

Computer-Mediated Communication: Application to Vocational English Education

Thi Quynh Nhu Ho 

Hue Industrial College, Vietnam

Corresponding author. Email: htqnhu@hueic.edu.vn

ARTICLE INFO

Received: 19/05/2023
Revised: 31/07/2023
Accepted: 07/09/2023
Published: 28/08/2024

KEYWORDS

Computer-mediated communication (CMC);
English language education;
English for specific purposes (ESP);
English for occupational purposes (EOP);
English for vocational purposes (EVP).

ABSTRACT

Recent research on the use of computer-mediated communication (CMC) tends to focus on how CMC occurs and how to effectively apply Internet-based technologies into classrooms in general while little evidence has been found on the application of CMC tools to teach English language for workplace purposes. Therefore, this article aims to explore the use of CMC as an alternative platform for teaching English for vocational purposes. For this purpose, the current paper is based on library research combining synthesis and analysis of more than thirty empirical and non-empirical articles which were published in journals, conference proceedings, books, and conference presentations. The findings center around specifying: (i) the characteristics of vocational English education and the key theoretical frameworks and pedagogical models that underpin the use of CMC in teaching English for vocational purposes; (ii) the impacts of CMC mode on the students' language learning outcomes and vocational skill development, and (iii) the needed preparation of educators for the successful use of CMC. The results offer insights into the growth of CMC use as an effective platform in vocational English education.

Doi: <https://doi.org/10.54644/jte.2024.1413>

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1. Introduction

Over the past decades, the development of high-tech devices such as computers, laptops, tablets, and cell phones in combination with the widespread and excessive use of internet-based technologies worldwide has influenced the ways people live, work, and study. Among the recent modern gadgets, the popularity of computers has highlighted the role of CMC as a very effective medium of interaction between people from different parts of the world.

Numerous definitions have been made to the concept of CMC from a plethora of perspectives. In 1991, Higgins defined CMC as "human communication via computer" [1]. It can be understood that this mode involves interaction between individuals who use computers to connect to each other and generally indicates "any communication pattern mediated through the computer" [2, p.32]. Lee related CMC with a large repertoire of terms involving virtual communication, online communication, electronic communication, cyber communication, or even cyber conversation [3]. Another definition was offered by Herring stating that CMC refers to "communication that takes place between humans via the instrumentality of computers" [4, p.1]. Similarly, December claimed that CMC is "a process of human communication via computers, involving people, situated in particular contexts, engaging in process to shape media for a variety of purposes" [5]. For Luppacini, CMC can be considered as "communications, mediated by interconnected computers, between individuals or groups separated in space and/or time" [6, p.142]. From these definitions, CMC can be seen as the use of technology, such as computers, smartphones, tablets, and the internet, to facilitate communication and collaboration between individuals from the four corners of the earth.

Nowadays, many CMC environments are introduced and becoming more and more popular in the field of education. People can communicate through computers in various formats (i.e., audio, video, and written forms) and platforms (e.g. Facebook, Instagram, MSN, Twitter, Skype, YouTube, etc.). These are common CMC environments not only used for communication but applied in the field of

language education. The application of these environments creates new experiences for both language teachers and learners to keep in contact even if they are out of the classroom. Since its first integration into the educational environment, this channel impacts significantly all aspects of education [7]. The use of CMC in language education has created new opportunities for language learning and teaching which cannot be found in normal traditional classrooms. The studies on CMC implementation in language learning have proved the benefits of the integration of CMC into EFL teaching and learning in terms of increasing both input (exposure) and output (use) of the target language, which helps learners develop their communicative competence [8].

In the teaching of English for occupational purposes (EOP) which involves related needs and training [9], CMC has revolutionized the way how both teachers and students learn and practice the target language in a very updated professional context. The popularization of CMC in vocational English language education is understandable simply because of its significant benefits. One of the major advantages is its ability to enable communication among individuals worldwide regardless of time or place. This is particularly vital in this globalized world, where people from different cultures and backgrounds must work together in a cross-cultural context. CMC tools such as video conferencing, instant messaging, and unlimited online media provide learners with abundant platforms to study and practice their target language skills and collaborate with others in a vocational setting. Another merit of CMC in vocational English language education is that learners can access unlimited materials and activities tailored to their majors' needs and learning styles.

Therefore, it is evident that more attention than ever has been paid to the use of this platform in the teaching and learning of English with a vocational orientation. Among essential tools, computers have become effective instructional ones in the language classroom over the past decades. As Huh reviews [10], CMC reveals multiple benefits such as language skills development, students' motivation enhancement, and social learning facilitation.

Generally speaking, it is undeniable that CMC is considered a channel widely applied in language education because of its convenience and flexibility in the current globalization. In addition, due to the appropriacy of CMC in this high-tech era and the ability to gather information and connect on an intercontinental level in the globalized business world, it can be used to orchestrate abundant intercommunication situations [11]. The necessity is to enable language instructors to apply CMC mode in both asynchronous and synchronous English language classrooms in alignment with workplace needs.

Previous studies on CMC have centered around its use in education and EFL (English as a Foreign Language) teaching in general (e.g. [12], [10], [13], [14], [15], [16], [17], [18]), but few have been done on the integration of CMC mode in teaching English for vocational purposes. Thus, this paper aims to fill this gap by exploring: (i) the characteristics of vocational English education and the key theoretical frameworks and pedagogical models that underpin the use of CMC in teaching English for vocational purposes; (ii) the impacts of CMC mode on the students' language learning outcomes and vocational skill development, and (iii) the needed preparation of educators for the successful use of CMC. This research hopes to shed more light on the effective application of CMC in the field of vocational language teaching.

2. Methodology

The research questions guiding this study are as follows:

- What are the characteristics of vocational English education and the key theoretical frameworks and pedagogical models that underpin the use of CMC in teaching English for vocational purposes?
- How does CMC impact students' language learning outcomes and vocational skills?
- What should vocational English educators prepare for CMC application?

In order to find out the answers, this study adopted a library research design to systematically analyze and synthesize existing literature related to the use of computer-mediated communication in English language instruction for vocational purposes. It is widely believed that library research allows for an in-depth exploration of a broad range of published sources, including academic journals, books, conference papers, and reputable websites [19]. Thus, the primary data sources for this study were scholarly articles

and academic publications available in search engines and electronic databases such as Google Scholar, ERIC, SCOPUS, and other relevant sources. Additionally, books, conference papers, and official reports related to computer-mediated communication and English language teaching in vocational settings were also considered.

The data collection process will involve systematic literature searches using keywords and search terms related to CMC, vocational English language teaching, computer-assisted language learning (CALL), and related concepts such as characteristics of vocational English language education, basic theories and frameworks in using technologies in teaching EOP, applications and studies on the use of CMC in vocational English education, and learners' language learning outcomes and vocational skills development under the impact of CMC. The reviews and journals on the uses of CMC in teaching ESP/EOP/EVP, not general education, have been examined and synthesized. The identified articles and publications will be screened, and relevant information will be extracted and grouped for further analysis. After that, the extracted data will be analyzed thematically to identify relevant themes and contrasting perspectives on the use of CMC in vocational English language teaching. The thematic analysis helped the author to synthesize the information and answer the research questions effectively.

It could be said that the use of library research was relevant to investigating the use of computer-mediated communication in teaching English for vocational purposes, which was thought to potentially contribute to the existing body of knowledge in the field of language education and vocational training.

3. Findings and discussion

3.1. The characteristics of vocational English education and key theoretical and pedagogical frameworks that underpin the use of CMC in teaching English for vocational purposes

This section reviews the characteristics of vocational English education and the basic theoretical and pedagogical background that hinders the CMC application to the teaching of vocational English, starting with the introduction to the CMC mode and finishing with the analysis of the theoretical frameworks underpinning the CMC use in vocational English teaching.

Being a subtype of ESP (English for specific purposes), EOP is also known as EVP (English for Vocational Purposes) and VESL (Vocational English as a Second Language) which is tailored to the learners' specific needs and goals, focusing on English skills and communication relevant to their chosen careers [9]. Regarding the methodology, vocational English education often employs a task-based language teaching approach, where language learning is centered around meaningful vocational tasks and activities. As described by Friedenber, Kennedy, Lomperis, Martin, and Westerfield, the tasks play a key role in learners' language needs for workplace use and skill levels [20]. Both content and tasks in vocational English education are authentic and mirror real-world professional scenarios, enabling learners to practice the language in practical contexts. Highlighting the benefits of task-based instruction, Friedenber et al. added that task-based approach allows a language course to address the language skills that learners need for their particular job contexts and to structure the syllabus to reflect a series of such situations [20].

In recent years, CMC has been brought into use in teaching vocational English, which is supported by several key theoretical frameworks and pedagogical models. These frameworks and models provide a theoretical basis for designing effective language instruction that caters to the specific needs of vocational learners. Developed by Jean Lave and Etienne Wenger, Situated Learning Theory posits that learning is best achieved within authentic contexts and social interactions [21]. In the context of CMC in teaching English for vocational purposes, this theory emphasizes the importance of incorporating real-life vocational tasks and scenarios into language learning activities. By using CMC tools, learners can engage in meaningful interactions with peers and industry professionals, simulating workplace communication and language use. In light of this theory, Jiang emphasized the important role of a specific learning environment in the effective application of CMC to teaching English to students majoring in network-based discipline [22]. The particularity of CMC in teaching vocational English can be identified by the fact that learners engage in authentic communication and tasks relevant to their future careers, enabling them to grasp language skills within meaningful contexts. In contrast, traditional methods may rely more on general language materials and lack the vocational focus that CMC offers.

Task-Based Language Teaching (TBLT) is another pedagogical theory underpinning the application of CMC in teaching vocational English. Richards and Roger mentioned that task-based activities involve real-life communication and activities require learners to use language for conveying meaningful tasks [23]. As described by Friedenber, Kennedy, Lomperis, Martin, and Westerfield, a task concerns a function and the conditions connected with particular language work-related needs [20]. It is evident that TBLT is particularly relevant in vocational language instruction, as it aligns language learning with the specific tasks and challenges that learners are likely to encounter in their vocational fields. The TBLT theory facilitates the language teachers' use of CMC platforms in vocational English education to encourage learners to communicate, collaborate, and problem-solve in English while addressing vocational-related tasks. Another important theory that underpins the application of CMC to vocational English education is Technological Pedagogical Content Knowledge (TPACK). Developed by Punya Mishra and Matthew J. Koehler in 2006, this framework emphasizes the integration of technology, pedagogy, and content knowledge in educational settings [24]. In the context of teaching English for vocational purposes with CMC, TPACK highlights the importance of instructors understanding how to use technology effectively to support language learning in vocational contexts. This includes selecting appropriate CMC tools, designing relevant language tasks, and aligning language instruction with the specific content and vocational skills required. The study clearly illustrates the vocational English teachers' integration of information and communication technology (ICT) tools, language contents, and appropriate tasks in alignment with the students' motivations, institution's purposes, and strategies for online teaching implementation [25].

By incorporating these key theoretical and pedagogical frameworks, vocational English education can effectively use CMC to create meaningful and authentic language learning experiences that align with learners' vocational goals and prepare them for success in their chosen careers. The reason is that the implementation of CMC in teaching vocational English facilitates interaction and negotiation of meaning. According to Kitade, the CMC approach enables learners to develop their sociolinguistic competence in a beneficial environment in which they are made to participate actively in real-life communication with the native speakers of the target language [13]. In this regard, Kramsch and Thorne stated that CMC platforms provide "convenient, authentic, direct and speed access to native speakers and their cultures" [26]. This improves students' intercultural and communicative competence. In this sense, it can be considered that CMC compensates for communication between individuals from different parts of the world and provides them with authentic vocational English language to work together with mutual cross-cultural understanding in this globalized world.

3.2. The impact of CMC on students' language learning outcomes and vocational skills development

In recent years, CMC has been widely applied in English language education in general and in teaching English for vocational purposes in particular. In the field of English education for vocational purposes, CMC can have a significant impact on students' language learning outcomes and vocational skills development. The integration of CMC in language instruction for vocational purposes offers several benefits that enhance the learning process and prepare learners for success in their chosen careers. This section analyzes these essential advantages.

One of the key benefits of CMC in EOP education is that it helps enhance students' language proficiency and real-life language use. CMC provides students with opportunities to practice their language skills in a real-world setting with frequent workplace-related input, interaction, and instant feedback from instructors through computer-based, student-student, and student-teacher communications. By integrating CMC technologies into their language teaching contexts both inside and outside of the classroom, CMC proponents argue that instructors can spark a large number of real-life interactions ([27], [17]). For example, students can participate in work-based virtual meetings and collaborative projects, make presentations, and write business emails using English. The authenticity of CMC in vocational English teaching exposes students to real-world language use in professional contexts. This type of authentic practice helps students develop their speaking, listening, reading, and writing skills in a relevant and meaningful way. At the same time, students have opportunities to encounter industry-specific vocabulary and communication styles, enabling them to better understand and use language in their future careers. In this sense, the continuous use of CMC platforms can foster

language immersion, allowing learners to become more proficient in English as they engage in authentic communicative situations. In a study on using CMC mode to teach ESP to Computer Science students, Sarimah and Hilary found that students who completed the program employing CMC ESP activities improved their oral communication abilities significantly and outperformed their peers in the conventional content-based education courses in terms of test scores [28]. It is evident that the relationship between globalization and graduates' enhanced language proficiency and real-world language use implicates their employability and professional opportunities in the job market [29].

Another important aspect of CMC in vocational English education is its ability to facilitate cross-cultural communication, which helps enhance students' collaborative and cross-cultural skills. With the rise of global business and the increasing need for individuals to communicate with people from different countries and cultures, it is crucial that students learn how to use English effectively in a cross-cultural context. CMC tools such as video conferencing, instant messaging, and online forums provide learners with a platform to practice their job-based language skills and collaborate with others from different parts of the world. Learning to work in virtual teams, online group projects, and discussions fosters learners' mutual collaboration and cross-cultural communication skills. Particularly, the CMC mode gives language learners the ability to interact with the target social and cultural environment and gain the pragmatic skills necessary to effectively communicate in the target language [8]. In this sense, learning EOP through CMC mode enables students to gain insights into different cultural perspectives, essential skills for success in a globalized workforce.

In addition, CMC encourages the enhancement and promotion of learners' autonomy in EOP learning since it supports personalized and self-paced learning. This is due to the fact that CMC's flexibility allows learners to access language materials and vocational content at their convenience. Through access to online resources, digital tools, and multimedia content, they can independently explore language materials and vocational resources that align with their interests and career goals. Additionally, CMC provides students with the flexibility to study and practice vocational English from anywhere, at any time, which can be particularly beneficial for those with busy schedules. This can help EOP students learn at their own pace, while also receiving immediate feedback on their progress through instant evaluations on language exercises and vocational tasks, enabling them to identify areas for improvement and make necessary adjustments promptly. For these reasons, it is clear that CMC advances give individual learners opportunities to leave their own comfort zones to take part in the language learning process productively and efficiently [30]. It can be seen that the use of CMC in teaching EOP is more beneficial than traditional English teaching which normally follows a fixed schedule, limiting flexibility and autonomy for vocational learners.

Generally speaking, the impact of CMC is multi-faceted. Advances in CMC technology help instructors optimize their EOP teaching with the use of online technologies while CMC provides students with opportunities to enhance their autonomy and flexibility in EOP learning and develop their language learning outcomes and vocational skills in a real-world setting. Consequently, the efficacy of language education for vocational purposes can satisfy the industry demands. By developing both language proficiency and vocational skills, students become more attractive to employers. The combination of strong language abilities and relevant vocational competencies enhances students' employability prospects, opening up a wider range of career opportunities.

3.3. Vocational English Educators' required preparation for the application of CMC to teaching English for vocational purposes

The integration of CMC into English language education for workplace purposes requires proper preparation from teachers of vocational English. These preparations are crucial to ensure their students' successful and meaningful learning experience in orientation to language learning outcomes and vocational skills development.

First and foremost, familiarity with CMC tools and platforms is needed for the effectiveness of vocational English instruction. Teachers of vocational English should familiarize themselves with various CMC platforms, such as online learning management systems, virtual classrooms, video conferencing tools, and collaboration platforms. Understanding how to navigate and utilize these technologies will enable educators to create engaging and interactive learning environments for their

students. In addition, possible technical issues and internet problems may occur and cause the process of incorporating CMC tools into vocational English teaching problematic. Therefore, familiarity with CMC tools and platforms specialized for EOP teaching is necessary. According to Olaniran, unfamiliarity with a communication tool might be the main concern in CMC and cause anxiety in students before they become comfortable using it [31]. For this, EOP teachers need to understand the features and capabilities of the various CMC tools and platforms that they plan to use in the EOP classroom. This includes understanding how to use the tools to create and facilitate online discussions, virtual meetings, and other activities for job purposes. In order to be familiar with the CMC platforms, educators need to be well-trained or self-train with technological skills. It is necessary for them to have a good understanding of the technology and the ability to troubleshoot technical issues that may arise. As Olaniran suggested, teachers of CMC courses must be adaptable to deal with any unanticipated contingencies that may occur [32]. According to Babni's study on gains and losses of applying CMC in English language learning [8], technical problems contributed to a loss of learners' motivation and self-confidence. Thus, this matter requires the teachers' understanding of how to use the tools and platforms, as well as being familiar with the hardware and software that is used in the classroom. It is extremely noticeable that teachers of vocational English should also carefully select CMC tools that align with the needs and preferences of their students based on their vocational English curriculum and learning objectives. Popular CMC tools can be listed as virtual internship platforms, industry-specific forums and social media groups, online collaboration and project management tools, E-portfolios and reflective journals, virtual language laboratories, digital research, and resource libraries, and so on [33]. For example, for students majoring in tourism, hospitality, or business, virtual internship platforms can be used to simulate real workplace scenarios. These platforms allow them to engage in tourism or business-specific communication, customer interactions, and task performance, which provide them with opportunities to apply language skills within their majors. By thoughtfully selecting and integrating appropriate CMC tools into vocational English instruction, vocational English teachers can create engaging and effective learning experiences that align with learners' career goals and support their language proficiency and vocational skill development.

Another important preparation for the smooth integration of CMC in vocational English education is the teachers' pedagogical knowledge readiness for EOP teaching. Vocational English educators need to have expertise in the above-mentioned characteristics of using CMC in teaching vocational English and the special requirements of teaching vocational English in order to design effective CMC-based vocation-oriented language instruction. Especially, they should understand how to use CMC to support the development of students' language proficiency and EOP skills by designing meaningful tasks relevant to the learners' vocational fields and aligned with language learning goals. These tasks can include virtual internships, industry-related discussions, multimedia projects, and online simulations. Also, an EOP teacher needs to be ready for the role of a connector who, on the one hand, has to locate online partners for their students in order to ensure cross-cultural contact. On the other hand, they must find an EOP course that meets the demands of their students in terms of language proficiency, area of interest, and learning objectives [8]. This is due to the fact that the EOP practitioners are responsible for monitoring their students' language performance on the vocation-specific tasks and making sure that their goals are completed effectively to meet their objectives using CMC platforms. Needless to say, language teachers need to be ready to deal with the learners' differences in background, language, and experience to promote the effective use of CMC tools in an EOP class environment. For this, EOP teachers are required to plan their teaching procedures effectively and implement them within the course syllabus.

Last but not least, continuous professional development is a necessity for vocational English teachers to enhance their TPACK and stay updated on best EOP practices in CMC integration. On the one hand, EOP educators need to adapt their pedagogical strategies to suit the online learning environment. On the other hand, they need to be prepared to use different instructional techniques and methods that leverage the benefits of CMC platforms while maintaining a focus on language and vocational skill development. These preparations can be done through ICT workshops, webinars, and online courses where teachers' proficiency in using software applications, multimedia tools, and online communication features can be

improved while professional workshops, research, and reading on EOP practices provide valuable EOP insights and strategies for effective application of CMC in vocational language instruction.

In conclusion, the successful integration of CMC into English language education for workplace purposes requires proper preparations from EOP educators. This includes familiarity with CMC tools and platforms, pedagogical knowledge of EOP, and ongoing professional development of both ICT and EOP education. By preparing themselves in these areas, EOP teachers can effectively leverage the benefits of CMC to support students' EOP learning and help them achieve their vocational English language learning goals.

4. Conclusion

In conclusion, this paper explored the application of the CMC mode in EOP education. The findings of this study highlight that CMC can serve as a valuable tool in vocational English education, fostering interactive and engaging learning experiences for students. Through various online platforms and tools, learners can practice communication skills in real-life contexts, promoting fluency and confidence in using English. Through CMC platforms, students' EOP learning outcomes and vocational skills can be developed, which help tailor their employability in the globalized market. It can be anticipated that the future of CMC in teaching English for workplace purposes looks bright, with new and innovative technologies expected to play a more significant role in language education. The increased use of virtual and augmented reality and smart devices has the potential to make language learning more engaging, interactive, and accessible for students. Therefore, educators need to stay informed of these trends and be well-prepared to leverage the benefits of CMC to help their learners achieve their language learning goals and match the requirements of the labor market in the current fast globalization.

On the one hand, the knowledge obtained from this study offers insight into how to apply CMC to develop students' vocational English learning outcomes and how teachers can prepare for effective application. On the other hand, certain limitations of the current study point to the necessity for further research on this topic. Future studies could explore the long-term impact of CMC in vocational English education. Tracking learners' progress over an extended period would provide valuable insights into the sustainability and efficacy of this approach. Additionally, investigating the role of teachers in CMC-based language learning is essential since training instructors to effectively integrate technology into their teaching methods can optimize the benefits of CMC for students.

Acknowledgments

We would like to express our sincere gratitude to Hue Industrial College, Vietnam, for supporting this research.

Conflict of Interest

The author declares no conflict of interest.

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Ho Thi Quynh Nhu achieved the Degree of Doctor of Philosophy in English Language Education from Hue University of Foreign Languages in 2019. She is now working as a lecturer in translation courses, ESP courses, and English language skills at Hue Industrial College. She is interested in ESP/EOP, translation, English teaching methodology, language course/curriculum development, Computer-assisted language learning (CALL), and Mobile-assisted language learning (MALL). She has published several articles within her research areas. She can be reached at: Dept. Fundamental Sciences, Hue Industrial College, 70 Nguyen Hue Street, Hue City, Vietnam.

Email: htqnhu@hueic.edu.vn. ORCID:  <https://orcid.org/0009-0008-3444-8854>