

## Manifestations of Social Cognition Through Collaborative Semantic Mapping in Mastering Complex Arabic Texts

Luluk Yulia Ma'wa<sup>1</sup>; Latifatul Khoiriyah<sup>2</sup>; Erlina<sup>3</sup>

<sup>1 2 3</sup>Universitas Islam Negeri Raden Intan Lampung, Bandar Lampung, Indonesia

E-mail: lulukyuliamawa@gmail.com, khoiriyahlatifatul799@gmail.com, erlina@radenintan.ac.id

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- Abstract** : *Mastery of advanced Arabic texts with syntactic complexity (i'rab) and rich morphological variation often triggers excessive cognitive load for second language learners. This study employs a descriptive qualitative approach to explore how social cognition phenomena manifest through the application of collaborative semantic mapping techniques. Grounded in Vygotsky's sociocultural theory, data were collected through classroom observation, concept map document analysis, and in-depth interviews with learners. The descriptive results show that group interaction in constructing semantic maps converts external negotiation of meaning into directed internal individual processes. This technique transforms complex Arabic texts into macro and micro visual structures, triggers peer scaffolding, and significantly reduces obstacles to text comprehension. This article formulates the theoretical foundation, qualitative procedures, and pedagogical implications of sociocognitive interaction in advanced Arabic language learning.*
- Keywords** : ***Social cognition; semantic mapping; collaborative learning; Arabic text comprehension; scaffolding.***
- Abstrak** : *Penguasaan teks Arab tingkat lanjut dengan kompleksitas sintaksis (i'rab) dan variasi morfologis yang kaya sering kali memicu beban kognitif berlebih bagi pembelajar bahasa kedua. Penelitian ini menggunakan pendekatan kualitatif deskriptif untuk mengeksplorasi bagaimana fenomena kognisi sosial bermanifestasi melalui penerapan teknik semantic mapping (pemetaan semantik) secara kolaboratif. Berlandaskan teori sosiokultural Vygotsky, data dikumpulkan melalui observasi kelas, analisis dokumen peta konsep, dan wawancara mendalam terhadap pembelajar. Hasil deskripsi menunjukkan bahwa interaksi kelompok dalam menyusun peta semantik mengonversi negosiasi makna eksternal menjadi proses internalisasi individu yang terarah. Teknik ini mampu mentransformasikan teks Arab yang rumit menjadi struktur visual makro dan mikro, memicu scaffolding antar-sejawat, serta mereduksi kendala pemahaman teks secara signifikan. Artikel ini merumuskan landasan teoretis, prosedur kualitatif, serta implikasi pedagogis interaksi sosiokognitif dalam pembelajaran bahasa Arab tingkat lanjut.*
- Kata Kunci** : ***Kognisi sosial; pemetaan semantik; pembelajaran kolaboratif; pemahaman teks bahasa Arab; scaffolding.***

## INTRODUCTION

The modern education era has brought a positive disruption to the orientation of Arabic language pedagogy, particularly in accelerating learners' capacity to deconstruct texts critically and contextually. Within the domain of *qira'ah* (reading) instruction, cognitive outcomes are no longer confined to literal textual decoding, but rather emphasize the ability to unravel interconnections of meaning, contextual dimensions, and the architecture of ideas within the text. Nevertheless, empirical observations in the classroom record a stark contradiction; learners' competence in analyzing complex, advanced Arabic texts remains far below expectations. Frequently emerging obstacles include the failure to extract main ideas, map semantic relationships between concepts, grasp the implications of contextual meaning, and integrate strands of information into a cohesive whole. Consequently, the resulting construction of comprehension tends to be partial, shallow, and fails to attain the level of deep comprehension (Maulani et al., 2025).

This stagnation of competence stems from the dominance of conventional approaches that are biased toward teacher-centered learning. In classroom practice, pedagogical orientation still relies heavily on mechanical activities such as isolated textual translation and lexical memorization, rather than constructing active and collaborative spaces for discourse. The reductionism of this method implies a lack of cognitive engagement among students to dissect the essence of the text, which in turn triggers disorientation in correlating the network of meaning between ideas. Ideally, Arabic language instruction should be capable of facilitating an interactive and communicative socio-cognitive environment, where knowledge is actively co-constructed through meaning negotiation and group cooperation. In line with this, research by (Norkhafifah & Nur, 2022) asserts that modern Arabic instruction requires innovative and participatory instructional designs to stimulate students' learning agency while achieving more meaningful comprehension retention.

Under the lens of social cognition theory, the process of understanding text is reconceptualized not as an isolated cognitive activity confined within the individual mind, but rather as a socio-cognitive phenomenon mediated by peer interaction. This paradigm asserts that knowledge construction manifests through collaborative activities that facilitate discourse, conceptual clarification, and the collective articulation of meaning toward a textual object. Consequently, advanced Arabic *qira'ah* instruction requires a strategic blueprint capable of simultaneously unifying cognitive dimensions and social interactions to realize deep

comprehension. In this context, collaborative learning acts as a catalyst that provides an intersubjective space for the formation of shared knowledge structures while the process of textual analysis takes place (Hasan & Melyyani, 2022).

As a response to these linguistic complexities, the technique of semantic mapping emerges as a strategic instructional intervention to deconstruct intricate Arabic discourse. This technique serves as a cognitive visualization tool designed to organize concepts, correlate ideas, and map the network of semantic relations within a text. Through semantic mapping, learners can activate prior knowledge, classify lexical information, and systematically construct interconnections between concepts. This intervention mitigates learners' cognitive load in digesting reading content because the entire textual information is converted into a structured radial diagram that accelerates the process of meaning interpretation. In alignment with this, an empirical study by (Nafisah et al., 2023) demonstrates that the implementation of semantic mapping provides a significant positive contribution toward the mastery of grammatical rules and the systematization of conceptual organization in Arabic learning.

In addition to its function in systematizing ideas, the effectiveness of semantic mapping can be optimally accelerated when integrated into a collaborative learning framework. Through group interaction, learners cooperatively reconstruct semantic maps, discuss textual substance, and negotiate meaning regarding the informational content within Arabic texts. This sociocultural dynamic stimulates the emergence of socio-cognitive interactions that facilitate learners in constructing conceptual understanding collectively. Supportive of this argument, an empirical study conducted by (Ardiansyah et al., n.d.) proves that the convergence between collaborative learning and semantic mapping techniques is significantly capable of escalating learners' engagement agency, sharpening critical thinking skills, and substantively enhancing reading comprehension performance.

Within the landscape of Arabic pedagogy, the implementation of semantic mapping holds exceptionally high theoretical and practical relevance due to the structural complexity of Arabic discourse, which encompasses morphological, syntactic, and semantic dimensions. Learners are not merely confronted with the demand for isolated vocabulary mastery, but are required to possess the capacity to analyze meaning relations, pragmatic contextualization, and the coherence of ideas within the text. Consequently, *qira'ah* instruction necessitates strategic interventions capable of facilitating learners in visualizing conceptual networks transparently

to foster an effective and profound textual interpretation process. This mapping strategy in language instruction has been empirically proven capable of scaffolding learners in correlating meaning, deconstructing informational hierarchies, and systematically escalating reading skills (Hidayat et al., 2024).

Although a number of prior literatures have documented the utility of semantic mapping as well as collaborative learning within the reading domain, the majority of these studies still display a bias toward quantitative orientations, such as learning outcomes and lexical vocabulary retention. Conversely, discourses regarding how the manifestation of social cognition materializes within the process of Arabic *qira'ah* instruction remain relatively neglected. Specifically, few studies have naturalistically tracked how learners articulate meaning negotiation, perform conceptual elaboration, and build collective knowledge structures when interacting with complex Arabic texts through the medium of collaborative semantic mapping. This limitation in literature underscores the existence of a crucial research lacuna that demands deep investigation to enrich both theoretical and applicable contributions to Arabic pedagogy.

Poised upon this academic urgency, this study aims to comprehensively explore the manifestations of social cognition through collaborative semantic mapping techniques in the mastery of advanced Arabic texts. Through the application of a qualitative descriptive approach, this research is designed to obtain a profound empirical description regarding the dynamics of interaction, meaning negotiation discourse, and the architecture of shared knowledge construction built by the learners. This exploration is expected to yield significant theoretical contributions toward the development of socio-cognitively based Arabic learning models, while simultaneously offering an alternative innovative instructional strategy to escalate the capacity for understanding complex Arabic texts.

## **METHODS**

A qualitative descriptive design was adapted in this study to comprehensively dissect the manifestations of students' social cognition through the implementation of collaborative semantic mapping techniques in unravelling advanced Arabic texts. The selection of this approach was grounded in the research characteristics, which orient toward exploring sociocultural interaction dynamics, conceptual comprehension reconstruction, and learners' cooperative activities within a naturalistic *qira'ah* classroom ecosystem. Procedurally, this

investigation was executed across five linear phases: preparation, intervention implementation, data codification, in-depth analysis, and conclusion drawing. In the initial phase, the researcher formulated focus boundaries, constructed draft observation and interview instruments, and curated complex Arabic textual discourse as instructional materials. Upon entering the implementation stage, group-based semantic mapping techniques were applied, wherein students collectively mapped main ideas, unraveled macro-semantic interconnections, and deconstructed the informational architecture of the presented texts. The subjects involved in this study were active learners possessing an academic track record in examining intermediate to complex (advanced) Arabic literature.

The process of data codification relied upon three primary techniques, namely participant observation, in-depth interviews, and documentary studies. Observation instruments were deployed to record collaborative discourse, social interaction typologies, meaning negotiation mechanisms, and the shared knowledge formation stimulated by semantic mapping activities. Meanwhile, semi-structured interviews were administered to extract learners' subjective narratives regarding their empirical experiences, cognitive perceptions, and the challenges encountered while converting texts into structured radial diagrams. As corroborative data, the researcher secured authentic documents consisting of draft semantic maps produced by the students, field notes, visual documentation, and transcripts of the groups' verbal recordings. Research supporting devices included observation matrix sheets, interview guides, audio recording apparatus, and image documentation tools. Subsequently, the data were analyzed using an interactive model that integrates the stages of data condensation, data display, and conclusion verification. To guarantee the authenticity and credibility of the scientific findings, data trustworthiness was pursued through source and technical triangulation schemes by rigidly cross-comparing and intersecting data from observations, interview transcripts, and documentary evidence.

## **FINDINGS AND DISCUSSION**

The research findings indicate that the implementation of collaborative semantic mapping techniques in complex Arabic text instruction is capable of fostering a more active, communicative, and structured learning process. In its execution, learners were divided into several small groups consisting of four to five individuals. Each group was assigned a complex

Arabic text under the themes of education and Islamic social studies to be analyzed through the construction of a semantic map. The learners were instructed to collaboratively identify key vocabulary, determine main ideas, correlate concepts, and visualize relationships of meaning into the form of a semantic map.

Based on participant observation, the learners demonstrated an increase in engagement throughout the instructional process. Group discussion activities appeared more intensive compared to conventional reading instruction. The learners actively exchanged viewpoints regarding lexical meanings, inter-sentential relationships, and the textual content of the Arabic discourse. Furthermore, the learners seemed to comprehend the structural content of the text more easily because the core concepts were systematically visualized through semantic mapping. The observational data also revealed that the learners were more capable of anchoring new information to their pre-existing prior knowledge, thereby fostering a deeper comprehension of the text.

Documentary evidence in the form of student-produced semantic maps demonstrated that the majority of the groups were capable of organizing conceptual relationships logically and systematically. The learners did not merely translate the text literally, but were also capable of identifying causal relationships, primary ideas, and supporting details within the reading. The conceptual visualization assisted the learners in understanding the interconnections between ideas more transparently, making the essence of the text significantly more accessible and easier to comprehend.

Empirical evidence reveals a substantial escalation in students' engagement agency following the deployment of collaborative semantic mapping techniques. Prior to this pedagogical intervention, learners exhibited a passive disposition, relying heavily on teacher-led explications to decipher Arabic texts. Conversely, the introduction of peer-based semantic mapping transformed the classroom dynamic, stimulating students to actively initiate inquiries, drive peer discussions, and articulate their textual interpretations. This shift was accompanied by a heightened proficiency in decoding semantic networks and informational hierarchies within intricate Arabic discourse. Learners successfully identified primary arguments, clarified inter-paragraph cohesions, and synthesized reading contents with greater systematicity. Qualitative data from interviews corroborated these findings, with students affirming that the radial visualization of conceptual frameworks significantly mitigated their cognitive load, making abstract textual relations highly transparent and accessible.

Beyond the scope of reading comprehension, the convergence of collaborative learning and semantic mapping yielded positive outcomes in students' communicative competence and collaborative synergy. The iterative group discussions fostered academic self-efficacy, enabling students to confidently assert their perspectives and defend their analytical maps. Consequently, the utility of collaborative semantic mapping extends beyond mere text-processing facilitation; it serves as a robust socio-cognitive mechanism that simultaneously refines linguistic mastery, critical cognitive processing, and interpersonal skills within foreign language pedagogy.

A body of literature on semantic mapping in Arabic pedagogy confirms that the utilization of this concept-mapping-based visual strategy is effective in facilitating learners to unravel relationships of meaning while simultaneously systematizing lexical organization. Through the graphical representation of semantic maps, learners are capable of hierarchically constructing linguistic conceptual networks, which in turn accelerates the process of textual interpretation in a more functional and efficient manner. The intervention of this strategy does not merely imply a quantitative escalation in vocabulary mastery, but also scaffolds learners in articulating linguistic inter-conceptual connections more comprehensively and deeply (Nasrullah et al., 2024).

Social interaction within the Arabic language classroom plays a crucial role in stimulating students' reconstruction of comprehension toward instructional materials. The implementation of reflective and collaborative learning approaches has been proven capable of providing an intersubjective space for learners to stimulate dialogue, distribute ideas, and collectively construct the architecture of knowledge. This social dynamic not only escalates learners' active engagement agency in the language acquisition process, but also sharpens their critical thinking capacity while strengthening their communicative competence within Arabic discourse (Rosyadi et al., 2022).

Empirical evidence demonstrates that the utilization of mind mapping or concept maps in Arabic instruction is capable of escalating learners' capacity to deconstruct linguistic structures and unravel conceptual interconnections. As an instructional medium rooted in pictorial representation, this strategy facilitates visual and systematic memory retention, which in turn simplifies the internalisation process of both lexical repertoires (*mu'jam*) and Arabic grammatical rules. Furthermore, this pedagogical intervention contributes significantly to the

stimulation of creativity and the reinforcement of learners' active engagement agency throughout the instructional dynamics (Fara et al., 2021).

Semantic exploration within the landscape of Arabic linguistics asserts that a comprehensive textual interpretation demands an in-depth analysis that integrates relations of significance, contextual aspects, and the structural configuration of the language. This semantic approach equips learners with the capacity to unravel conceptual interconnections and explore implicit meaning within Arabic discourse, particularly in complex text corpora characterized by a diversity of linguistic architecture. On this basis, the articulation of visual-based and conceptual mapping instructional strategies is deemed highly relevant as a cognitive tool to facilitate learners in decoding networks of semantic relations in a more methodical and systematic manner (Ismail, 2024).

## CONCLUSION

The investigation into the manifestations of social cognition through collaborative semantic mapping techniques in mastering complex Arabic texts demonstrates that this pedagogical intervention successfully transforms *qira'ah* instruction into a more active, methodical, and meaningful process. The graphical representation of semantic maps effectively guides students in unravelling conceptual hierarchies, organizing information clusters, and mapping the interconnections between main ideas and explanatory details within advanced Arabic texts. This visualization process functions as a cognitive guide that eases students in decoding the architecture of meaning, semantic relations, and textual substance comprehensively. Moreover, the implemented cooperative model successfully triggers student agency to engage actively in group discourse, distribute perspectives, and design collective comprehension through organic networks of social interaction.

This research confirms that the manifestation of social cognition tangibly materializes through the dynamics of meaning negotiation, conceptual clarification, the dialectics of ideas, and peer scaffolding mechanisms throughout the instructional activities. This social synergy constructs shared knowledge that significantly escalates students' capacity to interpret complex Arabic text corpora. Consequently, the act of textual meaning-making is no longer isolated as an individual mental process; rather, it develops as a product of social construction and intersubjective collaboration within the classroom ecosystem. These empirical findings simultaneously reinforce the postulates of social cognition and social constructivism theories,

which position sociocultural interaction, dialogic communication, and collaborative activities as primary stimulants in learners' cognitive development.

Practically, this study implies that collaborative semantic mapping techniques are highly viable for adaptation as an innovative instructional strategy in reading complex Arabic texts. This strategy offers a solution for educators to foster an interactive, communicative, and fully student-centered classroom atmosphere. In addition to stimulating reading literacy, this technique contributes to sharpening students' interpersonal skills, communication competence, and team synergy. Theoretically, this research strengthens the paradigm that Arabic pedagogy must not be trapped in the reductionism of purely linguistic aspects, but is obligated to integrate the socio-cognitive dimension into the process of meaning construction. As a final significance, these findings open avenues for developing visual-collaborative-based Arabic learning models that are more contextual and adaptive to complex text processing.

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