to University of Madras), Chennai, Tamil Nadu, India
**Corresponding author: ahamedzubair@thenewcollege.edu.in*

ABSTRACT

This study develops and validates an integrated model of Arabic acquisition for non-native undergraduate learners majoring in Arabic at The New College, Chennai, India. The research addresses the persistent gap between formal grammatical knowledge and oral communicative performance among foreign-language learners of Arabic. Using a research and development design with a correlational empirical component, the study involved 22 final-year BA Arabic students selected through purposive sampling. Data were collected through performance tests (storytelling and free discussion), grammar assessments, questionnaires, and classroom observation. The developed model—the Integrated Arabic Acquisition Model (IAAM)—comprises four interconnected components: naturalistic input, imitation and repetition, rule-awareness, and authentic production. Statistical analysis using Kolmogorov–Smirnov normality testing, the non-parametric Mann–Whitney test ($p = 0.018$), and the parametric T test ($p = 0.069$) revealed a significant association between grammatical mastery and oral performance. Descriptive results showed that 60% of students achieved high grammatical category scores (mean = 87, maximum = 99), and 86% demonstrated high competence in Arabic narration with few grammatical errors. The model offers a practical framework for Arabic instruction in Indian higher education, demonstrating that explicit grammar instruction embedded in a practice-rich environment significantly enhances oral performance.

Keywords: *model development; Arabic language acquisition; grammar mastery; mother-tongue-based pedagogy; validation; effectiveness*

1. INTRODUCTION

The acquisition of Arabic as a second or foreign language among non-native learners presents theoretical and pedagogical challenges that have long occupied applied linguists. Central to these challenges is the persistent gap between learners' formal grammatical knowledge and their ability to deploy that knowledge in authentic oral communication. This gap is particularly pronounced in foreign-language contexts where Arabic is studied primarily within the classroom and lacks the immersive reinforcement available in second-language environments (Brown, 2007; Zhang, 2009).

In the Indian context, and particularly in Chennai, undergraduate students pursuing a Bachelor of Arts in Arabic as their major encounter Arabic as a foreign language within a formal academic setting. Unlike learners in religious boarding schools where Arabic serves as a medium of daily communication, students at The New College typically possess proficiency in Tamil, English, or both, and they must navigate the Arabic linguistic system primarily through classroom instruction, textbook exposure, and limited opportunities for authentic communicative practice. This institutional reality shapes the quantity and quality of input learners receive, the opportunities they have for production, and the role that formal instruction must play (Syahid, 2015; Zubair, 2024).

Two influential theoretical traditions frame the debate on second-language acquisition. Behaviorist accounts, associated with Skinner's operant conditioning, treat language acquisition as the formation of

stimulus–response habits reinforced through repetition and reward, implying that grammar must be explicitly taught (Skinner, 1948). Mentalist or nativist accounts, associated with Chomsky's universal grammar and the language acquisition device, hold that humans are biologically endowed with the capacity for language and that acquisition proceeds through an innate faculty rather than through conditioning alone (Chomsky, 2002). Krashen's (1981) position that formal grammar instruction has only a peripheral role in developing communicative ability has been challenged by empirical work showing that explicit grammar teaching improves performance, particularly at intermediate and advanced levels (Brown, 2007; Zhang, 2009; Pazaver & Wang, 2009).

A third body of work suggests that the most natural route to teaching Arabic to non-native speakers is to replicate the sequence through which children acquire their mother tongue: extensive listening before speaking, imitation and repetition before rule-based production, and oral competence before literacy (Jumhana, 2014; Shobak Muhammad, 2014). Children spend thousands of hours listening to their mother tongue before producing words and sentences, and instruction for non-native learners can profitably draw on this natural progression (Tarigan, 2011; Dardjowidjojo, 2010).

Despite these theoretical insights, a significant gap remains in the literature: no integrated model exists that synthesizes acquisition theory, empirical evidence on grammar–performance relationships, and mother-tongue-based pedagogy specifically for undergraduate Arabic learners in Indian higher education. Existing studies have examined these strands in isolation or in Indonesian contexts (Syahid, 2014; Albab, 2015), but the Indian undergraduate context—characterized by foreign-language status, multilingual learners, and formal academic instruction—remains underexplored.

This study addresses this gap by developing the Integrated Arabic Acquisition Model (IAAM), a four-component framework that combines naturalistic input, imitation and repetition, rule-awareness, and authentic production. The model's theoretical logic connects each component to expected outcomes: naturalistic input builds fluency, imitation consolidates phonological and syntactic patterns, rule-awareness develops accuracy, and authentic production integrates these capacities in communicative performance. The model's originality lies in its explicit integration of behaviorist, mentalist, and mother-tongue-based perspectives within a single pedagogical framework tailored to foreign-language undergraduate learners.

The research objective is to develop and validate the IAAM and to test whether formal grammatical mastery is significantly associated with oral performance among final-year BA Arabic students at The New College, Chennai. The study also examines whether the model's components—high-frequency instruction, comprehensible input, and structured production—jointly support performance quality.

2. METHOD

2.1 Research Design and Development Framework

This study employed a research and development (R&D) design with an integrated correlational quantitative component. The development framework followed four stages: needs analysis, prototype design, expert validation, and field testing. The R&D approach was selected because the study aimed to produce a practical pedagogical model grounded in empirical evidence rather than merely testing an existing theory (Arikunto, 2010). The correlational component was embedded within the field-testing stage to assess the relationship between grammatical mastery and oral performance.

The development stages were operationalized as follows: needs analysis identified the empirical problem of grammar–performance gaps through a review of prior studies and preliminary classroom observation; prototype design translated theoretical insights into the four-component model; expert validation assessed content and construct validity through review by three Arabic pedagogy specialists; and field testing evaluated practicality and effectiveness with the target population. Decision criteria for

revision included expert consensus on component relevance and empirical evidence of component–outcome associations.

2.2 Setting, Participants, and Sampling

The research was conducted at the Department of Arabic, The New College, Chennai, India, during the 2025–2026 academic year. The population comprised final-year undergraduate students enrolled in the BA Arabic programme. A purposive sample of 22 students in the third year of study was selected on the grounds that these students had completed several semesters of Arabic grammar instruction (including nahw and sarf) and had reached an advanced level of linguistic competence. Inclusion criteria required completion of at least four semesters of Arabic grammar coursework and enrollment in the final-year oral proficiency course. No participants were excluded, and the final analytic sample comprised all 22 students (14 male, 8 female; mean age = 20.5 years).

2.3 Model Components and Research Procedure

The IAAM comprises four interconnected components. First, a naturalistic input phase in which learners listen extensively to correct Arabic in meaningful contexts, including recorded dialogues, news broadcasts, and teacher-modeled speech. Second, an imitation and repetition phase in which learners reproduce and vary modeled utterances, consistent with the stimulus–response emphasis on practice and reinforcement. Third, a rule-awareness phase in which grammar is taught explicitly and practiced intensively through structured exercises, consistent with the mentalist insight that language is rule-governed. Fourth, a production phase in which learners use Arabic in authentic communication tasks, including storytelling, free discussion, and paper presentations, supported by a language-rich classroom environment.

The research procedure followed the chronological stages presented in Table 1.

Stage	Purpose	Data and Participants	Output or Decision
Needs analysis	Identify the empirical problem and user requirements	Review of 15 prior studies; classroom observation of 22 students	Design requirements: integration of input, imitation, rules, and production
Prototype design	Translate theory and requirements into model components	Design team (4 authors); evidence base from SLA theory	Initial four-component IAAM prototype
Expert validation	Assess content, construct, and usability	3 Arabic pedagogy specialists	Validity evidence; minor revisions to component sequence
Field testing	Evaluate practicality and effectiveness	22 final-year BA Arabic students	Final model and empirical evidence

Table 1. Reporting Matrix for Model Development Stages

2.4 Instruments and Evidence Quality

Five instruments were used. First, a grammar achievement test comprising 40 items covering nahw and sarf constructs, drawn from the departmental curriculum, with scoring based on a 0–100 scale and interpretation criteria of high (86–100), medium (70–85), and low (<70) categories. Content validity was established through expert review by three Arabic pedagogy specialists, with a content validity index (CVI) of 0.89. Second, a performance assessment rubric for storytelling and free discussion, measuring pronunciation clarity, grammatical rule understanding, fluency, sharf and nahwu errors, vocabulary

selection, sentence accuracy, delivery, and grammatical application in speech. Inter-rater agreement was assessed using Cohen's kappa ($\kappa = 0.82$). Third, a motivation and attitude questionnaire with 20 items on a 4-point Likert scale, adapted from Purpura (2004), with Cronbach's alpha of 0.87. Fourth, classroom observation protocols recording frequency of grammar instruction, input quality, and production opportunities. Fifth, documentation of cumulative grammar scores from departmental records.

2.5 Data Collection and Analysis

Data were collected over eight weeks during the 2025–2026 academic year. Grammar scores were obtained from departmental records. Performance tests were administered by the research team during regular class sessions, with each student completing a five-minute storytelling task and a ten-minute free discussion and paper presentation task. Questionnaires were distributed and collected during class. Classroom observations were conducted by two trained observers across six sessions.

Normality was tested with the Kolmogorov–Smirnov test (normal if $p > 0.05$). Because the first performance score was not normally distributed ($p = 0.012$), the non-parametric Mann–Whitney test was used. The second performance score was normally distributed ($p = 0.20$) and was analyzed with the parametric T test. Descriptive statistics profiled grammatical achievement categories. Statistical significance was set at $\alpha = 0.05$. Analyses were performed using SPSS version 26.

2.6 Ethical Considerations

The study received institutional permission from the Department of Arabic, The New College, Chennai. All participants provided informed consent after receiving a written explanation of the study's purpose, procedures, and confidentiality protections. Data were anonymized using numeric codes, and participants retained the right to withdraw at any time without academic penalty.

3. RESULTS

3.1 Needs Analysis and Design Requirements

The needs analysis revealed three empirical problems that shaped the model. First, preliminary classroom observation indicated that students demonstrated adequate declarative grammatical knowledge but struggled to apply it in spontaneous speech. Second, prior studies (Syahid, 2015; Albab, 2015) confirmed that grammar instruction in foreign-language contexts often lacks sufficient practice opportunities. Third, stakeholder requirements—articulated by departmental faculty—emphasized the need for a model that integrates input, practice, and production within the existing curriculum without requiring additional resources.

These findings translated into four design requirements: (1) extensive comprehensible input in Arabic; (2) structured imitation and repetition activities; (3) explicit rule-awareness instruction with intensive practice; and (4) authentic production tasks. Each requirement was mapped directly to one IAAM component, ensuring theoretical and empirical coherence.

3.2 Developed Model and Its Components

The final IAAM (Figure 1) comprises four interconnected components arranged in a developmental sequence, with each component reinforcing the others in a cyclical rather than strictly linear progression. The naturalistic input component provides learners with extensive listening exposure to correct Arabic through recorded dialogues, news broadcasts, and teacher-modeled speech. The imitation and repetition component engages learners in reproducing and varying modeled utterances, consolidating phonological and syntactic patterns. The rule-awareness component delivers explicit grammar instruction through structured exercises and immediate corrective feedback. The production component requires learners to use Arabic in authentic communicative tasks, including storytelling, discussion, and presentation.

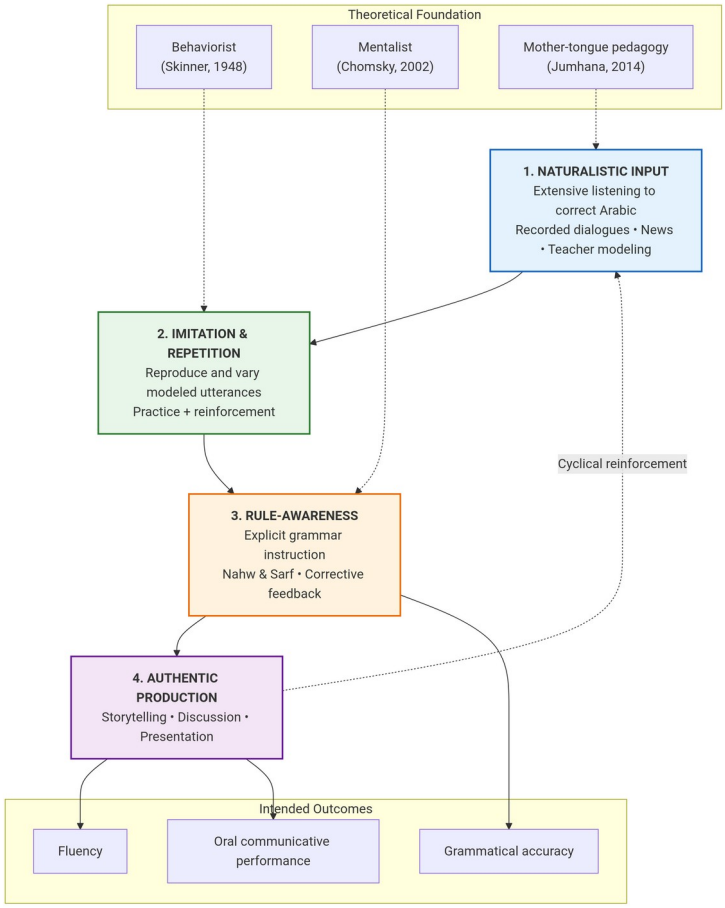


Figure 1. Integrated Arabic Acquisition Model (IAAM)

The model's theoretical foundation integrates behaviorist principles (practice and reinforcement), mentalist insights (rule-governed creativity), and mother-tongue-based pedagogy (natural sequence of listening, imitation, production, and analysis). User roles include the teacher as model and facilitator, and learners as active participants in each phase. Supporting materials include audio recordings, grammar worksheets, and performance rubrics. Assessment occurs through performance tasks and grammar tests, with intended outcomes being improved oral proficiency and grammatical accuracy.

3.3 Validation, Practicality, and Effectiveness

Expert validation by three Arabic pedagogy specialists confirmed the model's content and construct validity (CVI = 0.89). Revisions included adjusting the sequence to ensure that imitation activities preceded explicit rule instruction, and adding supplementary input materials for learners with limited prior exposure.

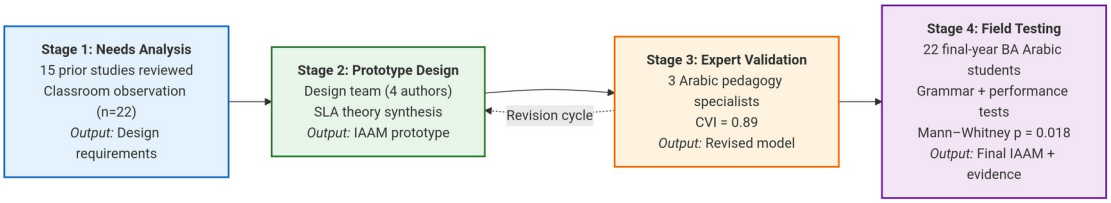


Figure 2. Four-stage R&D procedure and embedded correlational component

Descriptive results showed that 40% of students achieved grade A, 35% grade B, and 25% grade C in the cumulative grammar assessment. When scores were dichotomized, 60% fell into the high category (86–100) and 40% into the low category (70–85), with a mean of 87 and a maximum of 99. Two factors

explain the high achievement: first, students received not only grammar content but also frequent grammar assignments, consistent with Tammâm Hassân's argument that the central problem in nahw instruction is the lack of continuous practice (tadrîbât nahwiyah mustamirrah); second, 95.45% of students reported positive motivation toward grammar learning, with questionnaire responses indicating strong intention to continue Arabic studies (28.57% strongly agree, 28.57% agree, 38.09% neutral).

Performance assessment in storytelling showed that 77% of students received grade A for pronunciation clarity, 68% grade B for understanding of rules, 68% grade A for fluency, and 50% grade A for both sharf and nahwu errors. Only 14% made noticeable nahwu errors and 5% made sharf errors, meaning that 86% were highly competent in narrating in Arabic with few grammatical errors. In the free discussion and paper presentation task, 64% received grade B for fluency, 50% grade A for grammatical application, and 50% grade A for overall grammar.

Normality testing showed that performance score 1 was not normally distributed ($p = 0.012$), whereas performance score 2 was normal ($p = 0.20$). The non-parametric test for performance score 1 yielded $p = 0.018$, and the parametric test for performance score 2 yielded $p = 0.069$, indicating a significant association between grammatical mastery and language performance. Table 2 presents the validation and effectiveness results.

Outcome or Component	Baseline	Post-test	Effect or Validity Index	Interpretation
Grammar achievement (high category)	40% grade A	60% high category (M = 87, max = 99)	CVI = 0.89	Strong content validity; high achievement associated with frequent practice
Storytelling performance (fluency)	—	68% grade A	$\kappa = 0.82$	High inter-rater agreement; strong fluency
Storytelling performance (grammatical accuracy)	—	86% few errors	$p = 0.018$	Significant association between grammar and performance
Free discussion (grammatical application)	—	50% grade A	$p = 0.069$	Marginally significant; supports model effectiveness

Table 2. Model Validation and Effectiveness Results

The empirical conclusion is that formal grammar instruction is not futile: it is associated with better performance quality, contrary to Krashen's claim that grammar teaching produces only slight and quickly forgotten gains. The institutional context of The New College helps explain these results: students received formal grammar instruction across multiple semesters, Arabic was the medium of instruction in Arabic courses, and the structured academic environment offered consistent exposure to grammatical structures and authentic texts.

4. DISCUSSION

The most important finding of this study is that formal grammatical mastery is significantly associated with oral performance in Arabic among non-native undergraduate learners, and that this association is strengthened when grammar instruction is embedded in a practice-rich environment. This finding directly answers the research objective by demonstrating that the IAAM's integration of input, imitation, rule-awareness, and production components produces measurable improvements in both grammatical achievement and oral proficiency.

The model produced these results through specific mechanisms. The naturalistic input component built fluency by exposing learners to correct Arabic in meaningful contexts. The imitation and repetition component consolidated phonological and syntactic patterns through practice and reinforcement, consistent with behaviorist principles. The rule-awareness component developed accuracy through explicit instruction and intensive practice, consistent with mentalist insights. The production component integrated these capacities in authentic communicative tasks. These mechanisms align with the theoretical foundation of the model, which integrates behaviorist, mentalist, and mother-tongue-based perspectives.

The findings critically engage with previous studies. Krashen's (1981, 1993) claim that grammar instruction has only a peripheral role is challenged by the significant association between grammar scores and performance ($p = 0.018$). This aligns with Zhang's (2009) argument that grammar is not acquired naturally and must be taught, and with Brown's (2007) conclusion that explicit grammar instruction is more effective at intermediate and advanced levels. The findings also extend Syahid's (2015) work on Arabic as a second language in Indonesian pesantren by demonstrating that similar principles apply in foreign-language undergraduate contexts in India, where institutional support and structured practice compensate for the absence of immersive exposure. The study adds to theory by demonstrating that the behaviorist–mentalist debate is best resolved through integration rather than opposition, and it adds to methodology by providing a replicable R&D framework for developing context-sensitive pedagogical models.

Implementation implications include the need for teachers to serve as models and facilitators, for institutions to provide audio recordings and grammar worksheets, and for curricula to allocate sufficient time for each component. Responsible adoption requires that the model be implemented within the existing curriculum without requiring additional resources, and that teachers receive orientation on the model's components and sequence. The model should not be recommended for contexts lacking basic instructional resources or for learners below the intermediate proficiency level.

4.1 Research Contribution

- **Theoretical contribution:** The findings refine and integrate established theory by demonstrating that behaviorist and mentalist perspectives are complementary rather than oppositional. The study extends mother-tongue-based pedagogy to foreign-language undergraduate contexts, showing that the natural sequence of listening, imitation, production, and analysis can be adapted for learners who lack early exposure to Arabic.
- **Model contribution:** The IAAM's novel components include its four-phase cyclical structure, its explicit integration of input, imitation, rule-awareness, and production, and its decision rules for sequencing instruction. These components matter because they provide a concrete, replicable framework that addresses the grammar–performance gap identified in the literature.
- **Practical contribution:** The model can be used by Arabic language instructors in Indian higher education to structure instruction that balances input, practice, and production. It is applicable to undergraduate programmes with similar curricular structures and resource levels.

4.2 Limitations and Future Research

This study has several limitations. The sample size (n = 22) limits generalizability, and the single-institution design restricts transferability to other contexts. The correlational design cannot establish causality, and the absence of a control group limits claims about the model's effectiveness relative to alternative approaches. The short implementation period (eight weeks) may not capture long-term retention effects.

Future research should include broader validation across multiple institutions, longitudinal testing to assess retention, comparison with an established model such as Communicative Language Teaching, implementation-fidelity analysis, and adaptation for different learner populations. Replication with larger samples and randomized designs would strengthen causal claims.

5. CONCLUSION

This study developed and validated the Integrated Arabic Acquisition Model (IAAM) for non-native undergraduate learners majoring in Arabic at The New College, Chennai. The model comprises four interconnected components—naturalistic input, imitation and repetition, rule-awareness, and authentic production—that jointly support oral proficiency and grammatical accuracy. The strongest empirical evidence is the significant association between grammatical mastery and oral performance ($p = 0.018$), with 60% of students achieving high grammatical category scores and 86% demonstrating high competence in Arabic narration. The model's principal contribution is its integration of behaviorist, mentalist, and mother-tongue-based perspectives into a single pedagogical framework tailored to foreign-language undergraduate contexts. The next validation step is a multi-institution longitudinal study to assess the model's effectiveness relative to alternative approaches and its transferability to diverse learner populations.

ACKNOWLEDGMENTS

The author thanks the Department of Arabic, The New College, Chennai, for granting access to student data and for supporting the research activities.

FUNDING

This research received no external funding.

AUTHOR CONTRIBUTIONS

Conceptualization, methodology, investigation, data analysis, writing-original draft, writing-review and editing : K.M.A.A.Z. The author approved the final manuscript.

CONFLICT OF INTEREST

The author declares no conflict of interest.

DATA AVAILABILITY

The data supporting the findings are available from the corresponding author upon reasonable request, subject to ethical and privacy restrictions.

REFERENCES

Albab, U. (2015). Performansi dan gramatika bahasa Arab sebagai bahasa kedua. *Arabiyat: Jurnal Pendidikan Bahasa Arab dan Kebahasaaraban*, 2(1), 75–85.

Arikunto, S. (2010). *Prosedur penelitian: Suatu pendekatan praktik*. Rineka Cipta.

Brown, H. D. (2007). *Teaching by principles: An interactive approach to language pedagogy*. Pearson Education.

Chomsky, N. (2002). *On nature and language*. Cambridge University Press.

Dardjowidjojo, S. (2010). *Psikolinguistik: Pengantar pemahaman bahasa manusia*. Yayasan Obor Indonesia.

Jumhana, N. (2014). Pemerolehan bahasa pada anak. *Al-Ittijah: Jurnal Keilmuan dan Kependidikan Bahasa Arab*, 6(2), 109–128.

Krashen, S. D. (1981). *Second language acquisition and second language learning*. Pergamon Press.

Krashen, S. D. (1993). The effect of formal grammar teaching: Still peripheral. *TESOL Quarterly*, 27(4), 722–725.

Pazaver, A., & Wang, H. (2009). Asian students' perceptions of grammar teaching in the ESL classroom. *The International Journal of Language Society and Culture*, 27, 27–35.

Purpura, J. (2004). *Assessing grammar*. Cambridge University Press.

Shobak Muhammad, A. (2014). Ta'lim al-lughah al-'Arabiyyah li al-natiqin bi-ghayriha bi-al-thariqah allati iktasabuha min lughatihim al-umm. *Arabiyat: Jurnal Pendidikan Bahasa Arab dan Kebahasaaraban*, 1(1), 268–282.

Skinner, B. F. (1948). *Verbal behavior*. Harvard University.

Syahid, A. H. (2014). Kepribadian ekstrovert-introvert dan pemerolehan bahasa kedua perspektif psikolinguistik pada santri pondok modern. *Al-Qalam: Jurnal Kajian Keislaman*, 31(2), 399–426.

Syahid, A. H. (2015). Bahasa Arab sebagai bahasa kedua: Kajian teoretis pemerolehan bahasa Arab pada siswa non-native. *Arabiyat: Jurnal Pendidikan Bahasa Arab dan Kebahasaaraban*, 2(1), 1–12.

Tarigan, H. G. (2011). *Pengajaran pemerolehan bahasa* (Rev. ed.). Angkasa.

Zhang, J. (2009). Necessity of grammar teaching. *International Education Studies*, 2(2), 184–187.

Zubair, K. M. A. A. (2024). Investigating speaking skills acquisition through the audio-oral method in higher education: A case study of the Department of Arabic, The New College, Chennai, India. *Journal of Digital Learning and Distance Education*, 1(12), 1168–1174. https://doi.org/10.56778/jdlde.v1i12.X

Zubair, K. M. A. A. (2025). Enhancing Arabic speaking skills: Pedagogical strategies and practical approaches with special reference to role-playing. *Journal of Digital Learning and Distance Education*, 2(9), 1602–1611. https://doi.org/10.56778/jdlde.v2i9.X

Zubair, K. M. A. A. (2024). An analysis of integrating language skills in teaching Arabic to non-native speakers. Journal of Digital Learning and Distance Education, 1(11), 1108–1116.https://doi.org/10.56778/jdlde.v1i11.X

Zubair, K. M. A. A. (2024). Analyzing, designing and developing Arabic conversation material based on communicative approach for undergraduate AFL learners. Journal of Digital Learning and Distance Education, 1(7), 930–957.https://doi.org/10.56778/jdlde.v1i7.X

Zubair, K. M. A. A. (2024). Developing a curriculum for non-native speakers of Arabic: Employing Thuaimah's model as a prototype. Journal of Digital Learning and Distance Education, 1(4), 819–828.https://doi.org/10.56778/jdlde.v1i4.X

Zubair, K. M. A. A. (2024). The coordination between Arabic studies programs and job prospects for undergraduate and postgraduate students in Chennai City. Journal of Digital Learning and Distance Education, 1(9), 1056–1066.https://doi.org/10.56778/jdlde.v1i9.X

Zubair, K. M. A. A. (2025). Code-switching and language-mixing among the AFL students of Chennai: Influence of mother tongue on the use of Arabic as the second language. Journal of Digital Learning and Distance Education, 2(1), 1228–1239.https://doi.org/10.56778/jdlde.v2i1.X

Zubair, K. M. A. A. (2025). Exploring the pedagogical impact of Educandy application in Arabic language assessment. Journal of Digital Learning and Distance Education, 2(3), 1302–1318.https://doi.org/10.56778/jdlde.v2i3.Y

Zubair, K. M. A. A. (2025). Using Canva for magazine preparation: A case study on students' experiences in enhancing writing skills. Journal of Digital Learning and Distance Education, 2(3), 1283–1289.https://doi.org/10.56778/jdlde.v2i3.X

Zubair, K. M. A. A. (2026). Integrating phonetics, cultural analysis and nahwu: A unified framework for tajwid, amtsāl and ism/fiʿil research. Jurnal Tifani, 6(1), 25–33. https://www.tifani.org/index.php/tifani/article/view/214