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Optimizing Arabic Listening Skills: A Systematic Review and the Proposal of an Integrated Suggestopedic Brain-Based Learning (ISBBL) Model

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Abstract

Proficiency in Arabic listening skills is often hindered by significant psychological barriers, such as foreign language anxiety. This study aims to address this challenge by developing a coherent pedagogical framework that integrates the affective strategies of Georgi Lozanov's Suggestopedia with the neuroscientific principles of Brain-Based Learning (BBL). A Systematic Literature Review (SLR) was conducted following PRISMA guidelines. The process began with the identification of 134 records from academic databases, which were then screened to yield a final corpus of 36 core articles for thematic synthesis. This synthesis focused on literature pertaining to Suggestopedia, Brain-Based Learning (BBL), and listening acquisition. The analysis revealed profound synergies between Suggestopedia's techniques (e.g., concert sessions) and BBL's core principles (e.g., relaxed alertness, emotional engagement). This synthesis resulted in the formulation of the Integrated Suggestopedic Brain-Based Learning (ISBBL) model—a novel, five-phase conceptual framework proposed to systematically guide learners from high anxiety to a state of relaxed, active engagement. The ISBBL model offers a practical framework for

educators. While it awaits empirical validation, the model conceptually grounds the intuitive methods of Suggestopedia in the principles of educational neuroscience. This framework presents a structured approach to overcoming affective barriers in Arabic listening instruction and is recommended for further empirical research to validate its classroom efficacy.

Abstrak

Kemahiran menyimak dalam bahasa Arab seringkali terhambat oleh rintangan psikologis yang signifikan, seperti kecemasan berbahasa asing. Penelitian ini bertujuan untuk mengatasi tantangan tersebut dengan mengembangkan kerangka pedagogis yang mengintegrasikan strategi afektif Suggestopedia dari Georgi Lozanov dengan prinsip neurosains dari Brain-Based Learning (BBL). Systematic Literature Review (SLR) dilaksanakan mengikuti panduan PRISMA. Proses ini diawali dengan identifikasi 134 catatan dari basis data akademik, yang kemudian disaring hingga menghasilkan korpus akhir sebanyak 36 artikel inti untuk sintesis tematik. Sintesis ini berfokus pada literatur terkait Suggestopedia, Brain-Based Learning (BBL), dan pemerolehan kemahiran menyimak. Analisis mengungkap adanya sinergi yang mendalam antara teknik Suggestopedia (misalnya, sesi konser) dan prinsip inti BBL (misalnya, kewaspadaan yang rileks, keterlibatan emosional). Sintesis ini menghasilkan perumusan model Integrated Suggestopedic Brain-Based Learning (ISBBL)—sebuah kerangka kerja konseptual lima fase yang inovatif, yang diusulkan untuk membimbing pembelajar secara sistematis dari kecemasan tinggi menuju kondisi keterlibatan aktif yang rileks. Model ISBBL menawarkan sebuah kerangka kerja praktis bagi para pendidik. Meskipun masih memerlukan validasi empiris, model ini secara konseptual melandaskan metode-metode intuitif Suggestopedia pada prinsip-prinsip neurosains pendidikan. Kerangka ini menyajikan pendekatan terstruktur untuk mengatasi hambatan afektif dalam pembelajaran menyimak bahasa Arab dan direkomendasikan

untuk diuji lebih lanjut guna memvalidasi efektivitasnya di dalam kelas.

الملخص

غالبا ما يعاق إتقان مهارات الاستماع في اللغة العربية بسبب حواجز نفسية كبيرة، مثل قلق اللغة الأجنبية. يهدف هذا البحث إلى مواجهة هذا التحدي من خلال تطوير إطار تربوي متكامل يدمج بين الاستراتيجيات الوجدانية لمنهجية التعليم الإيحائي (Suggestopedia) لجورجي لوزانوف والمبادئ القائمة على علم الأعصاب للتعلم المستند إلى الدماغ (BBL). أجريت مراجعة منهجية للأدبيات (SLR) باتباع إرشادات PRISMA. بدأت العملية بتحديد ١٣٤ سجلا من قواعد البيانات الأكاديمية، والتي تم فحصها للوصول إلى مجموعة نهائية مكونة من ٣٦ مقالة أساسية للتحليل الموضوعي. ركز هذا التحليل على الأدبيات المتعلقة بالتعليم الإيحائي، والتعلم المستند إلى الدماغ، واكتساب مهارة الاستماع. كشف التحليل عن وجود أوجه تآزر عميقة بين تقنيات التعليم الإيحائي مثل الجلسات الموسيقية (Concert Sessions) والمبادئ الجوهرية للتعلم المستند إلى الدماغ (مثل اليقظة المريحة والمشاركة الوجدانية). وأسفر هذا التوليف عن صياغة نموذج "التعلم الإيحائي المتكامل المستند إلى الدماغ" (ISBBL)، وهو إطار عمل مفاهيمي مبتكر خماسي المراحل، يقترح لتوجيه المتعلمين بشكل منهجي من حالة القلق المرتفع إلى حالة من المشاركة النشطة والمريحة. يقدم نموذج ISBBL إطارا عمليا للمعلمين. بينما ينتظر التحقق التجريبي، يؤسس النموذج من الناحية المفاهيمية الأساليب البديهية لـ Suggestopedia في مبادئ علم الأعصاب التربوي. يقدم هذا الإطار نهجا منظما للتغلب على الحواجز العاطفية في تعليم الاستماع العربي ويوصى به لمزيد من البحث التجريبي للتحقق من فعاليته في الفصول الدراسية.

Keywords: Arabic listening skills; Brain-Based Learning; ISBBL model; suggestopedia; systematic literature review

Introduction

Proficiency in listening comprehension (*mahārah istimāʿ*) is widely recognized as a foundational pillar of second language acquisition, serving as the primary gateway for mastering other linguistic skills such as speaking, reading, and writing.[1] However, learners of Arabic frequently encounter significant impediments that can be broadly categorized as linguistic and non-linguistic.[2] While linguistic challenges include difficulties with pronunciation, unfamiliar vocabulary, and complex grammar, non-linguistic barriers are often more profound. These include psychological factors such as low motivation, negative attitudes, and, most notably, foreign language anxiety.[3] For instance, a university student in a

[1] Nurul Khoirunnisa Dalimunthe and Rahmaini Rahmaini, "Media Pembelajaran Berbasis Game Gambar Berangkai Dalam Pembelajaran Mahārah Istimāʿ," *Jurnal Educatio FKIP UNMA* 9, no. 3 (2023): 1378–85, https://doi.org/10.31949/EDUCATIO.V9I3.5539; Rizka Sari and M. Muassomah, "Implementasi Media Audio-Visual Dalam Pembelajaran Istimaʿ," *Alsina : Journal of Arabic Studies* 2, no. 2 (2020): 125–44, https://doi.org/10.21580/alsina.2.2.4961; Niswa Ikraama and Maslamah Maslamah, "Taṭwīr Al-Wasāʾil al-Taʿlīmīyah 'Al-Podcast al-ʿArabī' Li-Taḥsīn Mahārat al-Istimāʿ al-ʿArabīyah Li-Ṭalabat al-Madrasah al-Mutawassiṭah al-Islāmīyah," *Alsina : Journal of Arabic Studies* 5, no. 1 (2023): 29–52, https://doi.org/10.21580/alsina.5.1.20204; Dwi Suweni and Saefurrohman Saefurrohman, "The Use of Lyricstraining.Com to Improve Students' Listening Skills in Senior High School," *Metafora: Jurnal Pembelajaran Bahasa Dan Sastra* 11, no. 1 (2024): 247–52, https://doi.org/10.30595/mtf.v11i1.24451.

[2] Hamidah and Marsiah, "Pembelajaran Maharah Al-Istima' Dengan Memanfaatkan Media Youtube: Problematika Dan Solusi," *Al-Ta'rib : Jurnal Ilmiah Program Studi Pendidikan Bahasa Arab IAIN Palangka Raya* 8, no. 2 (December 2, 2020): 147–60, https://doi.org/10.23971/ALTARIB.V8I2.2282; Shimaa M Hwaider, "Problems of Teaching the Listening Skill to Yemeni EFL Learners," *International Journal of Scientific and Research Publications* 7, no. 6 (2017): 140–48; Yuli Imawan et al., "Ashwat's Teaching Strategies and Their Implications In The Learning of Maharah Istima'," *International Journal of Education and Teaching Zone* 2, no. 1 (January 7, 2023): 13–24, https://doi.org/10.57092/IJETZ.V2I1.55.

[3] Meryem Melike Güngenci and Musa Yildiz, "Challenges in Listening and Speaking Skills for Arabic Language Pre-Service Teachers: A

listening class might struggle to distinguish between similar-sounding consonants (e.g., س vs. ص) while simultaneously feeling anxious about being called upon to answer. This cognitive split between decoding sounds and managing fear creates a high "affective filter," which can block comprehension regardless of the student's intellectual ability. This anxiety is a significant phenomenon, as evidenced by studies showing how factors like negative self-perception severely impact language fluency. Compounding these issues are unconducive learning environments and a lack of adequate resources, which collectively create major challenges in the foreign language classroom.[4]

This challenge is not merely logistical but is also rooted in neurology. Overly analytical teaching methods often neglect the affective, emotional, and holistic dimensions crucial for processing auditory information, such as intonation and non-verbal cues.[5] Neurolinguistic research confirms the inherent difficulty of second language acquisition, demonstrating that the brain must construct entirely new neural representations—a process that is initially "less precise and less active". Studies utilizing EEG signals have recorded distinct differences in brain activity in the frontal and temporal areas when processing a new language compared to a native one. This research underscores the neurological challenge at play and highlights a scarcity of studies examining adult brain activity during language learning, thereby necessitating

Correlational Study," *Novitas-Royal* 18, no. 2 (2024): 104–16, https://doi.org/10.5281/ZENODO.13860910; Harisur Rahman et al., "Voices in Peril: Understanding English Public Speaking Anxiety among University Students in Bangladesh," *Cogent Education* 11, no. 1 (2024), https://doi.org/10.1080/2331186X.2024.2355381.

[4] Yılmaz and Yavuz, "The Problems Young Learners Encounter During Listening Skills."

[5] Muhammad Yusuf, "Desain Pengembangan Kurikulum Bahasa Arab: Pendekatan Otak Kanan," *El-Tsaqafah : Jurnal Jurusan PBA* 18, no. 2 (2019): 147–60, https://doi.org/10.20414/TSAQAFAH.V18I2.1867.

innovative pedagogical approaches that optimize the brain's imaginative and emotional potential.[6]

In response to these affective challenges, the humanistic paradigm offers methods like Suggestopedia, developed by Georgi Lozanov.[7] This approach combines relaxation, positive suggestion, and artistic elements to create a comfortable, stress-free atmosphere that lowers psychological barriers and accesses subconscious learning potential.[8] The effectiveness of Suggestopedia in enhancing various language skills, including listening, has been demonstrated in multiple contexts.[9] Specifically for Arabic *mahārah istimāʿ*, studies suggest it effectively improves comprehension and makes the learning process more engaging, with some research linking its success to the activation of specific brain waves.[10] Its core techniques

[6] Talal A. Aldhaheri et al., "Investigation of Brain Response to Acquisition and Learning the Second Languages Based on EEG Signals and Machine Learning Techniques," *Cogent Arts and Humanities* 11, no. 1 (2024): 2416759, https://doi.org/10.1080/23311983.2024.2416759; Syafiqul Lathif, "Implementasi Metode Suggestopedia Dalam Pembelajaran Bahasa Arab Pada Madrasah Mu'allimin Muhammadiyah Yogyakarta," *Humanika* 23, no. 1 (2023): 27–36, https://doi.org/10.21831/hum.v23i1.35788.

[7] Nur Agung, "Peningkatan Kemampuan Debat Bahasa Arab Mahasiswa Melalui Metode Suggestopedia," *Naskhi: Jurnal Kajian Pendidikan Dan Bahasa Arab* 2, no. 1 (2020), https://journal.uiad.ac.id/index.php/naskhi/article/view/288/203.

[8] Muhammad Ali Mustapha, "Use of Suggestopedia to Improve Students' Listening Skill in English Language.," *Journal on English Language Teaching* 8, no. 4 (2018): 16–20; Maitham Sarhan et al., "Impact of the Modern-Day Suggestopedia Approach in Pedagogy and Learning the English Language Skills: Writing and Speaking as A Sample in Wasit School of Excellence in 2022," *International Journal of Linguistics, Literature and Translation* 5, no. 4 (2022): 172–78, https://doi.org/10.32996/IJLLT.2022.5.4.21.

[9] Claire Bernabe et al., *The Impact of Suggestopedia Method to Enhance the Listening Skills of the Grade 8 Students*, 2024, https://doi.org/10.2139/SSRN.4892053.

[10] Erta Mahyudin and Hikmah, "Istikdām Al-Ṭarīqah al-Īḥāʾiyyah Li-Tarqiyat Mahārat al-Istimāʿ Fī Taʿlīm al-Lughat al-ʿarabiyyah," *Jurnal*

include creating a supportive environment, using music, and giving positive suggestions. However, despite its success in creating a safe learning collective, Suggestopedia has been criticized for being highly teacher-centered, which can limit students' creative contributions and personal engagement.[11] This suggests a need for a more refined model that fosters greater student participation.[12]

Parallel to these humanistic developments, the field of educational neuroscience has championed Brain-Based Learning (BBL), an approach that aligns instruction with the brain's natural learning processes.[13] BBL prioritizes creating a challenging yet enjoyable environment that encourages active student participation to stimulate various brain regions. Empirical evidence supports the efficacy of BBL, showing that interventions designed around its principles—such as fostering a relaxed and meaningful atmosphere—yield significantly better academic performance than conventional teaching.[14] A strong convergence exists between the two approaches; BBL's core principles of creating a low-threat environment ("relaxed alertness") and the importance of

Pendidikan Islam 2, no. 2 (2016): 348–78, https://doi.org/10.15575/JPI.V2I2.794.

[11] Helena Colliander and Andreas Fejes, "The Re-Emergence of Suggestopedia: Teaching a Second Language to Adult Migrants in Sweden," *Language, Culture and Curriculum* 34, no. 1 (2021): 51–64, https://doi.org/10.1080/07908318.2020.1767643.

[12] Muhammad Rasyid Ridha et al., "Pengembangan Media Learning Management System (LMS) Berbasis Kitāb Al-'Arabiyah Li An-Nāsyi'īn," *Al Mi'yar: Jurnal Ilmiah Pembelajaran Bahasa Arab dan Kebahasaaraban* 6, no. 1 (2023): 1–28, https://doi.org/10.35931/am.v6i1.1842.

[13] Ruhamauliyah Meiliyati, "Brain Based Learning Dalam Pembelajaran Bahasa Arab Untuk Meningkatkan Keterampilan Berbicara," *Jurnal Pendidikan Islam Al-Affan* 3, no. 1 (2022): 59–66, https://doi.org/10.69775/JPIA.V3I1.99.

[14] Nektarios Lagoudakis et al., "The Effectiveness of a Teaching Approach Using Brain-Based Learning Elements on Students' Performance in a Biology Course," *Cogent Education* 9, no. 1 (2022), https://doi.org/10.1080/2331186X.2022.2158672.

emotion in learning are highly aligned with Suggestopedia's methods, including the use of classical music during relaxation sessions. This alignment is further supported by Krashen's Affective Filter Hypothesis, which posits that a positive emotional state is crucial for optimal language input absorption.[15]

Despite this clear conceptual alignment, a significant research gap persists in the systematic integration of these two powerful approaches. Research has largely proceeded along two parallel tracks. On one hand, studies focusing on Suggestopedia have confirmed the effectiveness of its components—such as music, relaxation, and positive suggestion—in lowering affective barriers in language learning. This includes research specifically on Arabic *mahārah istimāʿ*.[16] On the other hand, a separate body of literature demonstrates the efficacy of Brain-Based Learning in improving language achievement and long-term retention in various contexts.[17] However, these studies tend to analyze the

[15] Sekoai Elliot Nkhi and Thembeka Shange, "Do Communicative Activities Play a Role in Motivating English-Second-Language (ESL) Tertiary Students to Learn English? A Case of Three Selected Universities in Lesotho," *Scrutiny2*, ahead of print, Routledge, 2025, https://doi.org/10.1080/18125441.2025.2498911; Andri Warseto et al., "Pandangan Stephen Krashen Dalam Pemerolehan Bahasa Dan Implikasinya Dalam Pembelajaran Bahasa Arab," *Ihtimam: Jurnal Pendidikan Bahasa Arab* 1, no. 1 (2019), https://doi.org/10.36668/JIH.V2I1.213.

[16] Mahyudin and Hikmah, "Istikdām Al-Ṭarīqah al-Īḥāʾiyyah Li-Tarqiyat Mahārat al-Istimāʿ Fī Taʿlīm al-Lughat al-ʿarabiyyah"; Prasetyo Muhammad and Nanin Sumiarni, "Penerapan Metode Suggestopedia Dalam Pengajaran Bahasa Arab Untuk Meningkatkan Kemamuan Siswa Terhadap Keterampilan Menyimak," *EL-IBTIKAR: Jurnal Pendidikan Bahasa Arab* 8, no. 2 (2019), https://doi.org/10.24235/IBTIKAR.V8I2.5514; Ismail Ismail et al., "Efektivitas Metode Suggestopedia Dalam Meningkatkan Maharah Istima'," *`A Jamiy : Jurnal Bahasa Dan Sastra Arab* 14, no. 1 (2025): 30–41, http://dx.doi.org/10.31314/ajamiy.14.1.30-41.2025.

[17] Meiliyati, "Brain Based Learning Dalam Pembelajaran Bahasa Arab Untuk Meningkatkan Keterampilan Berbicara"; Mohammad Jailani, "The

methods in isolation. What remains absent from the literature is a theoretical framework that moves beyond reporting on the effectiveness of individual components and instead provides a deep, systematic integration of Suggestopedia's affective strategies with the neuroscientific principles of BBL. This lack of a unified model highlights a critical need for the very framework this paper aims to develop.

This study employs a Systematic Literature Review (SLR) approach to construct a conceptual model for integrating the Suggestopedia method and Brain-Based Learning (BBL) to enhance Arabic listening skills (*mahārah istimāʿ*). An SLR methodology was chosen for its rigorous, transparent, and replicable process of identifying, evaluating, and synthesizing the existing body of knowledge. This qualitative approach is ideal for in-depth phenomenological understanding, concept exploration, and theory building from textual data, rather than numerical measurement or hypothesis testing.

The following protocol, inspired by the guidelines of Webster and Watson (2002) and the procedural example from Syed et al. (2020),[18] outlines the systematic stages of this research.

Effectiveness of Development of Brain-Based Arabic Learning Media with a Neuroscience Approach to Muhammadiyah Vocational High School Students in the Covid-19 Period," *Afaq Lughawiyyah* 3, no. 1 (2025): 172–90; Mohammad Jailani et al., "Arabic Language Learning Media in Schools Reviewed from the Perspective of Neuroscience/ Media Pembelajaran Bahasa Arab Di Sekolah Ditinjau Dari Neurosains," *ATHLA : Journal of Arabic Teaching, Linguistic and Literature* 4, no. 2 (2023): 119–38, https://doi.org/10.22515/ATHLA.V4I2.7155; Maryam Haghighi, "The Effect of Brain- Based Learning on Iranian EFL Learners' Achievement and Retention," *Procedia - Social and Behavioral Sciences* 70 (January 2013): 508–16, https://doi.org/10.1016/j.sbspro.2013.01.088; A Wilson et al., "The Effects of Brain-Based Learning Strategies on Low Ability Malaysian English as a Second Language Learners' Writing Performance," *Pertanika Journal of Social Sciences and Humanities* 32, no. 2 (2024): 345–63, https://doi.org/10.47836/pjssh.32.2.01.

[18] Wasana Bandara and Rehan Syed, "The Role of a Protocol in a Systematic Literature Review," *Journal of Decision Systems*, ahead of print,

Stage 1: Formulation of Research Questions

The primary objective is to develop an integrated conceptual framework. To guide the literature search and analysis systematically, this objective was broken down into the following specific Research Questions (RQs): (RQ1) What are the foundational principles, pedagogical techniques, and documented outcomes of the Suggestopedia method as applied to language listening acquisition?; (RQ2) What are the core principles of Brain-Based Learning, particularly those informed by neurolinguistics, that are relevant to optimizing language listening skills?; (RQ3) What are the points of synergy, complementarity, and potential conflict between the principles of Suggestopedia and Brain-Based Learning in the context of *mahārah istimāʿ*?; (RQ4) How can the synergistic elements of Suggestopedia and Brain-Based Learning, be integrated to form a coherent conceptual model for teaching Arabic *mahārah istimāʿ*?

Stage 2: Literature Search and Selection Strategy

A comprehensive and systematic search strategy was executed to identify all relevant scholarly literature. The search was conducted across multiple academic databases to ensure wide coverage of the literature. These included: Google Scholar, Scopus, and online academic libraries and publisher portals (e.g., SpringerLink, SAGE Journals, Taylor & Francis Online).

Keywords were identified based on the research questions, encompassing concepts in both English and Arabic to capture a global body of literature. These keywords were combined using Boolean operators (AND, OR) to form precise search strings, adapted for each database's syntax, as outlined in Table 1.

Taylor & Francis, October 1, 2024, https://doi.org/10.1080/12460125.2023.2217567.

Table 1
Keyword and Search String Components

Concept	Keywords
Primary Domain	"mahārah istimāʿ", "listening skill", "listening comprehension"
Method 1	“Suggestopedia”, "Suggestive Accelerative Learning", “Lozanov”
Method 2	"Brain-Based Learning", "neuro pedagogy", "neuroeducation", "brain compatible learning"
Example Search String	("Suggestopedia" OR "Brain Based Learning") AND ("Arabic" OR "mahārah istimāʿ") AND ("listening skill" OR "listening comprehension")

This table outlines the core concepts that guided the literature search and the corresponding keywords used in both English and Arabic. It also provides an example of a Boolean search string constructed to query academic databases. To ensure the relevance and quality of the literature, a clear set of inclusion and exclusion criteria was established (Table 2) and applied during the screening process.

Table 2
Inclusion and Exclusion Criteria

	Inclusion Criteria	Exclusion Criteria
Subject Focus	Articles with a primary focus on Suggestopedia, BBL, neurolinguistics, or mahārah istimāʿ.	Articles with only a peripheral mention of the core concepts.
Publication Type	Peer-reviewed journal articles, seminal books and book chapters, and high-quality conference proceedings.	Grey literature (e.g., theses, dissertations) and non-scholarly sources (e.g., magazines, blogs), editorials, book

		reviews, unpublished manuscripts.
Time Frame	No time frame was initially imposed to include foundational texts, but priority was given to recent publications (last 15 years) for contemporary insights.	Outdated theories that have been empirically refuted without historical value.

This table details the specific criteria used to screen the identified literature, ensuring the relevance and quality of studies included in the final synthesis. The rules cover subject focus, publication type, and time frame.

To provide further detail on the initial identification stage of the literature selection process, Table 3 presents the specific number of articles found from each of the searched academic databases.

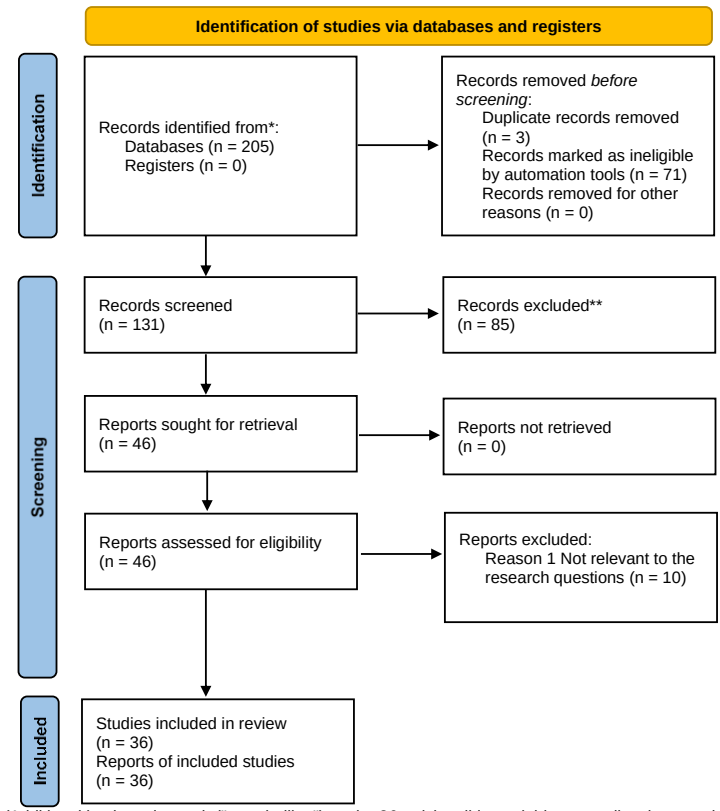
Table 3
Search Results from Academic Databases

Research Database	**Number of Articles Found**	**Number of Articles Included in Review**
Google Scholar	76	4
Scopus	69	10
ScienceDirect	35	13
SpringerLink	4	3
SAGE Journals	3	2
Taylor & Francis Online	18	4
Total	205	36

To provide a transparent and replicable overview of the entire selection process, the complete flow from this initial identification to final inclusion is summarized in the PRISMA

flow diagram. Figure 1 visually maps the number of articles at each stage: initial identification (as detailed in Table 3), screening, eligibility assessment, and the studies that were finally included.

Figure 1
PRISMA Flow Diagram for the study



(Additional backward search ("snowballing") on the 36 articles did not yield new studies that met the

Stage 3: Data Extraction and Thematic Coding

A structured data extraction and coding process was employed to systematically analyze the final corpus of 36 articles. This was facilitated using reference management software Mendeley and qualitative data analysis principles. For each article, key information was extracted and recorded, including: bibliographic details, research objectives,

theoretical framework, methodology, key findings related to *mahārah istimāʿ*, and direct definitions or principles of Suggestopedia and BBL.

A two-level coding process was implemented: (1) Level 1: Deductive and Open Coding: In the first cycle, content from the articles was deductively coded according to a pre-defined codebook based on the research questions. This involved line-by-line reading to identify segments of text that directly addressed the core concepts. Open coding was also used to capture emergent themes not initially anticipated. (2) Level 2: Axial and Thematic Coding: In the second cycle, the initial codes were clustered and organized into higher-level, interpretive themes. This axial coding process focused on identifying relationships, patterns, and connections between the codes to build a cohesive understanding of the subject matter.

To maintain consistency, the entire coding process was conducted by a single researcher. A sample of the articles was re-analyzed one month after the initial coding to establish intra-rater reliability and ensure the stable application of the codebook. The structure of the codebook was directly derived from the research questions to ensure a focused analysis. This alignment is as follows: (1) Meta-Theme 1 (Suggestopedia Principles) was designed to systematically gather data to answer RQ1; (2) Meta-Theme 2 (Brain-Based Learning Principles) was structured to address RQ2; (3) Meta-Themes 3 (Points of Integration & Synergy) and 4 (Points of Conflict & Divergence) were created to comprehensively investigate RQ3.

The synthesis of findings from these coded themes provided the foundational data required to formulate the integrated model in response to RQ4. To ensure consistency and rigor during analysis, a detailed codebook was developed, as presented in Table 4.

Table 4
Research Codebook

Meta-Theme	**Overarching Question**	**Coding Suggestions & Examples**
Suggestopedia Principles	What are the core tenets of Suggestopedia for listening?	Code for: principles of joy and ease, peripheral learning, use of classical music, infantilization, authority of the source, role of suggestion/de-suggestion, concert sessions (active/passive), and impact on the affective filter.
Brain-Based Learning Principles	What are the core tenets of BBL for listening?	Code for: relaxed alertness, orchestrated immersion, active processing, emotional engagement, pattern recognition, memory pathways (semantic, episodic), and creating a low-threat.
Points of Integration & Synergy	Where do Suggestopedia and BBL align?	Code for conceptual overlaps. *Example:* How the use of music, art, and a rich environment (Suggestopedia) achieves 'orchestrated immersion' and engages multiple sensory pathways (BBL).
Points of Conflict & Divergence	Where do the methods differ or conflict?	Code for contradictory elements. *Example:* The passive role in a Suggestopedia concert

	session versus the "active processing" principle in BBL. The role of teacher "authority" in Suggestopedia versus student-centered discovery in BBL.

This table presents the structured codebook used for the thematic analysis of the selected articles. It breaks down the meta-themes, the guiding analytical questions, and provides examples of concepts to be coded, ensuring a consistent and rigorous analysis.

Stage 4: Data Synthesis and Model Development

The final stage involved synthesizing the analyzed data into a new, coherent conceptual framework. This was an iterative and reflective process: (1) Descriptive-Comparative Analysis: The themes identified for Suggestopedia and BBL were first described in depth. Then, a comparative analysis was conducted to clearly articulate the similarities and differences, drawing directly from the "Points of Integration" and "Points of Conflict" codes; (2) Theoretical Synthesis: The findings were synthesized by integrating the synergistic elements from both methods. The supporting theories from Krashen and Vygotsky were used as a theoretical "glue" to connect disparate concepts and justify the integration. For instance, Krashen's Affective Filter Hypothesis was used to explain *why* the integration of Suggestopedia's relaxed environment and BBL's emotional engagement is effective; (3) Model Formulation: The synthesis culminated in the formulation of a new conceptual model. This model visually and narratively outlines the integrated pedagogical steps, the required learning environment, and the theoretical underpinnings for optimizing Arabic *mahārah istimāʿ*. The entire process was reflective, constantly referring

back to the literature and research questions to ensure the validity and coherence of the final model.

Result

The thematic synthesis is based on a final corpus of 36 core articles. Of these, 13 studies focused specifically on Arabic language learning, with 8 directly addressing listening comprehension (*mahārah istimāʿ*). The remaining 23 articles provided foundational insights from other language contexts (such as EFL) and the broader fields of educational neuroscience and psychology. This diverse body of literature informed the following themes.

The systematic review of 36 core articles revealed profound conceptual links between humanistic pedagogy and educational neuroscience. The findings are synthesized into three primary themes: (1) the core principles and affective mechanisms of Suggestopedia; (2) the neuroscientific foundations and demonstrated efficacy of Brain-Based Learning (BBL); and (3) the critical, albeit complex, role of the affective environment and music in learning.

Theme 1: The Affective-Centric Framework of Suggestopedia

Suggestopedia is consistently identified in the literature as a holistic, humanistic method designed to accelerate learning by overcoming psychological barriers. Its primary objective is to dismantle the "affective filter" through a carefully curated, stress-free environment.[19] Table 5 summarizes the frequency of its core principles found within the reviewed literature.

[19] Masoud Hashemi, "Language Stress and Anxiety among the English Language Learners," *Procedia - Social and Behavioral Sciences* 30 (2011): 1811–16, https://doi.org/10.1016/j.sbspro.2011.10.349; F G Vural, "The Significance of Music in Teaching Turkish," *New Research of Tuva* 2018, no. 1 (2018): 113–21, https://doi.org/10.25178/nit.2018.1.10.

Table 5
Summary of Evidence for Suggestopedia Principles in the Corpus (n=36)

Suggestopedia Principle/Technique	Number of Supporting Studies	Key Supporting Citations
Orchestrated / Peripheral Learning	5	Fatemipour, 2013
Positive Suggestion & Authority	12	Shimbo, 2008
Decentering the Self (New Personas)	7	Kaur, 2024
Concert Sessions (Active/Passive)	5	Mahyudin & Hikmah, 2016

The Orchestrated Environment: The physical classroom is transformed into a comfortable and aesthetically pleasing space using art and soft lighting to facilitate "peripheral learning," where linguistic information is absorbed subconsciously from the surroundings.

Authority and Positive Suggestion: The teacher assumes an authoritative yet highly encouraging role, using positive verbal and non-verbal cues to build student confidence and frame learning as an easy, enjoyable process. One study identified positive suggestion as the method's most impactful component for improving student self-concept.

Decentering the Self: Students are often given new names and personas, a technique that lowers inhibitions and the fear of making mistakes by allowing them to step outside their normal identity.

The Concert Sessions: The method's signature is a two-part concert reading consisting of an active and passive session, a process intended to aid subconscious absorption.

These techniques align with findings on "emotiоncy," which show that content linked to emotion is learned more

effectively,[20] and are reported to prevent mental fatigue by calming the brain's bioelectrical activity.[21]

Theme 2: The Neuroscientific Principles of Brain-Based Learning (BBL)

BBL is defined as an educational framework that leverages findings from neuroscience to align instruction with the brain's natural learning processes. It marks a shift from rote memorization to meaningful, experience-driven learning.[22] The literature consistently emphasizes several core principles, which are summarized in Table 6.

Table 6
Summary of Evidence for Brain-Based Learning Principles in the Corpus (n=36)

BBL Principle	Number of Supporting Studies	Key Supporting Citations
Relaxed Alertness / Low Threat	7	Lagoudakis, 2022
Emotional Engagement	8	Bora, 2012
Orchestrated Immersion	5	Harden & Jones, 2022
Active Processing & Connections	12	Amjad et al., 2023

Based on the Table 6, the foundational principles of Brain-Based Learning identified in this review are as follows: (1)

[20] Reza Pishghadam et al., "Emotion-Based Language Instruction (EBLI) as a New Perspective in Bilingual Education," *Multilingual Education 2013 3:1* 3, no. 1 (2013): 1–16, https://doi.org/10.1186/2191-5059-3-9.

[21] G Kaur et al., "Methodology and Experimental Protocol for Fatigue Analysis in Suggestopedia Teachers," *Brain Sciences* 14, no. 12 (2024), https://doi.org/10.3390/brainsci14121215.

[22] V Harden and V N Jones, "Applying the Principles of Brain-Based Learning in Social Work Education," *Advances in Social Work* 22, no. 1 (2022): 145–62, https://doi.org/10.18060/25142.

Relaxed Alertness: BBL prioritizes a state of low threat and high challenge, considered optimal for learning. This state minimizes anxiety, freeing the brain for higher-order cognitive functions instead of operating in a "survival mode"; (2) *Emotional Engagement*: The reviewed studies unanimously confirm that positive emotion is integral to attention, memory, and motivation; (3) *Orchestrated Immersion and Active Processing*: Learning is optimized by immersing students in rich, multi-sensory experiences (e.g., visuals, music, movement) coupled with active processing through meaningful, hands-on activities like games and problem-solving; (4) *Patterning and Connections*: BBL emphasizes that the brain learns best by connecting new information to prior knowledge and lived experiences.

Studies show BBL is effective in improving academic achievement and leads to superior long-term retention compared to conventional methods.[23] However, some methodological reviews caution that the quality of many BBL studies is moderate and its effects may be influenced by other factors.[24]

Theme 3: The Nuanced Role of Music and the Power of Affect

The synthesis of the literature revealed a complex, nuanced role for music, but a clear consensus on the critical power of a positive affective environment. The findings from

[23] Ozlem Yagcioglu, "The Advantages of Brain Based Learning in ELT Classes," *Procedia - Social and Behavioral Sciences* 152 (October 2014): 258–62, https://doi.org/10.1016/j.sbspro.2014.09.190; K A Al-Balushi and S M Al-Balushi, "Effectiveness of Brain-Based Learning for Grade Eight Students' Direct and Postponed Retention in Science," *International Journal of Instruction* 11, no. 3 (2018): 525–38, https://doi.org/10.12973/iji.2018.11336a.

[24] Z Şen et al., "Brain-Based Learning Studies in Turkey: A Review for Methodological Analysis," *Egitim ve Bilim* 40, no. 181 (2015): 41–56, https://doi.org/10.15390/EB.2015.4555.

the corpus on these two interconnected points are summarized in Table 7.

Table 7
Summary of Findings on Music and Affect in the Corpus (n=36)

Finding / Concept	Number of Supporting Studies	Key Supporting Citations
Music as Cognitive Interference	3	Mohan et al., 2020
Music as Mood/Arousal Enhancer	1	Husain et al., 2002
Critique of "Neuromyths"	2	Grospietsch & Lins, 2021
Power of Positive Affective Environment	1	Shimbo, 2008
Role of "Emotional Scaffolding"	1	Alavi & Esmaeilifard, 2021

While both methodologies utilize music, the literature presents a complex picture, with evidence varying significantly by context. On one hand, some general cognitive research reports that background music can interfere with verbal learning tasks by consuming finite cognitive resources. [25] On the other hand, a body of research indicates a positive, albeit indirect, effect of music when tailored to specific contexts. For example, positive outcomes were noted when music was used as an intentional pedagogical tool in the teaching of Turkish[26], and when adolescents' task performance improved specifically

[25] Forough Kasiri, "The Impact of Non-Lyrical Iranian Traditional Music on Reading Comprehension Performance of Iranian EFL Learners: The Case of Gender, Attitude, and Familiarity," *Procedia - Social and Behavioral Sciences* 199 (August 2015): 157–62, https://doi.org/10.1016/j.sbspro.2015.07.500.

[26] Vural, "The Significance of Music in Teaching Turkish."

with culturally familiar background music.[27] Similarly, the use of music within the Suggestopedia framework was found to enhance the Arabic listening skills of young learners.[28] These findings collectively support the Arousal-Mood Hypothesis, suggesting that the primary benefit of music in these contexts is not direct cognitive enhancement but its ability to improve mood, increase attention, and create a more positive learning state. This distinction is critical, as many scholars caution against "neuromyths" like the "Mozart Effect," arguing that strong evidence for direct cognitive transfer is lacking.[29]

Despite the debate on music, the synthesis showed a clear consensus on the power of a positive affective environment. This was identified as the most potent factor in both frameworks. For example, research that isolated Suggestopedia's components found that the teacher's positive suggestion, not music, was the most significant factor in boosting students' self-concept. [30] This finding is further supported by the concept of "emotional scaffolding," which is

[27] Ashmita Mohan and Elizabeth Thomas, "Effect of Background Music and the Cultural Preference to Music on Adolescents' Task Performance," *International Journal of Adolescence and Youth* 25, no. 1 (2020): 562–73, https://doi.org/10.1080/02673843.2019.1689368.

[28] Mahyudin and Hikmah, "Istikdām Al-Ṭarīqah al-Īḥā'iyyah Li-Tarqiyat Mahārat al-Istimāʿ Fī Taʿlīm al-Lughat al-ʿarabiyyah."

[29] Albi Odendaal et al., "Lost in Translation? Neuroscientific Research, Advocacy, and the Claimed Transfer Benefits of Musical Practice," *Music Education Research* 21, no. 1 (2019): 4–19, https://doi.org/10.1080/14613808.2018.1484438.

[30] K Shimbo, "The Effects of Music, Relaxation and Suggestion on Tertiary Students' Affect and Achievement in Learning Japanese as a Foreign Language," *Australian Review of Applied Linguistics* 31, no. 2 (2008): 16.1-16.22, https://doi.org/10.2104/aral0816; Lutz Jäncke et al., "Verbal Learning in the Context of Background Music: No Influence of Vocals and Instrumentals on Verbal Learning," *Behavioral and Brain Functions* 10, no. 1 (2014): 1–7, https://doi.org/10.1186/1744-9081-10-10.

independently proven to reduce anxiety and improve language achievement. [31]

Discussion

The results of the systematic literature review demonstrate a profound overlap and conceptual convergence between the pedagogical framework of Suggestopedia and the principles of Brain-Based Learning. This aligns with broader trends in language pedagogy, which increasingly call for the integration of various methods to create more effective and comprehensive educational strategies that meet the diverse needs of students. As Guan et al. note, such integration allows for the creation of more flexible and effective educational programs by considering students' individual needs and preferences.[32] Rather than framing Suggestopedia as simply a form of BBL, this discussion highlights their profound conceptual alignment, positioning Suggestopedia as a pioneering approach whose intuitive methods anticipated many core neuroscientific principles later articulated within the BBL framework. This synthesis allows for a nuanced interpretation of the role of music, highlights the model's applicability to diverse learners, and leads to the formulation of an integrated model for optimizing Arabic listening skills.

Synergies between Suggestopedia and Brain-Based Learning

Suggestopedia, though developed decades before the term "BBL" became popular, is built on principles that are

[31] Sayyed Mohammad Alavi and Fatemeh Esmaeilifard, "The Effect of Emotional Scaffolding on Language Achievement and Willingness to Communicate by Providing Recast," *Cogent Psychology* 8, no. 1 (2021), https://doi.org/10.1080/23311908.2021.1911093.

[32] Wenyi Guan et al., "GTM in New Era: A Reflection on Its Development and Integration with Other Teaching Methods," *Scientific Herald of Uzhhorod University. Series Physics*, no. 55 (2024): 2777–85, https://doi.org/10.54919/physics/55.2024.277ud7.

remarkably congruent with modern neuroscientific findings on learning. The synergistic relationship between the two approaches is evident across their core tenets, as illustrated in Table 8.

Table 8
Parallels Between Suggestopedic Techniques and Brain-Based Learning Principles

Suggestopedia Technique/ Principle	Corresponding Brain-Based Learning Principle	Synthesis and Supporting Evidence
Creating a Relaxed, Positive Atmosphere (use of art, comfortable seating, calm environment)	Relaxed Alertness & Low-Threat Environment	Both approaches prioritize reducing the affective filter and minimizing anxiety, which is known to inhibit higher-order cognitive functions. A safe emotional space allows the brain to shift from a "survival" mode to a state optimized for learning and creativity.[33]

[33] Suna Akalin, "The Discourse in Mrs. Dalloway by Virginia Woolf and Foreign Language Teaching: The Decline of Language Learner Anxiety by the Usage of Hedges, Particular Modals and Adverbs as in the Usage of These Structures in Mrs. Dalloway for a Specific Purpose," *Procedia - Social and Behavioral Sciences* 174 (February 2015): 3049–54, https://doi.org/10.1016/j.sbspro.2015.01.1097; Harden and Jones, "Applying the Principles of Brain-Based Learning in Social Work Education"; F. Duygu Bora, "The Impact of Emotional Intelligence on Developing Speaking Skills: From Brain-Based Perspective," *Procedia - Social and Behavioral Sciences* 46 (2012): 2094–98, https://doi.org/10.1016/j.sbspro.2012.05.434.

Positive Suggestion & Authoritative Teacher (building confidence, framing learning as easy and enjoyable)	Emotional Scaffolding & Positive Climate	Both frameworks highlight the teacher's role in shaping students' self-concept and motivation. Positive verbal and non-verbal suggestions function as a form of "emotional scaffolding" that builds learner confidence and willingness to communicate.[34]
Use of Art, Music, and Role-Play (multi-sensory, engaging activities)	Orchestrated Immersion & Emotional Engagement	Immersing students in a rich, multi-sensory environment engages multiple brain areas, leading to stronger memory formation. The use of art, music, and role-play makes learning emotionally resonant, which is

[34] Shimbo, "The Effects of Music, Relaxation and Suggestion on Tertiary Students' Affect and Achievement in Learning Japanese as a Foreign Language"; Alavi and Esmaeilifard, "The Effect of Emotional Scaffolding on Language Achievement and Willingness to Communicate by Providing Recast"; Wilson et al., "The Effects of Brain-Based Learning Strategies on Low Ability Malaysian English as a Second Language Learners' Writing Performance"; Stephanie M. Williams and John F. Ziegler, "Practical, Applied, and Research-Based Teaching Strategies for Physicians," *Ear, Nose and Throat Journal* 101, no. 9_suppl (2023): 6S-15S, https://doi.org/10.1177/01455613231164315.

		critical for patterning and retention.[35]
Peripheral Learning (use of posters, decorations with linguistic information)	Focused and Peripheral Perception	Both methodologies recognize that the brain processes information from the wider environment both consciously and unconsciously. This peripheral input can be absorbed "effortlessly" and reinforces learning without direct instruction.[36]

This strong alignment suggests that Suggestopedia's established techniques can be effectively structured and justified within a modern BBL framework, creating a powerful, conceptually grounded pedagogical model.

A Nuanced Role for Music in the Integrated Model

The conflicting evidence on music's direct cognitive benefits necessitates a careful and scientifically-grounded approach to its use. Rather than framing music as a direct cognitive enhancer—a claim that risks falling into the category

[35] Harden and Jones, "Applying the Principles of Brain-Based Learning in Social Work Education"; Lagoudakis et al., "The Effectiveness of a Teaching Approach Using Brain-Based Learning Elements on Students' Performance in a Biology Course"; Kaur et al., "Methodology and Experimental Protocol for Fatigue Analysis in Suggestopedia Teachers."

[36] Hamidreza Fatemipour, "Peripheral Learning of English Language: A Comparison Between ESL and EFL Contexts Provided for University Students," *Procedia - Social and Behavioral Sciences* 93 (October 2013): 1394–97, https://doi.org/10.1016/j.sbspro.2013.10.050; Harden and Jones, "Applying the Principles of Brain-Based Learning in Social Work Education"; Haghighi, "The Effect of Brain- Based Learning on Iranian EFL Learners' Achievement and Retention."

of "neuromyth"[37]—this integrated model positions music primarily as an affective and environmental tool. Based on the synthesis of the literature, its role is to: (1) Cultivate a Relaxed Atmosphere: Calm, classical, and culturally familiar music can be used to lower stress and create a pleasant environment conducive to learning, supporting the principle of *Relaxed Alertness*.[38] (2) Structure the Learning Process: Different types of music can signal different phases of the lesson. For example, stimulating music can accompany active tasks, while calm Baroque music can be used for periods of passive reflection, as in the Suggestopedic concert sessions.[39] (3) Lower the Affective Filter: By making the environment less intimidating and more enjoyable, music helps reduce language anxiety, thereby lowering the affective filter that can block language input.[40] (4) Enhance Emotional Connection: When used in the form of songs, music directly links linguistic content with emotion and melody, which can significantly aid memorization and recall.[41]

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[37] Odendaal et al., "Lost in Translation? Neuroscientific Research, Advocacy, and the Claimed Transfer Benefits of Musical Practice"; F Grospietsch and I Lins, "Review on the Prevalence and Persistence of Neuromyths in Education – Where We Stand and What Is Still Needed," *Frontiers in Education* 6 (2021), https://doi.org/10.3389/feduc.2021.665752.

[38] Mohan and Thomas, "Effect of Background Music and the Cultural Preference to Music on Adolescents' Task Performance"; Vural, "The Significance of Music in Teaching Turkish."

[39] F H Alanazi, "Brain-Based Learning as Perceived by Saudi Teachers and Its Effect on Chemistry Achievement of 7th Graders," *Journal of Baltic Science Education* 19, no. 6 (2020): 864–74, https://doi.org/10.33225/jbse/20.19.864; Colliander and Fejes, "The Re-Emergence of Suggestopedia: Teaching a Second Language to Adult Migrants in Sweden."

[40] Şen et al., "Brain-Based Learning Studies in Turkey: A Review for Methodological Analysis"; Vural, "The Significance of Music in Teaching Turkish."

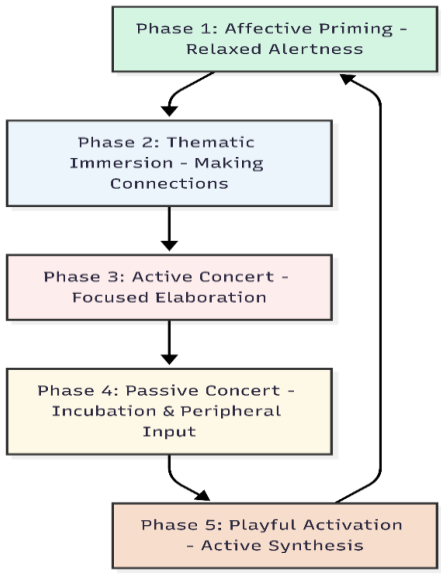
[41] M. Makri et al., "A Novel Method of Teaching English to People with Mild Cognitive Impairment Using Songs: A Randomized Controlled Trial Protocol," *Journal of Alzheimer's Disease* 92, no. 2 (2023): 529–46,

This approach leverages the strongest evidence for music's benefits while avoiding unsubstantiated claims, grounding the model in solid pedagogical and psychological principles.

The Proposed Integrated Suggestopedic Brain-Based Learning (ISBBL) Model

Based on the thematic synthesis and discussion, we propose the Integrated Suggestopedic Brain-Based Learning (ISBBL) Model as a framework for optimizing Arabic listening skills. This model is structured as a five-phase cycle, designed to guide the learner from a state of high anxiety to one of relaxed, active engagement, as illustrated in Figure 2.

Figure 2
The Integrated Suggestopedic Brain-Based Learning (ISBBL) Cycle



Phase 1: Affective Priming (Relaxed Alertness). The cycle begins by establishing an emotionally safe and positive environment. The classroom is made comfortable and visually

https://doi.org/10.3233/JAD-220184/ASSET/F2556BEC-9B21-4640-91C0-C74F67808354/ASSETS/GRAPHIC/10.3233_JAD-220184-FIG2.JPG.

stimulating.[42] The teacher greets students warmly and uses positive suggestions to frame the learning experience as enjoyable and achievable.[43] Quiet, culturally familiar instrumental music is played to reduce initial anxiety.[44] This phase directly targets the affective filter before any cognitive load is introduced.

Phase 2: Thematic Immersion (Making Connections). The core content is introduced holistically through an engaging, low-pressure activity. The teacher performs a short, dramatic reading or role-play of an Arabic dialogue that contains the target vocabulary and structures.[45] This contextualizes the language and activates students' prior knowledge and curiosity, aligning with BBL's principle of making connections.[46] Students may be given new Arabic names to encourage role-play and psychological distance from their fear of making errors.[47]

Phase 3: Active Concert (Focused Elaboration). This phase focuses on conscious attention to the linguistic material. Students follow the written text of the dialogue as the teacher reads it with clear, emotional intonation. The reading is

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[42] Zahara Aziz and Suria Baba, "Instructional Leadership Enhanced Creativity in Smart Classroom Activities," *Procedia - Social and Behavioral Sciences* 15 (2011): 1566–72, https://doi.org/10.1016/j.sbspro.2011.03.332.

[43] Shimbo, "The Effects of Music, Relaxation and Suggestion on Tertiary Students' Affect and Achievement in Learning Japanese as a Foreign Language."

[44] Mohan and Thomas, "Effect of Background Music and the Cultural Preference to Music on Adolescents' Task Performance."

[45] Alanazi, "Brain-Based Learning as Perceived by Saudi Teachers and Its Effect on Chemistry Achievement of 7th Graders."

[46] V N Yulian and N Hayati, "Enhancing Students' Mathematical Connection by Brain Based Learning Model," *Journal of Physics: Conference Series* 1315, no. 1 (2019), https://doi.org/10.1088/1742-6596/1315/1/012029.

[47] I Humeniuk et al., "Language Acquisition for ESP Students with Suggestopedia Method Application," *Engineering for Rural Development* 22 (2023): 38–44, https://doi.org/10.22616/ERDev.2023.22.TF006.

accompanied by stimulating classical music (e.g., Mozart) to maintain alertness and engagement.[48] This stage represents the "high challenge" component of relaxed alertness, where active processing occurs.

Phase 4: Passive Concert (Incubation & Peripheral Input). This is a "downtime" or consolidation phase.[49] Students are instructed to relax, close their books, and simply listen as the teacher reads the text again. This time, the reading is accompanied by calm, structured Baroque music, which is claimed to aid subconscious absorption and memory consolidation.[50] This phase leverages the brain's need for processing time and engages peripheral learning channels.[51]

Phase 5: Playful Activation (Active Synthesis). The final phase brings the learning into active use through communicative, non-threatening activities. Using their role-play identities, students engage in games, structured dialogues, and creative tasks that require them to use the newly acquired language. [52]The focus is on successful communication rather than grammatical accuracy. The teacher acts as a facilitator, providing emotional scaffolding and encouragement rather than direct error correction.[53] This phase builds confidence and moves the knowledge into long-term, applicable memory.

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[48] Colliander and Fejes, "The Re-Emergence of Suggestopedia: Teaching a Second Language to Adult Migrants in Sweden."

[49] Lagoudakis et al., "The Effectiveness of a Teaching Approach Using Brain-Based Learning Elements on Students' Performance in a Biology Course."

[50] Alanazi, "Brain-Based Learning as Perceived by Saudi Teachers and Its Effect on Chemistry Achievement of 7th Graders."

[51] Fatemipour, "Peripheral Learning of English Language: A Comparison Between ESL and EFL Contexts Provided for University Students."

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[53] Alavi and Esmaeilifard, "The Effect of Emotional Scaffolding on Language Achievement and Willingness to Communicate by Providing Recast."

To illustrate how these five phases translate into classroom practice, a detailed 90-minute sample lesson plan for an Arabic listening class is provided in Appendix A.

Conclusion

This systematic review concludes that a powerful synergy exists between the pedagogy of Suggestopedia and the principles of Brain-Based Learning (BBL), as both converge on the importance of an emotionally safe and positive learning environment. Based on these findings, this study proposes a new conceptual model: the Integrated Suggestopedic Brain-Based Learning (ISBBL) model. The ISBBL model is designed as a practical framework that synthesizes the most potent elements of both approaches to address the affective barriers inhibiting Arabic listening comprehension (mahārah istimāʿ), while also grounding Suggestopedia in educational neuroscience.

While the ISBBL model offers a significant theoretical contribution, its primary limitations must be acknowledged. First, the model remains conceptual and requires empirical validation through direct classroom testing. Second, the synthesis relies heavily on literature from EFL (English as a Foreign Language) contexts, which are more numerous than studies focused specifically on Arabic learners. Consequently, future research should prioritize piloting the ISBBL model in Arabic classroom settings, ideally employing a mixed-methods approach (utilizing both quantitative and qualitative data) to measure its impact and refine the framework.

Pending full empirical validation, the core principles of the ISBBL model offer practical, immediately applicable strategies for Arabic language educators. These strategies include prioritizing affective priming (creating an emotionally safe atmosphere before cognitive tasks), integrating purposeful, low-pressure role-plays, using music strategically to signal different learning phases (e.g., the "active concert" and "passive

concert"), and shifting the focus of feedback from grammatical correction to successful communication during practice activities.

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APENDIX A
SAMPLE 90-MINUTE ISBBL LESSON PLAN

- Topic: At the Airport (في المطار)
- Primary Objective: Students will be able to comprehend a short Arabic dialogue about checking in for a flight.
- Materials: Audio player, instrumental music (Arabic and classical), projector/screen with an image, printed dialogue, props (fake passports/tickets), vocabulary posters.

Phase 1: Affective Priming (Relaxed Alertness) (10 Minutes)
The goal is to lower anxiety and create a positive, safe learning environment before introducing new content.

- Atmosphere: As students enter, soft, instrumental Arabic music (e.g., an Oud melody) is playing. The screen displays a calming image of an airport lounge at sunset.
- Teacher's Role: The teacher greets students warmly (أهلاً وسهلاً) and uses positive suggestions like, "Today will be a fun and easy journey into Arabic".
- Student Activity: Students are given new Arabic "traveler" names for the lesson (e.g., Fatima the Traveler) to help lower their inhibitions and fear of making mistakes.

Phase 2: Thematic Immersion (Making Connections) (15 Minutes)
The content is introduced holistically to activate prior knowledge and build context.

- Teacher's Role: The teacher performs a brief, dramatic role-play of the airport check-in dialogue, using gestures and props (a passport, a ticket) to convey meaning without pressure. Key vocabulary like جواز

سفر(passport) and رحلة(flight) are displayed on posters around the room for peripheral learning.

- Student Activity: Students watch the role-play and are then asked simple questions to connect to their own experiences (e.g., "Have you ever been to an airport?").

Phase 3: Active Concert (Focused Elaboration) (20 Minutes)
This phase focuses on conscious and active processing of the linguistic material in a stimulating environment.

- Teacher's Role: The teacher distributes the printed dialogue. Then, with stimulating classical music (e.g., Mozart) playing, the teacher reads the dialogue aloud with clear, emotional intonation.
- Student Activity: Students follow along on their printed copies, underlining words they recognize. This is the "high challenge" component of the lesson.

Phase 4: Passive Concert (Incubation & Peripheral Input) (15 Minutes)
This is a consolidation phase where the brain can process the new information subconsciously in a relaxed state.

- Teacher's Role: The teacher asks students to put down their papers, close their eyes if they are comfortable, and just relax. With calm Baroque music playing, the teacher reads the dialogue again in a soothing, rhythmic voice.
- Student Activity: Students simply listen and absorb the sounds and rhythm of the language without any pressure to analyze it.

Phase 5: Playful Activation (Active Synthesis) (30 Minutes)
The final phase moves the new knowledge into active, communicative use through low-stakes activities.

- Teacher's Role: The teacher acts as a facilitator, providing encouragement and emotional scaffolding rather than direct error correction.

- Student Activity: In pairs and using their traveler personas, students practice the dialogue at a "check-in counter" (the teacher's desk). The goal is successful communication, not perfect grammar. The lesson concludes with a quick, fun game, like matching the new vocabulary words to pictures.