# THE PRAGMATIC PHILOSOPHY: COMPUTER MEDIATED COMMUNICATION (CMC) IN ARABIC LANGUAGE LEARNING

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**Abstrak:**
Studi ini mengeksplorasi hubungan konseptual antara Pragmatisme dan Komunikasi Berbasis Komputer (CMC) dalam konteks pendidikan bahasa Arab. Pragmatisme menekankan nilai praktis pengetahuan, yang sejalan dengan tujuan pengajaran bahasa Arab untuk mengembangkan kompetensi komunikatif. CMC, khususnya melalui mode Sinkron (SCMC) dan Asinkron (ACMC), berfungsi sebagai alat pedagogis modern untuk mendukung pembelajaran bahasa. Penelitian ini mengadopsi pendekatan berbasis literatur dengan menganalisis sumber-sumber akademis terkini untuk mengevaluasi bagaimana CMC dapat meningkatkan pemerolehan bahasa Arab melalui interaksi kolaboratif dan kontekstual. Temuan penelitian menunjukkan bahwa integrasi CMC yang efektif dapat meningkatkan kemahiran siswa secara signifikan, khususnya dalam lingkungan belajar digital. Studi ini menawarkan wawasan berharga untuk mengembangkan strategi pengajaran bahasa Arab yang inovatif yang sejalan dengan tujuan pendidikan pragmatis.

**Kata Kunci:** Pembelajaran Bahasa Arab, CMC (Computer Mediated Communication). Filsafat Pragmatis

مستخلص البحث:

تستكشف هذه الدراسة العلاقة المفاهيمية بين البراغماتية والتواصل عبر الحاسوب في سياق تعليم اللغة العربية. تؤكد البراغماتية على القيمة العملية للمعرفة، وهو ما يتوافق مع هدف تعليم اللغة العربية المتمثل في تنمية الكفاءة التواصلية. ويُعدّ التواصل عبر الحاسوب، ولا سيما من خلال نمطيه المتزامن وغير المتزامن، أداة تربوية حديثة لدعم تعلم اللغة. تعتمد هذه الدراسة نهجًا قائمًا على الأدبيات من خلال تحليل المصادر الأكاديمية الحديثة لتقييم كيف يمكن للتواصل عبر الحاسوب أن يعزز اكتساب اللغة العربية من خلال التفاعلات التعاونية والسياقية. تشير نتائج البحث إلى أن التكامل الفعال للتواصل عبر الحاسوب يمكن أن يحسن بشكل ملحوظ من كفاءة الطلاب، لا سيما في بيئات التعلم الرقمي. وتقدم هذه الدراسة رؤى قيّمة لتطوير استراتيجيات مبتكرة لتدريس اللغة العربية تتوافق مع الأهداف التعليمية العملية.

الكلمات المفتاحية: تعليم اللغة العربية، التواصل عبر الحاسوب، الفلسفة البراغماتية

**Abstrac:**
This study explores the conceptual relationship between Pragmatism and Computer-Mediated Communication (CMC) within the context of Arabic language education. Pragmatism emphasizes the practical value of knowledge, aligning with the objective of Arabic instruction to develop communicative competence. CMC, particularly through Synchronous (SCMC) and Asynchronous (ACMC) modes, serves as a modern pedagogical tool to support language learning. This research adopts a literature-based approach by analyzing current academic sources to evaluate how CMC can enhance Arabic language acquisition through collaborative and contextual interaction. The findings suggest that effective integration of CMC can significantly improve students' proficiency, especially in a digital learning environment. The study offers valuable insights for developing innovative Arabic language teaching strategies that are aligned with pragmatic educational goals.

**Keywords:** *Arabic Learning, CMC (Computer Mediated Communication), The Pragmatic Philosophy*

**INTRODUCTION**

In the current era of Society 5.0, the Arabic language plays a significant role as an official international language and as a cultural medium. At the same time, technology—particularly Instructional Computer Technology (ICT)—has transformed various aspects of modern life, including education[1]. Both language and technology continue to evolve and are now integral to teaching and learning processes. In this educational context, Computer-Mediated Communication (CMC) has emerged as a crucial medium that facilitates interaction beyond the constraints of traditional classrooms.

CMC refers to human communication conducted through digital devices. While the term initially referred to computer-based interactions such as email, chat rooms, and online forums, it has since expanded to include text and multimedia exchanges on mobile devices and other internet-enabled platforms. The rise of CMC has been fueled by rapid technological development and the widespread availability of the internet, making it a widely adopted tool in interpersonal communication, information sharing, and—most notably—education[2].

Integrating Computer-Mediated Communication (CMC) into language learning, including Arabic, provides significant benefits. CMC enables learning beyond the boundaries of space and time, while introducing a more dynamic and contextual teaching approach. Research results show that the use of internet-based digital communication media can increase students' learning motivation, active participation, and oral and written communication skills[3]

The integration of technology into language learning has transformed the way students interact with learning materials and with fellow students. CMC enables flexible and personalized learning, facilitating collaboration and language practice in real-time and asynchronously.

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[1] Nabilah and Abrilian, "Learning Arabic in the Era of Society 5 . 0."
[2] Liang and Walther, "Computer Mediated Communication."
[3] Zhao et al., "Effectiveness of Mobile-Assisted Language Learning in Developing Oral English in Higher Education: A Comparative Systematic Review."

According to Quan-Haase and Wellman[4], digital technology enables students to express ideas and emotions more openly and reflectively, because they are not bound by the time and space constraints that usually exist in conventional learning.

This is in line with recent findings that interactive online learning environments, such as discussion forums, video conferencing applications, and educational social media platforms, have significantly increased learning autonomy, emotional engagement, and the quality of foreign language learning outcomes[5]. In the context of Arabic language learning, CMC provides diverse platforms—such as email, online discussion groups, forums, and chat rooms—that allow learners to engage in either written or spoken communication about Arabic-related topics. These environments are especially helpful for students who may feel anxious or reluctant to speak Arabic in conventional classrooms due to fear of making mistakes or receiving negative feedback. Such psychological barriers often hinder participation. CMC helps mitigate this by creating low-stress, flexible environments that encourage students to interact more confidently in the target language[6].

Moreover, CMC enables learners to participate in intercultural dialogue, engage in interest-based discussions, and collaborate with peers from various cultural backgrounds. Students can join Arabic-speaking communities, interact via voice or text, and access a wide range of authentic learning resources. In doing so, they develop not only language proficiency but also global awareness and communicative confidence. This mode of learning transforms passive consumption into active collaboration.

Recent advancements in CMC tools have also enhanced the development of all four essential language skills—listening, reading, speaking, and writing. These tools support learners in navigating a variety of language contexts and purposes. According to Kern and Warschauer, this shift reflects the integration of technology within social-cognitive approaches to language education[7]. From this perspective, CMC is not just a technological innovation but a pedagogical evolution, enabling learners to construct meaning collaboratively while immersed in real-world communication tasks.

**METHOD**

This study employs a systematic literature review (SLR) approach by collecting and analyzing scholarly sources related to pragmatism and Computer-Mediated Communication (CMC) in the context of Arabic language education. The data were obtained from academic platforms such as Google Scholar, Scopus, and ScienceDirect, using relevant keywords including *pragmatism in education*, *computer-mediated communication*, *Arabic language instruction*, and *technology-enhanced language learning*.

Sources included peer-reviewed journal articles, scholarly books, and reputable educational publications, which were selected based on their relevance, credibility, and publication date (within the last 10 years) to ensure the currency of the data[8]. The analysis was conducted using thematic

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4 Quan-Haase, Mo, and Wellman, "Connected Seniors: How Older Adults in East York Exchange Social Support Online and Offline."
5 Jiang, "On Effective Utilization of Computer-Mediated Communication Technology in Network-Based Foreign Language Teaching."
6 Hung, Pham, and Purohit, "Computer Mediated Communication in Second Language Education BT - New Trends and Applications in Internet of Things (IoT) and Big Data Analytics."
7 Kern, Ware, and Warschauer, "Network-Based Language Teaching BT - Second and Foreign Language Education."
8 Snyder, "Literature Review as a Research Methodology: An Overview and Guidelines."

content analysis, following the procedure outlined by Braun and Clarke[9], which involves identifying, analyzing, and reporting patterns (themes) within data.

Key ideas and recurring concepts were identified that reflect the philosophical alignment between pragmatism and the pedagogical use of CMC, such as learner autonomy, interaction-driven knowledge construction, and contextualized language use[10]. These themes were then synthesized into a conceptual framework that supports the study's objectives to explore how pragmatist principles manifest in technology-mediated Arabic language instruction.

## RESULT AND DISCUSSION
### The Philosophy of Pragmatism and Its Foundations

The term *pragmatism* originates from the English word "pragmatic," which refers to practicality, outcomes, and consequences[11]. This philosophy emerged in the United States in the late 19th century and has significantly influenced various domains, particularly education, science, and technology. Pragmatism views knowledge not as an end in itself but as a tool for solving problems and improving life. In this worldview, the value of an idea or theory is determined by its usefulness and ability to produce tangible results[12].

Pragmatism attempts to bridge the gap between two earlier schools of thought: empiricism, which emphasizes experience, and idealism, which centers on abstract reasoning. Pragmatism suggests that knowledge must be rooted in experience but oriented toward solving real-life problems. Truth is not seen as fixed or eternal but as evolving based on its practical consequences and alignment with human needs.

Three central figures in the development of pragmatism are Charles S. Peirce, William James, and John Dewey. Each made significant contributions to shaping pragmatism as a philosophical and educational approach.

Charles S. Peirce introduced pragmatism as a method for clarifying the meaning of ideas through their practical consequences. He argued that beliefs must be evaluated by their observable outcomes. For Peirce, the scientific method involves suspending dogma and embracing open inquiry. If a belief (X) implies a consequence (Y), but Y does not occur, then X must be questioned. This scientific approach demands that one remain open to revising beliefs in light of empirical evidence.

William James expanded Peirce's ideas, defining pragmatism as a means of interpreting ideas based on their potential effects. For James, ideas gain meaning when examined through their practical consequences. While agreeing with Peirce on the importance of experience, James placed stronger emphasis on metaphysical and ethical concerns. He argued that debates on topics like justice, morality, or religion should be evaluated pragmatically: Do these ideas lead to meaningful outcomes in real life? If not, they may be intellectually interesting but practically irrelevant.

John Dewey took a more educational approach[13]. For Dewey, pragmatism is grounded in human experience and centered on solving problems encountered in daily life. He rejected metaphysical speculation and believed that philosophy should serve a social function by guiding action. Dewey

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[9] Braun and and Clarke, "Reflecting on Reflexive Thematic Analysis."
[10] Shadiev, Wu, and Huang, "Using Image-to-Text Recognition Technology to Facilitate Vocabulary Acquisition in Authentic Contexts."
[11] Satiri, Hasani Aceng, Nulhakim Lukman, Ruhiyat Yayat, "Filsafat Pendidikan Pragmatisme Sebuah Analisis Tentang Teori Pragmatisme Dalam Pendidikan."
[12] Kosasih, "FILSAFAT PENDIDIKAN PRAGMATISME Telaah Atas Teori Manajemen Pendidikan John Dewey."
[13] Kosasih.

proposed that thinking should be reflective and follow a structured process of inquiry, consisting of five stages: Problem recognition – a sense of doubt or conflict that disrupts existing understanding, Problem definition – intellectualizing the situation and identifying the real issue, Hypothesis generation – proposing potential solutions based on past experiences, Reasoning through consequences – predicting outcomes of each hypothesis, and Testing through action – implementing the best hypothesis to determine its validity. This cycle of inquiry aligns with the principles of scientific reasoning, where conclusions are provisional and subject to change based on new evidence.

Dewey also emphasized that spiritual, emotional, or non-rational experiences can be meaningful if they are processed reflectively and lead to constructive action. In pragmatism, reality is not static; it evolves in response to human needs and discoveries. What is considered "true" today may become obsolete tomorrow, and this openness to change underlies the pragmatist's approach to science, law, and education.

At its core, pragmatism promotes probabilistic thinking rather than belief in absolute truths. It encourages continuous testing, revision, and adaptation. By focusing on outcomes, pragmatism not only shapes theory but also guides ethical, educational, and political practices toward more humane and effective results.

### Definition of Computer Mediated Communication (CMC)

To understand what is meant by Computer-Mediated Communication (CMC), the following definitions from various fields are provided. Hiltz and Turoff were the first to develop and introduce Computer-Mediated Communication (CMC) principles. They view CMC as a communication medium used to create, comprehend, transmit, encode, and decode messages[14]. This definition has been accepted by various researchers. Barnes provides a depiction of computer-mediated communication (CMC) as the utilization of diverse technologies that enable human interaction and information sharing over interconnected computer networks, including email, discussion groups, news forums, and real-time chat[15]. According to Harb, CMC refers to the process of human communication involving the use of computers, wherein individuals interact within certain contexts and with diverse objectives through the medium[16]. similarly according to Jiang, "CMC or network communication" refers to reading, writing, and communicating through a computer connected to the internet[17]".

### Characteristics of Computer Mediated Communication (CMC)

Murray defines Computer Mediated Communication (CMC) as "communication that occurs between humans through computer devices. Chew, Shin Yi, and Lee Luan Ng acknowledges the significance of CMC characteristics in this communication, and posits that if educators intend to employ various types of CMC software in the classroom, students should be provided with information regarding the expectations associated with such interactions Chew concluded from his research that CMC shares similar characteristics with simple lists in written and spoken languages[18]. Chew etc. also recognizes the existence of specific norms in CMC, such as the use of abbreviations, simpler grammar, tolerance for initial errors, the use of symbols like emoticons, and certain phrases. Another aspect of computer-mediated communication (CMC) is the difference in conversational

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[14] Gráinne Kirwan, *AN INTRODUCTION TO CYBERPSYCHOLOGY.*
[15] Hadjah, "Computer Mediated Communication (CMC), Pola Baru Berkomunikasi."
[16] Harb, "Disagreement among Arabic Speakers in Faceless Computer-Mediated Communication."
[17] Jiang, "On Effective Utilization of Computer-Mediated Communication Technology in Network-Based Foreign Language Teaching."
[18] Chew and Ng, "Computer-Mediated Communication (CMC)."

structure, including the beginning and end of a conversation, compared to face-to-face communication. As an illustration, in the context of telephone communication, self-identification is a necessity, whereas in face-to-face communication, it may not be necessary unless the individual is interacting with someone they have never met before. However, in computer-mediated communication (CMC), this is an option because technology automatically identifies the sender and receiver "[19].

One distinctive characteristic of Computer Mediated Communication (CMC) in language learning is its ability to support collaboration in the learning process.; CMC encourages high school students to actively participate in the communication process; CMC gives high school students control over the learning process they undergo. The use of CMC (Computer-Mediated Communication) encouraged students to increase their knowledge of language usage; Computer-Mediated Communication (CMC) plays a facilitative role in facilitating the process of meaning negotiation among students[20]. Dijk revealed the main characteristics of Copmuter mediated Comunnication, namely: First, communication partners do not have to be in the same place. Second, you don't have to communicate at the same time. Third, computers or media can be substitutes for humans as communication partners, either only partially or completely. Fourth, mental processes during communication can be replaced by information processing tools[21].

**Computer Mediated Communication (CMC) in Arabic Language Learning**

In the context of Arabic language instruction involving the use of computer technology, computers play an important role in facilitating communication, particularly in the development of speaking and writing skills. Consequently, there is a strong relationship between computer-mediated communication (CMC) and the acquisition of Arabic language proficiency in foreign language learning. In this context, understanding of input, such as the ability to hear (istima') and read (qiro'ah), has a significant impact on the acquisition of Arabic for communication purposes as a whole.

The use of computers in Arabic language communication activities provides both input and output, both of which are essential to the development of students in Arabic language instruction[22]. In addition to this, CMC can also be used as a tool to improve communication skills. Numerous websites that are primarily designed to improve listening skills can also be used to improve speaking skills, including radio, television, streaming services, and others. The ability to speak can also positively influence one's ability to speak other languages. A skilled communicator can make it easier for the audience to hear and comprehend communication. Additionally, the ability to speak has a positive effect on the ability to write, because speaking and writing are, at their core, active skills that serve the same purpose as information-delivery tools. The difference between the two is the media used; conversing requires the use of written language, whereas writing requires the use of written language. As a general rule, controlling the pace of conversation is similar to controlling the pace of reading. As a result, the ability to converse can also aid in comprehension[23].

**Model of Arabic learning using computer-mediated communication**

Warschauer explains two CMC modes below: *firstly*, SCMC (Synchronous Computer-Mediated Communication) is a form of computer-mediated communication in which participants interact in

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[19] Ancheta, "Computer-Mediated Communication in Language Teaching: Challenges and Responses of Filipino ESL Teachers in the Philippines."
[20] Liang and Walther, "Computer Mediated Communication."
[21] Silvia, Rousta, and Gilrandy, "Application of Computer-Mediated Communication Theory in Online Learning."
[22] Pimada and Muhammad Afif Amrulloh, "Penerapan Media Elektronik Pada Pembelajaran Bahasa Arab."
[23] Amin, "Computer Mediated Communication (Cmc) Dalam Pembelajaran Bahasa Inggris."

real time, such as through instant messaging (chat) or a discussion application that enables the direct transmission of messages. *Secondly*, Asynchronous Computer Mediated Communication (ACMC) refers to a form of communication facilitated by computers, in which participants interact with a predetermined delay imposed by the computer. Examples of ACMC include email correspondence, reading, and writing online documents via the internet.

1. **Synchronous Computer Mediated Communication (SCMC)**

   As previously explained, Synchronous Computer Mediated Communication (SCMC) or Synchronous Computer-Mediated Communication is a form of communication that occurs in real-time through computers. The conversations within SCMC may involve the utilization of voice or instant text messages. Examples of synchronous communication include the utilization of chat applications such as Yahoo Messenger, Google Talk, MIRC, and video chat platforms such as Skype, Line, Facetime, Google+, Hangout, and others. The discussion within SCMC enables participants to engage in communication within a context that closely resembles face-to-face (FtF) communication [24].

   Some of the advantages of Synchronous Computer Mediated Communication (SCMC) includes facilitating interaction in the absence of physical presence, enhancing the self-confidence of introverted learners, and enabling learners to participate in and follow the progress of a discussion without the need to be physically present at the discussion location. Some problems that may arise in Synchronous Computer Mediated Communication (SCMC) include difficulties for learners in maintaining eye contact with the visual representation of their interlocutors and the potential for learners' behavior to become less controlled when they are represented by avatars (due to the absence of direct supervision)[25].

2. **Asynchronous Computer Mediated Communication (ACMC)**

   Asynchronous Computer-Mediated Communication (ACMC) is a daring form of communication that occurs with time compression, does not occur in real-time, and uses computers. Different locations and times can support ACMC communications. Examples of electronic communication include the use of e-mail applications, streaming video, and other means.

   ACMC enables language learners to more precisely consider, evaluate, revise, or even cancel a message before sending it to the intended recipient. This aids language learners in learning how to determine the message's content and become more critical of their own thoughts before communicating with others. As a result, asincron technology can activate students' critical thinking processes In addition, the solution to this problem is to use more focused and direct communication..

   The advantages of Asynchronous Computer-Mediated Communication (ACMC) or Computer-Mediated Asynchronous Communication include flexibility, the ability to read whenever and wherever, and the facilitation of instructor duties. Several potential problems with ACMC include a delay in receiving messages and an increased risk of a message being rejected if it is not examined frequently.

**The Conceptual Relationship Between Pragmatism and CMC in Arabic Language Education**

The integration of Computer-Mediated Communication (CMC) into Arabic language instruction can be meaningfully understood through the lens of pragmatic philosophy, which emphasizes the

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[24] Sykes, "Synchronous CMC and Pragmatic Development: Effects of Oral and Written Chat."
[25] Kessler, Loewen, and Trego, "Synchronous Video Computer-Mediated Communication in English Language Teaching."

practical application of knowledge, the value of experience, and the orientation toward solving real-world problems. Pragmatism, as articulated by philosophers such as John Dewey, William James, and Charles S. Peirce, prioritizes outcomes and functionality in education. Knowledge, according to this tradition, is not absolute but is shaped and validated through lived experience, usefulness, and adaptability.

In language education, pragmatism implies that learning must be contextual, purposeful, and closely connected to communicative practice. Rather than focusing solely on grammatical accuracy or rote memorization, a pragmatist approach emphasizes meaningful use of language in authentic situations, collaborative learning, and reflection through trial and error. CMC, as a digitally mediated form of communication, naturally aligns with this educational philosophy by offering platforms where learners can actively engage in linguistic exchanges, problem-solving tasks, and dynamic feedback processes.

Synchronous CMC (SCMC), such as video conferencing and live chat, reflects the pragmatist value of experiential learning. Learners use the Arabic language in real-time, constructing meaning collaboratively while negotiating misunderstandings and cultural nuances. Asynchronous CMC (ACMC), on the other hand, such as email, forums, and blogs, provides space for reflective thinking, which Dewey described as essential to deep learning. Learners can compose, revise, and analyze their Arabic texts over time, engaging in iterative cycles of feedback and self-improvement.

In the context of Arabic language instruction, this relationship is practically manifested in several ways. For example, students participating in online discussions about Arab culture, current events, or Islamic texts are not only acquiring vocabulary or grammar structures, but also developing intercultural competence and communicative confidence. CMC facilitates exposure to various dialects and registers of Arabic, enhances access to native speakers, and encourages student autonomy—elements highly compatible with a pragmatist framework.

Moreover, pragmatism supports the use of task-based language teaching (TBLT), where language serves as a tool to complete meaningful tasks. CMC-based environments are ideal for implementing such tasks: creating video presentations in Arabic, writing collaborative essays via Google Docs, or engaging in cross-cultural email exchanges. These activities align with the pragmatist belief that learning occurs most effectively when it is active, social, and grounded in real-life relevance.

In conclusion, the conceptual alignment between pragmatism and CMC offers a robust theoretical and pedagogical foundation for the future of Arabic language education. CMC operationalizes the principles of pragmatism by enabling authentic, purposeful, and context-driven language use. When thoughtfully integrated, CMC does not merely enhance instructional delivery—it transforms learning into a pragmatic, student-centered experience that prepares learners to function competently in a multilingual and digital world.

**CONCLUSION**

As a fundamental principle of spirituality, pragmatism asserts that a thing's legitimacy is dependent on the practical benefits it provides in real life. In the context of Computer-Mediated Communication (CMC), which involves the use of computer technology to transmit messages, it plays an important role. CMC facilitates the development of students' Arabic language skills, particularly their speaking and reading abilities, in Arabic language instruction. By utilizing the two main CMC models, Synchronous Computer Mediated Communication (SCMC) and Asynchronous Computer Mediated Communication (ACMC), the teaching of Arabic can become more

collaborative, give students more control, and promote language learning. To achieve maximum effectiveness, however, the use of CMC in the teaching of Arabic must be tailored to the learning objectives and characteristics of the course.

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