Integration of AI into the Distance Learning Environment: Enhancing Soft Skills

Inna Borkovska
Department of English Language for Humanities, Faculty of Linguistics, National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”, Kyiv, Ukraine

Hanna Kolosova
Department of English Language for Humanities, Faculty of Linguistics, National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”, Kyiv, Ukraine

Iryna Kozubska
Department of English Language for Humanities, Faculty of Linguistics, National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”, Kyiv, Ukraine
Corresponding author: kozubskaair@gmail.com

Inna Antonenko
Department of English Language for Humanities, Faculty of Linguistics, National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”, Kyiv, Ukraine

Received: 01/06/2024 Accepted: 04/11/2024 Published: 04/24/2024

Abstract
Soft skills have become increasingly essential for success in the modern world, especially in the labor market, where employers value employees' social and communication skills. Online education, which is an integral part of the educational process in Ukraine, is adjusting to the development of students' soft skills. Integrating artificial intelligence tools into English language learning is becoming a new direction in soft skills development. This approach opens up new teaching strategies that make learning more effective, engaging, and innovative. While learning English, students develop communication, creativity, and critical thinking skills, which contribute to their educational process and prepare the foundation for employment. The study aims to 1) evaluate the impact of artificial intelligence on the development of students' soft skills in online learning; 2) identify the most essential soft skills for their effective learning and future employment based on a student survey; 3) develop criteria for an online course using artificial intelligence and outline strategies for integrating the ChatGPT tool into distance learning English classes. To achieve the objectives of our study, we developed and processed a questionnaire, collected quantitative data, and analyzed and interpreted qualitative data; the study sample included 304 students. The questionnaire results showed a generally positive attitude of students towards using artificial intelligence in English for Specific Purposes courses. They opened up prospects for introducing an online course in the English for Specific Purposes program and further research, including an experiment with the introduction of this online course.

Keywords: Artificial intelligence, distance education, English for Specific Purposes, ChatGPT, higher education, smart technologies, soft skills.

Cite as: Borkovska, I., Kolosova, H., Kozubska, I., & Antonenko, I. (2024). Integration of AI into the Distance Learning Environment: Enhancing Soft Skills. Arab World English Journal (AWEJ) Special Issue on ChatGPT, April 2024: 56-72. DOI: https://dx.doi.org/10.24093/awej/ChatGPT.3
Introduction

In the modern professional world, a key element of success for specialists in various fields is their possession of soft (flexible) skills, also referred to as the skills of the 21st century (Qizi, 2020; Caeiro-Rodriguez et al., 2021; Marin-Zapata et al., 2022), which are a complex set of mental, communication, management skills and personal qualities that help to achieve success in professional spheres. That is why higher education institutions have the task of training specialists who will not only generate new ideas but will also be able to critically analyze them, predict goals, and express them clearly and precisely. According to employers’ requirements, the primary soft skills that a true specialist should possess include creativity, collaboration, critical thinking, problem-solving, communication skills, leadership, teamwork, empathy, innovative thinking, global awareness, a desire to learn throughout life, time management, etc.

In the new educational environment, innovative technologies, especially Artificial Intelligence (AI), can effectively support the development of these skills. AI embodies a set of codes, techniques, algorithms, and data that enable a computer system to develop and emulate human-like behavior. Due to this capability, AI can make decisions similar to or better than humans. AI will allow teachers to organize and personalize learning by the needs of students, which will help them acquire the competencies necessary to succeed in the global economic competition.

This article studies soft skills development in students of different specialties using AI in online English for Specific Purposes (ESP) courses. ESP classes are a favorable environment for developing soft skills, as AI is now offering many new ideas in foreign language learning, completely changing the traditional learning model.

AI integration enables innovative teaching methods for personalized programs focused on each student’s individual goals and level of knowledge (Romanysyn et al., 2023). The combination of AI and virtual reality technologies in distance learning in foreign language classes helps introduce situational learning into pedagogical practice, which can develop a wide range of soft skills, such as critical thinking, creativity, teamwork, time management, communication skills, etc. Lifelong learning is a crucial soft skill for success in the labor market. AI, such as GPT-4, enables continuous skill development. Duolingo and Coursera are already using AI to facilitate access to learning and provide personal assistance for effective studying.

The main research questions of the study

1. How can AI be effectively utilized to develop students' soft skills during distance learning in ESP courses? 2. What are the most effective methods and tasks for developing soft skills using AI in English for specific purposes classes?

According to the main research questions, the authors formulated the following underlying research objectives: to assess the impact of AI on the development of students' soft skills in the context of distance learning; to identify the specific soft skills that AI can effectively develop in ESP courses; to investigate students' perceptions and experiences regarding the use of AI for soft skills development in ESP course; to provide recommendations for integrating AI into distance learning to enhance the development of students' soft skills in English for specific purposes classes.

Literature Review

Until recently, the significance of soft skills for students during and after university education has been underestimated. Schulz’s (2008) research confirms this, highlighting employers’
complaints about graduates lacking soft skills such as communication, critical thinking, problem-solving, creativity, teamwork, and cultural awareness. Teachers should be responsible for improving students' soft skills and incorporating soft skills development practices into their courses. Despite the concerns of some researchers about the excessive emphasis on soft skills development (Schulz, 2008; Lyu & Liu, 2021; Schultheiss & Backes-Gellner, 2023), the relevance of soft skills development in modern education is indisputable, as it contributes to student's readiness for the challenges of the contemporary labor market and ensures their success in professional and personal development.

Nowadays, there is a need to address the issue of soft skills development in the context of online learning, which has become relevant due to the global COVID-19 pandemic and the introduction of martial law in Ukraine. These challenging conditions have demanded the use of digital technologies in the educational process, and presently, we bear witness to the adept implementation of the online format in educational paradigms. Online learning platforms have significantly contributed to transforming traditional education by enabling virtual classrooms and providing various tools for effective distance learning. They serve as valuable supplements to conventional educational methods, creating new opportunities for students to develop soft skills in a virtual environment (Kansal et al., 2021).

It is a virtual platform for active interaction and communication among fellow students, teachers, and other participants in the learning process, which can be used to develop students’ soft skills. Online education, thanks to its flexibility and psychological support, is becoming increasingly influential, combining traditional and innovative methods of soft skills development (Kexin et al., 2020; Kırmızı & Tosuncuoğlu, 2022; Chaka, 2022; Pavin Ivanec, 2022; Kruszewska et al., 2022; Osetskyi et al., 2021). Among the new methods are those that utilize AI tools in classes, which pave the way for innovative development of communication skills, leadership qualities, and other soft skills.

There are numerous studies dedicated to in-depth analysis of the use of AI in English language learning using tools such as Google Translate, TTS, English ABLE, Orai, ELSA, chatbots, Duolingo, and Neo, discussing their capabilities and limitations in the context of language learning (Schmidt & Strasser, 2022; Fitria, 2021). The focus of research on chatbot applications demonstrates their importance as an AI tool in education. According to Javaid et al. (2023), the use of ChatGPT in education aids learning by developing conversational practice, improving students' language skills, providing feedback on their work, stimulating learning, assisting in information search, offering literature and other educational resources, providing language translation, and summarizing news and scientific articles, thereby fostering critical thinking.

The analysis of sources and scientific literature has uncovered several advancements in researching the effectiveness of using virtual assistants or simulations of authentic communication to enhance oral communication skills. One notable development includes Chatterbots, also known as Artificial Conversational Entities, which are AI programs designed to simulate communication with people (Ali, 2020). The use of virtual assistants affects the motivation and independence of students in higher education. Gubareva & Lopes (2020) show the importance of virtual assistants in such aspects as academic and social integration of students and quick feedback from virtual assistants, including assessment and help.
Despite a significant number of scientific papers, the development of students' social skills in ESP classes using AI programs remains a topic that requires more investigation, making this issue relevant for further pedagogical research.

**Method**

The research methodology is based on a combination of quantitative and qualitative methods. The quantitative approach involves using a questionnaire, conducting statistical analysis of numerical data, and comparing the results. The qualitative approach includes analyzing open-ended questions and conducting thematic analysis to identify key themes in the participants' responses. The strategic planning method involves analyzing the current requirements for soft skills in the learning environment, identifying specific needs of students in soft skills development, and selecting AI tools for future implementation in the online course.

**Participants and procedure**

The survey was conducted among 304 students of various specialties who studied the ESP course at the National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute” in November 2023. Five specialties from three faculties represent the respondents: the Institute of Publishing and Printing (IPP), the Faculty of Biomedical Engineering (FBME), and the Faculty of Management and Marketing (FMM). The distribution across disciplines is as follows: 104 students - 061 “Journalism,” 108 students - 051 “Economics” and 073 “Management,” 92 students - 122 “Computer Sciences,” and 163 - “Biomedical Engineering.”

**Instruments**

We designed and conducted a questionnaire to obtain information about students' perspectives on the opportunities to develop soft skills using AI technologies in their ESP course. This survey aimed to explore the importance of various soft skills in the learning environment, their impact on professional success, and to assess the effectiveness of using AI to develop these skills in ESP courses. The questionnaire design process took fifteen days. The authors concluded that it was necessary to include two blocks for a more detailed analysis.

The first block of the survey allowed us to systematize students' attitudes to soft skills development, considering the prospects and challenges in the context of distance learning. In this block, we conducted a survey using a set of five questions. Students expressed their attitudes to various soft skills at the current stage of their studies, using a five-point Likert scale from “very important” to “not at all important” to assess the importance of each soft skill. The second question was about which soft skills they consider most important for future professional success. Students were also asked whether they believe that distance learning impacts the development of their soft skills. They responded using a "yes" or "no" scale. Additionally, we surveyed the level of soft skills development in ESP classes within the framework of distance learning. Lastly, students selected answer options that depicted the challenges encountered in developing soft skills through distance learning.

The second block was devoted to assessing the effectiveness of using AI in distance learning for developing soft skills and included six questions. The first question was about evaluating the effectiveness of AI in online learning on a scale from very effective to very ineffective. Other questions covered the impact of AI on soft skills development, the use of AI technologies in university and ESP classes, attitudes towards AI programs for soft skills development, and the advantages and disadvantages of using AI for learning.
The students were surveyed via Google Forms, where the answers were automatically systematized and analyzed. The study included the following stages: 1) planning, development, and conduct of the survey based on the research objectives; 2) quantitative data analysis (statistical analysis of quantitative data; derivation of averages, percentages, graphs) and qualitative data analysis (analysis of open-ended questions in the survey and identification of themes in the answers); 3) interpretation of the results and formulation of conclusions based on data analysis; 4) development of strategies for the development of soft skills among students with the integration of AI technologies into the educational process.

Students participated voluntarily, receiving prior information on the study's purpose and assurance of answer confidentiality for scientific purposes. Google Forms was chosen for its ease of use, automatic data collection, and visual result presentation.

Reliability assessment was carried out using the test-retest procedure within the framework of our study. A random sub-sample of 163 students was selected to complete the questionnaires again two weeks later. The results show a high correlation coefficient (close to +1) between the first and second tests, which indicates high measurement stability and reliability of the questionnaire during this period. The following measures were taken to assess the validity of the instrument used: checking the relevance of the questions and their purpose and comparing the questionnaire results with other studies.

Results

Block 1: Soft Skills

1.1 Students of three faculties, IPP, FBME, and FMM, expressed their attitude to various soft skills at the stage of their current studies. From “very important” to “not important at all,” the leading positions were given to communication skills, teamwork, critical thinking, the ability to set priorities, planning, conflict resolution, creativity, and the desire to learn. The skills of digital literacy, information media literacy, global awareness, openness to other ideas and thoughts, and innovative thinking were recognized as “important.” Moderate importance was given to leadership qualities, empathy, positivity, openness to criticism, and independent learning. None of the specialties expressed priorities regarding soft skills that would radically differ from others.

1.2 Students from three faculties responded to the question about the most crucial soft skills for future professional success. At IPP, 29% prioritize communication skills. FBME emphasizes communication (29%), teamwork (19%), and critical thinking (18%). FMM values communication (26.47%) and critical thinking (17.06%). Overall, communication skills are essential across faculties.

1.3 To the question “Do you think distance learning affects your development of soft skills?” students of all three faculties recognized that distance learning could influence the development of their interpersonal skills. They mentioned a lack of face-to-face communication, remote teamwork, lack of opportunities for public speaking, and other factors as challenges in developing soft skills during distance learning. The survey results differ within 6%, as shown in Figure 1, where red means “No” and blue means “Yes.”
Figure 1. Yes/No responses to Soft Skills development in distance learning

1.4 The results of a survey among students of three faculties regarding assessing the level of development of soft skills in the context of distance learning in ESP classes reflect specific differences between the groups. The evaluation of the results follows Figure 2, which displays colors according to the following scheme:

- Very high
- High
- Average
- Low
- Very low

Figure 2. The level of development of soft skills in the context of distance learning in English language classes for particular purposes

The majority of students of the faculty of IPP rated their level of soft skills as average (55.8%) and high (34.6%); FBME also showed positive results, with a high level of confidence (37% “high,” 8.7% “very high”). FMM students mainly rated their level as “high” (56.4%) and “average” (34.5%), which indicates a high level of confidence in their soft skills.

1.5 A survey among students regarding challenges in the development of soft skills during distance learning revealed that a significant percentage of respondents at IPP (43.2%) noted the lack of direct communication, difficulties in maintaining motivation (51%), and problems related...
to technical aspects (51%). At FBME (64.4%) and FMM (14.8%), motivation and conflict resolution difficulties are highlighted. The general trend shows that students of all faculties most often note challenges in motivation and insufficient communication.

**Block 2. Use of AI in Distance Education**

2.1. The first question aimed to obtain information from students about the effectiveness of using AI during distance learning. On a scale from “very effective” to “very ineffective,” the leading positions were marked by FBME students as “very effective” (26.1%) and “effective” (43.1%), as well as by FMM students – “very effective” (26.1%) and “effective” (50%). At the faculty of IPP, almost two times fewer students noted high efficiency – 13.5%. Nevertheless, 38.5% of students rated the effectiveness as high, and the vast majority rated the effectiveness of using AI during distance learning as average (40%), in contrast to FBME and FMM, where the results are much lower – 29.8% and 20%, respectively.

2.2. A survey conducted among students aimed at studying the impact of AI on the development of soft skills during distance learning showed that students of various specialties generally perceive this impact positively. Since the responses of the survey participants were similar for all specialties, we presented the obtained results in the form of Table 1. According to the data, the impact of AI on the development of soft skills is estimated at an average level, amounting to 44.8%, indicating a moderate effect of AI on the development of students' soft skills during distance learning.

<table>
<thead>
<tr>
<th>Level of impact</th>
<th>Very high</th>
<th>High</th>
<th>Average</th>
<th>Low</th>
<th>Very low</th>
</tr>
</thead>
<tbody>
<tr>
<td>In percentages for all specialties</td>
<td>7.2%</td>
<td>19.1%</td>
<td>44.8%</td>
<td>22%</td>
<td>6.9%</td>
</tr>
</tbody>
</table>

2.3. When analyzing the results of a survey among students regarding the use of AI technologies in university classes, we found that a high percentage of FMM (88.5%), FBME (82.6%), and IPP (72.2%) students use these technologies.

2.4. The survey results on students' use of AI technologies during ESP classes indicate a significant difference between majors. More than half of IPP students noted their active use of intelligent technologies. In other faculties, there is a noticeable difference between students who use AI and those who avoid it (see Figure 3).

![Figure 3. The use of AI technologies in ESP courses](image)
2.5. Students of three faculties expressed their attitude to various AI programs in the context of soft skills development in ESP classes. According to the results of a survey conducted among FBME, FMM, and IPP students, ChatGPT and Grammarly were singled out as particularly effective, with percentages of 74.4% and 53.7%, respectively, for FBMI, 53.5% and 59.3% for FMM, and 72% and 68% for IPP (see Table 2). These results illustrate the attitudes of students of different faculties towards the specified AI programs, highlighting their diverse preferences and goals.

Table 2. The effectiveness of AI programs for the development of soft skills in ESP courses

<table>
<thead>
<tr>
<th>AI programs</th>
<th>FBME</th>
<th>FMM</th>
<th>IPP</th>
</tr>
</thead>
<tbody>
<tr>
<td>ChatGPT</td>
<td>74.4%</td>
<td>53.7%</td>
<td>72%</td>
</tr>
<tr>
<td>Grammarly</td>
<td>53.5%</td>
<td>59.3%</td>
<td>68%</td>
</tr>
<tr>
<td>Google Bard</td>
<td>27.9%</td>
<td>7.4%</td>
<td>14%</td>
</tr>
<tr>
<td>Notion</td>
<td>20.9%</td>
<td>13%</td>
<td>10%</td>
</tr>
<tr>
<td>Midjourney</td>
<td>14%</td>
<td>11.1%</td>
<td>10%</td>
</tr>
</tbody>
</table>

2.6. We clarified answers to questions about the advantages and disadvantages of using AI in education and divided them into sections. Benefits include time savings, strategy generation, recourse access, individualization, and increased motivation. Negative aspects include loss of skills, reluctance to work independently, loss of motivation, and limited understanding of context. Students also noted cost, affordability, academic integrity, unreliability, and lack of live communication.

A student survey confirmed the importance of soft skills for future success. While distance learning positively impacts most soft skills development, it also poses challenges, including loss of motivation and technical problems. Faculties hold diverse views on AI, but they recognize programs such as ChatGPT and Grammarly as effective. Students appreciate the time savings but point to the loss of skills and motivation as a challenge for further improvement.

Discussion

The first block of the questionnaire is devoted to the analysis of essential aspects of the attitude of students to soft skills at various stages of education, particularly during distance learning in the conditions of a modern higher education environment. The study covered five specialties, giving us a diverse and more complete overview of the issue.

Students from the three faculties prioritize the development of communication skills, teamwork, critical thinking, time management, and creativity for future success. Therefore, innovative methods should be implemented into educational programs to prepare students for professional growth with a focus on the development of soft skills. (Hamdan, 2022; Thornhill-Miller, 2023). According to the analysis of the faculty survey, communication skills are identified as key at IPP, while at FBME and FMM, teamwork and critical thinking are essential.

Students recognized that distance learning has a challenging impact on the development of their soft skills due to the lack of face-to-face communication and remote teamwork, lack of communication. Therefore, it is essential to introduce various innovative methods to develop such
skills, including interdisciplinary groups and multiple internships in all academic subjects, ensuring a balance between hard and soft skills (Almeida & Morais, 2023; Ragusa et al., 2022).

Survey participants highly appreciate their level of soft skills in ESP classes, which stimulates them to further active development. Soft skills are critical to interpersonal interaction, collaboration, adaptability, resilience, embracing innovation, building relationships, and personal/professional development. Integrating these skills through online learning increases competitiveness and expands opportunities in the labor market (Singh et al., 2022; Otermans et al., 2023).

The second block of the questionnaire focuses on evaluating the efficacy of AI in distance learning. The first question aims to get information from students about their personal experiences and impressions of AI's effectiveness. The overall assessment among students suggests they consider using AI effectively in distance learning at a Ukrainian university.

The answers to the second question allowed us to analyze students' attitudes toward using AI in education and determine its impact on developing their soft skills. Most students note an average level of influence of AI on developing their soft skills. 1. Students prefer to use Grammarly for writing assignments because of the instant feedback (Huang et al., 2020). Still, some do not consider it practical for developing soft skills due to its limited functionality and lack of interpersonal interaction. 2. The technical limitations of the GPT chat tool can also complicate its impact on the development of soft skills, especially in terms of the lack of emotional interaction and the development of an individual writing style.

Students of various specialties widely use AI technologies in their classes, as evidenced by the positive responses of most survey participants, indicating a high acceptance and successful integration of AI into their educational process. In particular, students of FBME and FMM have shown particular interest and activity in using these technologies, which is consistent with the results of previous studies from different countries (Kelly et al., 2023; Nwachukwu & Affen, 2023).

The survey results showed a diverse use of AI technologies in ESP courses. The students from the IPP and FBME departments demonstrate active engagement with AI tools, while those from the FMM department show slightly diminished interest. This difference in interest could stem from certain teachers' reluctance to adopt new technologies and their uncertainty regarding fostering student independence. Teachers' doubts about the need to use AI tools may arise from the threat to the educational system and the rejection of the previous status of the only authoritative figure in the educational process. FMM students may also avoid using AI tools in English classes because of the risk of plagiarism (Baidoo-Anu & Ansah, 2023).

In the fifth question, students from three faculties expressed their attitudes towards different AI programs, paying particular attention to their effectiveness in developing soft skills in ESP courses. They prioritized ChatGPT, Grammarly, Google Bard, Notion AI, and Midjourney as the most effective. Unsurprisingly, most students rated ChatGPT as the most effective tool for developing soft skills. This tool has undergone numerous studies, showcasing its impressive features and substantial educational potential for students and teachers (Baidoo-Anu & Ansah, 2023; Qadir, 2023). GPT is a helpful tool for enhancing soft skills. It should complement other teaching methods because it aids in the development of various skills: 1) communication skills by forming clear and logical statements; 2) critical thinking by generating arguments or counter-arguments and inspiring students to analyze and formulate responses; 3) team skills by formulating
Strategies to achieve common goals; 4) empathy in communication by encouraging students consider diverse perspectives when composing dialogues, etc.

Students acknowledge the effectiveness of AI technologies in learning, noting time savings (simplified search), generation of problem-solving strategies (clear direction for finding information), easy access to resources, individualization of learning (asking an unlimited number of questions), and increased motivation to learn (a detailed study of the topic when checking AI answers). The findings confirm the positive attitude toward using AI programs in the learning process in the Ukrainian educational system and align with the results of many studies (Humble & Mozelius, 2022; Sharma et al., 2021).

Students believe that using AI in education has potentially negative consequences, such as loss of self-development and the possibility of incorrect answers. Problems with the availability and cost of AI create an unequal learning environment. AI can also infringe copyrights and lead to plagiarism, affecting the fairness of learning and the reliability of information. It is essential to take into account the lack of opportunity for face-to-face communication and the inability of AI to convey the emotional connection that is essential to the role of the teacher (Baidoo-Anu & Ansah, 2023, p. 54; Edwards & Cheok, 2018, p. 350; Humble & Mozelius, 2022).

The study on the attitudes of students from three faculties towards soft skills identifies familiar and different priorities, emphasizing the impact of distance learning on the development of these skills. Students confirm the effectiveness of AI in distance learning, especially in ESP classes, using popular tools such as ChatGPT and Grammarly. However, drawbacks have been identified, such as the loss of self-development skills and lack of emotional interaction. Developing soft skills in higher education programs remains crucial. Studies emphasize the need for a balanced approach, combining AI with emotional support to effectively develop soft skills in today's educational environment.

**Strategies for students and teachers to develop soft skills with the integration of AI tools – ChatGPT**

To increase soft skills and integrate AI tools into English classes, we recommend introducing an online course that can be hosted on platforms such as Moodle, Google Classroom or on existing university platforms such as Sikorsky. This will contribute to developing soft skills among students of various specialties. The course aims to develop soft skills using AI applications, including ChatGPT, in ESP courses. The objectives include creating conditions for high motivation, dynamizing the learning process, individualizing learning via ChatGPT, and creating unique student content. The criteria for evaluating the effectiveness of the course include the relevance of the topic, the focus of the exercises on the development of soft skills, the availability of AI tools, and the use of external resources.

To gather more information about the process of developing soft skills in an online ESP course, we considered the typical stages of a class: 1) describing an image; 2) discussing the results of a quiz with a partner; 3) vocabulary and terminology tasks; 4) watching a video; 5) practicing grammar; 6) reading and processing a text; 7) writing. In developing these stages, we considered the survey results, which confirmed that soft skills such as communication, critical thinking, time management, creativity, and teamwork are essential to students' future success in all three faculties.

To demonstrate the development of such soft skills, we have chosen to analyze the first (“Describing an image”) and fourth (“Watching a video”) stages of the class.
The initial phase (“Describing an image”), typically regarded as a warm-up stage, involves stimulating students' critical thinking. Students need to not only identify the details of the image but also provide arguments, formulate their own opinions, and draw conclusions. At this stage, students develop their communication skills because they learn to express their thoughts concisely and effectively, listen to others, and facilitate the exchange of ideas. While developing cooperation and teamwork skills, students interact, exchange opinions, listen to their partner, and construct a standard image description. Using imagination to describe the image, creating scenarios and stories, and actively sharing ideas stimulate students' creativity.

The fourth stage (“Watching the video”) proves vital for developing critical soft skills among students. As they analyze the information in the video, they use critical thinking to evaluate it and form their opinions. This process contributes to developing communication skills as students actively interact, exchanging opinions and impressions. In addition, the Video Watching stage stimulates students’ creative development by writing creative narratives, reviews, and dialogues using the video material. Such activity promotes creativity and allows students to express their uniqueness in learning the material. Students interact by discussing their impressions of the video and working together on assignments. This approach stimulates collaborative learning and mutual assistance, promoting crucial social skills such as teamwork. Using strategies to scan the video task to find keywords helps develop prioritization skills. In the context of ESP classes, this means the ability to identify keywords to understand a particular topic effectively and quickly. This method helps to develop time management skills in ESP classes.

The questionnaire analysis revealed that the ChatGPT AI program received the highest marks from the survey participants regarding developing soft skills in ESP courses. That is why we decided to implement this particular tool in the online course, offering strategies for students and teachers, as it meets all the criteria for online learning, ensuring accessibility and ease of use for students.

Let's look at the strategies for students in the first stage of the class (“Image description”): 1) create a brief outline for the description and identify the main aspects; use GPT chat features to get valuable expressions for the description; 2) interact with a partner to mutually check the description and improve its quality through GPT chat; 3) pay attention to new words and expressions that were learned during the discussion and chat help; 4) get explanations from ChatGPT about cultural features in the image (see Figure 4).

For the optimal implementation of ChatGPT technology in the English language teaching process, teachers are also advised to use effective strategies to enhance the learning process and improve students' critical thinking, communication, teamwork skills, and creativity. For the first stage, we suggest the following strategies: 1) have students write a brief description on paper before using GPT chat, then compare their descriptions with the ones from the chat; 2) highlight key phrases and constructions that students use and compare them with the expressions provided by GPT chat; 3) use the chat features to introduce new constructions that students can use to describe another image.

We will present the structure of the following stages of the ESP class and the development of soft skills that take place during a particular stage. We will also outline strategies for developing these skills for students and teachers, using AI to increase the efficiency of the entire learning process.
The second stage. Answering the questions of the interview quiz and discussing its results with a partner. Development of soft skills: critical thinking, communication skills, teamwork, creativity.

Student strategies: 1) expanding vocabulary (synonyms and expressions for more accurate and varied expression); 2) analyzing the results of the questionnaire and identifying strengths and weaknesses; 3) individual recommendations for the development of specific skills; 4) formulating possible questions or discussion topics based on the questionnaire results.

Teacher strategies: 1) using chat for extended responses and additional expressive phrases or words; 2) discussing the effectiveness of the chat; 3) creating additional questions with the help of chat.

The third stage. Vocabulary and terminology tasks. Development of soft skills: Critical thinking, communication skills, time management, creativity, teamwork.

Student strategies: 1) additional explanation of terms; 2) creating contextual sentences; 3) training vocabulary based on the learned terms; 4) chat support for discussing specific topics using new vocabulary and terminology; 5) Automatic translation; 6) preparation of self-control exercises; 7) providing recommendations for self-study accompanied by resources or exercises for independent learning.

Teacher strategies: 1) using GPT chat to demonstrate the use of words in specific contexts; 2) choosing a topic for an essay or article using new terms and then generating constructive feedback; 3) formulating questions using new vocabulary and GPT to generate answers.

The fourth stage. Listening (watching videos). Development of soft skills: critical thinking, communication skills, teamwork, creativity, and time management.

Student strategies: 1) defining or using unknown words in context; 2) explaining cultural aspects and other nuances; 3) supplementing information from the video with additional facts or explanations; 4) recommending additional resources for further study of the topic.
Teacher strategies: 1) Two stages: a) describing the content or event from the video; b) clarifying or expanding on the statements; 2) Keywords - enhancing explanations through GPT chat; 3) Generating contextual questions to develop critical thinking based on the video.

The fifth stage. Working on grammar. Development of soft skills: critical thinking, communication skills, teamwork, creativity.

Student strategies: 1) answering grammar questions through self-testing; 2) correcting grammatical errors in sentences; 3) practicing grammar to consolidate the rules learned.

Teacher's strategies: 1) getting explanations or additional examples of grammar rules; 2) analyzing sentences with grammatical errors with two stages: a) correction of sentences with errors by students; b) using GPT chat to identify errors; 3) helping to identify the topics of dialogues using specific grammatical structures.

The sixth stage. Reading and processing the text. Development of soft skills: critical thinking, communication skills, teamwork, creativity, and time management.

Student strategies: 1) helping create a condensed text with essential details; 2) explanation of unknown words and examples of usage; 3) support in analyzing the plot to understand the context better; 4) facilitating the learning of new material based on the text; 5) recommending resources to expand understanding of the topic.

Teacher strategies: 1) using ChatGPT to translate unknown words or get additional explanations to enhance text comprehension; 2) analyzing main ideas in the text and offering recommendations for further discussion; 3) creating role-playing games based on information from the text; 4) analyzing expressions from the text and then using GPT to explore with alternative expressions.

The seventh stage. Writing a CV. Development of soft skills: critical thinking, communication skills, teamwork, creativity, and time management.

Student strategies: 1) developing a general CV structure; 2) identifying essential skills for adequate CV preparation; 3) correcting language and style to ensure a professional appearance of the text.

Teacher strategies: 1) identification of essential elements of a CV. Checking the key aspects through GPT; 2) correction and improvement of CV; 3) expanding vocabulary through words and structures; 4) facilitating student discussions, providing feedback, and offering comments and advice for improving CV writing.

Limitations

The study has some limitations since the questionnaire was conducted among students of specific specialties, which may lead to varying outcomes compared to other groups. The assessment of the importance of soft skills and the level of their development (block 1) may be subjective and depend on the individual perception of each questionnaire participant.

Conclusion

The study used a questionnaire among 304 students of different specialties and identified the main aspects of soft skills development using AI technologies in distance learning. Students evaluated the significance of various soft skills and conveyed their opinions on distance learning within the framework of their personal growth. The results also demonstrate the positive impact of AI on the development of soft skills but point to the need for a more detailed study of the effectiveness of these technologies. The strategies presented in the example of an ESP class can
serve as a basis for further research and development of new methods and online courses using various AI tools in teaching and developing soft skills.

**Funding**
This research is not funded.

**Acknowledgments**
Not applicable.

**Conflicts of Interest**
The authors declare no conflict of interest.

**Authenticity**
This manuscript is an original work.

**Artificial Intelligence Statement:**
AI and AI-assisted technologies were not used.

---

**About the Authors:**

**Inna Borkovska** is a Ph.D., Associate Professor of the Department of English Language for Humanities, National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”. Her research interests lie in the field of pragmatics and innovative methods aimed at developing students' soft skills. Email: Borkovskaya@meta.ua  
https://orcid.org/0000-0001-5035-7866

**Hanna Kolosova** is a Ph.D., Associate Professor of the Department of English Language for Humanities, National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”. Her research interests lie in onomastics, presupposition, and innovative methods for developing students' soft skills. Email: plakydanna@gmail.com  
https://orcid.org/0000-0003-4224-0371

**Iryna Kozubska** is a PhD, Associate Professor of the Department of English Language for Humanities, National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”. Her research interests lie in the field of linguistics of the text, teaching ESP, and innovative methods aimed at developing students' soft skills.  
https://orcid.org/0000-0003-0934-6844

**Inna Antonenko** is a Ph.D. Associate Professor of the Department of English Language for Humanities, National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute.” Her research interests include a cross-disciplinary approach to teaching foreign languages and innovative methods for the development of students' soft skills. Email: discussion17@ukr.net  
https://orcid.org/0000-0001-6238-9937

**References**


Huang, H. W., Li, Z., & Taylor, L. (2020, May). The Effectiveness of Using Grammarly to Improve Students' Writing Skills. In *Proceedings of the 5th International Conference on Distance Education and Learning* (pp. 122-127).


